NSW GOVERNMENT

NSW Land and Housing Corporation

Specialised Fire Safety Services Contract

New South Wales Land and Housing Corporation
ABN 24 960 729 253

and

Infinity Fire Protection Pty Ltd
ABN 57 067 135 246

Date: 2024

Table of contents

1 General 1
1.1 Contract Documents 1
1.2 Documents complementary 2
1.3 Costs and expenses 2
1.4 Survival of Obligations 2
1.5 Law and Jurisdiction 3

1 Defined terms and interpretation 1
1.1 Definitions 1
1.2 General 19
1.3 Codes and standards 20
1.4 Construction 20

2 Contract Objectives 20
2.1 Contract Objectives 20
2.2 Continuous Improvement 21

3 Transition In 21
3.1 Transition In Period 21
3.2 Access Keys 22
3.3 Building Inspections 22
3.4 Component Register, Fire Safety Schedules and Programmed Works Plan 23
3.5 Transition In Plan 24
3.6 Failure to comply with the Transition In Plan 25

4 SUI Interim Side Agreement 25
4.1 SUI Interim Side Agreement 25

5 Term 25
5.1 Commencement of the Maintenance Works 25
5.2 Initial Term 26
5.3 Extension to Term 26

6 SFSS Document Deliverables 26
6.1 Requirements 26
6.2 Monthly Walkthrough 27
6.3 Updates to Component Register 27
6.4 Initial Programmed Works Plan 27
6.5 Annual Update to Programmed Works Plan 27
6.6 Update to Fire Safety Schedule 28
6.7 Fire Safety Statement 28
6.8 Fire Safety Statement Work Orders 29
6.9 Interactions with Responsible Authority 29
6.10 Recovery of cost 29
6.11 Changes to the Contract Area Property List 29
6.12 Display 30
6.13 Reliance 30
6.14 No Effect 31

7 Contract Areas 31
7.1 Allocated and Alternative Contract Areas 31
7.2 Maintenance Works performed by others 31
7.3 No representation or warranty 31
7.4 Composition of Contract Areas 32

7.5 Rectification of defective or incomplete work 32
7.6 Removal or Addition of Properties 32
7.7 Step-in to Alternative Contract Areas 33

8 Work Orders 33
8.1 Contractor's readiness 33
8.2 Issuing Work Orders 34
8.3 No works without Work Order 35
8.4 Work Order Extension 36
8.5 Late completion of Work Order or rectification work 36
8.6 Type 1 Supplementary Works Threshold 37
8.7 No Separate Agreement 38
8.8 Amendment of SoR 38
8.9 Additional Maintenance Works 38
8.10 Amendment of Principal Plans, Policies and Procedures 39

9 Communication and Information Technology Requirements 39
9.1 Single User Interface (SUI) and IT Requirements 39
9.2 Communication 40
9.3 When taken to be received 41

10 Fees 41
10.1 Fee 41
10.2 Contractor's Warranty in relation to Fee 42
10.3 Adjustments 42
10.4 Currencies 43

11 Terms of Payment 43
11.1 Payments 43
11.2 Invoicing Methodology 44
11.3 Contractor Invoices 44
11.4 Payment of Contractor Invoices 45
11.5 RCTIs 45
11.6 Payment of RCTIs 46
11.7 Payment on account 46
11.8 Set off 47
11.9 Security of Payment Act 47
11.10 Statutory Declaration 47

12 Security 47
12.1 Bank Guarantee 47
12.2 Parent Company Guarantee 48
12.3 Bank Guarantee Replacement 48
12.4 Conversion of Bank Guarantee 48
12.5 Invalidity and unenforceability 49

13 Key Performance Indicators 49
13.1 Key Performance Indicators 49
13.2 Abatements 49
13.3 Tenant Surveys 49

14 NCNs, Audits and Records 50
14.1 Non-conformance notices 50
14.2 Inspections 51
14.3 Audits 51
14.4 Other investigations 52
14.5 Contractor's records 52
14.6 Records retention 52

15 Contract Governance Committee 53
15.1 Organisation 53
15.2 Duties of CGC 53
15.3 Meetings 53
15.4 Non-binding nature 53

16 Plans, Reporting and Meetings 54
16.1 General 54
16.2 Reports 54
16.3 Contractor Plans, Policies and Procedures 54
16.4 Works Reports 55
16.5 No relief 55
16.6 Meetings 55
16.7 Reviews 55
16.8 Briefings 55

17 Subcontracts 56
17.1 Subcontracting 56
17.2 Responsibility 56
17.3 Subcontractors 56

18 Representatives 57
18.1 Contractor's Representative 57

19 Contractor's Personnel 57
19.1 Contractor to appoint suitable personnel 57
19.2 Organisation and Personnel 57
19.3 Inductions and Site requirements 58
19.4 Key Personnel 58
19.5 Replacement of persons 58

20 Warranties and standard of Maintenance Works 59
20.1 Contractor must do all necessary work 59
20.2 Warranties relating to the Maintenance Works 59
20.3 Disclosure 60
20.4 No warranty from the Principal 60
20.5 Contractor deemed to satisfy itself 60
20.6 Warranty of Equipment and workmanship 61
20.7 Interface with Tenants 61
20.8 Cleaning up 62
20.9 Supervision 62

21 Defects 62
21.1 Contractor to rectify 62
21.2 General obligations 62
21.3 Rights at Law 63

22 Risk and Ownership 63
22.1 Transfer of ownership 63
22.2 Risk in and ownership of Contractor's Equipment 63
22.3 Risk and Reinstatement 63
22.4 Liens and Encumbrances 64

23 Indemnities 64
23.1 Contractor's indemnity 64
23.2 Mitigation 64
23.3 Indemnification Procedures 64
23.4 Survival 65

24 Insurance 65
24.1 Principal Insurances 65
24.2 Contractor Insurances 65
24.3 Obligations on Contractor 66
24.4 Duration of insurances 67
24.5 Failure to insure 67
24.6 Insurance excess 67
24.7 General Obligations 67

25 Event of Force Majeure 68
25.1 No responsibility 68
25.2 Notification of Event of Force Majeure 68
25.3 Obligation to mitigate 68
25.4 Recommencement of performance 69
25.5 No relief from pre-existing obligations 69
25.6 Liability for costs 69

26 Suspension 69
26.1 Suspension by the Principal 69
26.2 Resumption of Maintenance Works 69
26.3 Costs incurred during Principal's Suspension 70

27 Intellectual Property Rights 70
27.1 Contractor to obtain all necessary rights 70
27.2 Ownership of the Principal IP 70
27.3 Ownership of Project IP 70
27.4 Licence of Project IP and Principal IP 70
27.5 Licence of Contractor IP 71
27.6 Intellectual Property warranty 71
27.7 Intellectual Property indemnity 71
27.8 Moral rights 71
27.9 No third party payments 72
27.10 Return of material forms of Principal IP 72
27.11 Survival obligations 72

28 Confidential Information 72
28.1 Non-disclosure of Confidential Information 72
28.2 Permitted disclosure 72
28.3 Publicity and media releases 73
28.4 Community liaison 73
28.5 Disclosure to professional advisors 73
28.6 Survival of obligations 73

29 Privacy 74
29.1 Privacy Compliance 74
29.2 General Privacy Obligations 74
29.3 Consents 75
29.4 Images of Properties 75

30 GIPA 75
30.1 Disclosure log 75
30.2 Access to information 76
30.3 Consultation 76

31 Statutory and NSW Government Requirements 77
31.1 Laws and Responsible Authorities 77
31.2 Permits 77
31.3 Change in Law 77
31.4 Industrial Relations 78

31.5 Work health and safety and the Environment 79
31.6 Appointment as Principal Contractor 80
31.7 Hazardous Substance 80
31.8 Notification 82
31.9 Home Building Act 82
31.10 Conflicts of Interest 83

32 Social Obligations 84
32.1 Employment Opportunities 84
32.2 Local Industry and Community Participation 84
32.3 Engagement of Community Service Organisations 84
32.4 Tenant Employment 84
32.5 Social Obligations Plan 84
32.6 Aboriginal Participation 84
32.7 Skills and Diversity 85
32.8 Changes to targets 85

33 Taxes 85
33.1 Contractor to pay Taxes 85
33.2 Exemptions and concessions 86
33.3 Survival 86

34 GST 86
34.1 Definitions 86
34.2 GST Exclusive 86
34.3 Taxable Supply 86
34.4 Recipient Created Tax Invoices 87
34.5 Principal GST warranties 87
34.6 Contractor GST warranties 87
34.7 Later GST charge 87
34.8 Reimbursement or indemnity 88
34.9 Progressive or Periodic Supplies 88

35 Termination 88
35.1 Termination of Contract for convenience 88
35.2 Removal of Contract Area for convenience 88
35.3 Immediate termination for the Contractor's default 88
35.4 Principal may issue notice 89
35.5 Termination for Principal's default 90
35.6 Termination for Event of Force Majeure 91
35.7 Procedure on termination for the Contractor's default 91
35.8 Procedure on removal of Contract Area for Contractor's Default 92
35.9 Procedure on termination for convenience 92
35.10 Procedure on removal of Contract Area for convenience 93
35.11 Return of Property 93
35.12 Termination general 93
35.13 Transition Out 93
35.14 No limitation 95

36 Dispute Resolution 95
36.1 Application of procedure 95
36.2 Referral to Representatives 95
36.3 Referral to Dispute Panel 95
36.4 Procedure for resolution 95
36.5 Arbitration 95
36.6 Seat of arbitration 96
36.7 Arbitrator 96
36.8 Arbitration award final and binding 96
36.9 Exceptions 96

36.10 Performance of obligations pending resolution of Dispute 96
36.11 Survival 97

37 General Representations and Warranties 97

38 Assignment and Change in Control 98
38.1 No assignment by Contractor 98
38.2 No Change in Control without approval 98
38.3 Assignment by Principal 98

39 Personal Property Securities Act 98

40 Proportionate Liability 99
40.1 Proportionate liability 99

41 General 101
41.1 Ministerial control 101
41.2 No fetter 101
41.3 Independent legal advice 101
41.4 Amendment 101
41.5 Independent contractor 101
41.6 Non-waiver 101
41.7 Severability 101
41.8 Comments, review, representation or approval by the Principal 101
41.9 Entire agreement 102
41.10 Counterparts 102
41.11 Amounts due and payable 102
41.12 Further assurances 102

Schedule 1 (Contract Details) 103
Schedule 2 (Maintenance Works) 106
Schedule 3 (Operational Requirements) 109
Schedule 4 (Servicing Requirements) 130
Schedule 5 (Technical Specification) 200
Schedule 6 (Component Requirements) 325
Schedule 7 (SoR) 458
Schedule 8 (Fee and Payment) 459
Schedule 9 (Key Performance Indicators) 469
Schedule 10 (Reporting Templates) 478
Schedule 11 (Communication Requirements) 497
Schedule 12 (IT Requirements) 515
Schedule 13 (Contract Areas) 565
Schedule 14 (Contract Area Property List) 569
Schedule 15 (Form of Statutory Declaration) 571
Schedule 16 (Form of Parent Company Guarantee) 575
Schedule 17 (Home Building Act Requirements) 579

Formal Instrument of Agreement

Parties

New South Wales Land and Housing Corporation (ABN 24 960 729 253)

of 4 Parramatta Square, 12 Darcy Street, Parramatta, New South Wales 2150

(Principal)

Infinity Fire Protection Pty Ltd (ABN 57 067 135 246)

of 22 Beresford Street, Mascot, New South Wales 2020

(Contractor)

Background

A. The Principal is a statutory corporation constituted under section 6 of the Housing Act. The Principal owns and manages land, buildings and other assets within its Portfolio across New South Wales.

B. The Principal has sought offers from contractors to perform Maintenance Works. The Contractor has represented to the Principal that it has the capability and resources to deliver the Maintenance Works in the Allocated Contract Areas and the Alternative Contract Areas.

C. The Principal has agreed to engage the Contractor to perform Maintenance Works in the Allocated Contract Areas and Alternative Contract Areas, in accordance with this Contract.

Operative Terms

1 General

1.1 Contract Documents

The following documents and their attachments (if any) together constitute the Contract Documents:

(a) this Formal Instrument of Agreement;

(b) the terms and conditions incorporating clauses 1 to 41 (inclusive) (the **General Terms**);

(c) Schedule 1 (Contract Details);

(d) Schedule 2 (Maintenance Works);

(e) Schedule 3 (Operational Requirements);

(f) Schedule 4 (Servicing Requirements);

(g) Schedule 5 (Technical Specification);

(h) Schedule 6 (Component Requirements);

(i) Schedule 7 (SoR);

(j) Schedule 8 (Fee and Payment);

(k) Schedule 9 (Key Performance Indicators);

(l) Schedule 10 (Reporting Templates);

(m) Schedule 11 (Communication Requirements);

(n) Schedule 12 (IT Requirements);

(o) Schedule 13 (Contract Areas);

(p) Schedule 14 (Contract Area Property List);

(q) Schedule 15 (Form of Statutory Declaration);

(r) Schedule 16 (Form of Parent Company Guarantee); and

(s) Schedule 17 (Home Building Act Requirements),

including any documents expressly incorporated by reference therein.

1.2 Documents complementary

(a) The Contract Documents are intended to be correlative, complementary and mutually explanatory of one another. The Contract Documents must be read as a whole.

(b) If this Contract provides for differing standards of service, product, workmanship or finish, then the greater or higher standard, product, workmanship or finish will prevail.

1.3 Costs and expenses

Each party will bear its own costs of preparing, negotiating and executing this Contract.

1.4 Survival of Obligations

(a) If this Contract expires or is terminated then, except where this Contract provides otherwise:

(i) the parties are released from their obligations to continue to perform this Contract except the obligations which are expressed to or by their nature, survive termination;

(ii) each party retains the rights and claims it has against the other party for any past breach of this Contract; and

(iii) the provisions of this Contract survive termination to the extent necessary to give effect to clause 1.4(a)(i).

(b) The following survive termination of this Contract:

(i) any warranties provided by the Contractor, including pursuant to clause 20;

(ii) clauses 1, 2, 6.5(b), 8.3, 10.2, 11.7, 14, 23, 24, 27, 28, 29, 30, 31, 33, 34, 35, 35.13, 36, 37, 38, 40 and 41; and

(iii) clauses 1.4 and 1.5 of this Formal Instrument of Agreement.

(c) The indemnities in this Contract are:

(i) continuing, separate and independent obligations of the parties from their other obligations and survive termination of this Contract; and

(ii) absolute and unconditional and unaffected by anything that might have the effect of prejudicing, releasing, discharging or affecting in any other way the liability of the party giving the indemnity.

1.5 Law and Jurisdiction

(a) This Contract is governed by the laws of the State of New South Wales, Australia.

(b) The parties submit to the exclusive jurisdiction of the courts in the State of New South Wales, Australia, and any courts that may hear appeals from these courts regarding any proceedings under or in connection with this Contract.

(c) Subject to any express provisions to the contrary, any person who is not a party to this Contract has no rights under or in connection with this Contract.

Execution

Executed as a Deed

Signed sealed and delivered
by
Infinity Fire Protection Pty Ltd (ABN: 57 067 135 246) in accordance with section 127 of the *Corporations Act 2001* (Cth):

X _____	_____
Director	Director/Secretary
X MARCUS MUCCINO	PETER BEGGS
Full name of Director	Full name of Director/Secretary

Executed for and on behalf of
New South Wales Land and Housing Corporation
on 10 / 7 / 24 by its duly authorised officer in the presence of:

	_____
	Signature of Authorised Officer
_____	Michael James Ryan
Signature of witness	Full Name of Authorised Officer
Joy Bramham	Director, Legal
Name of witness (print)	Office Held

General Terms

1 Defined terms and interpretation

1.1 Definitions

Abatement means each of the abatements identified in, and calculated in accordance with, Schedule 9 (Key Performance Indicators).

Abatement Condition means each of the abatement conditions for each KPI set out in Schedule 9 (Key Performance Indicators).

Aboriginal Business means a business that has at least 50 per cent Aboriginal or Torres Strait Islander ownership and that is recognised as such through an appropriate indigenous business verification organisation, including Supply Nation or the NSW Indigenous Chamber of Commerce.

Accredited Practitioner (Fire Safety) has the meaning given in the *Environmental Planning and Assessment Regulation 2021* (NSW) and **APFS** has the same meaning.

Act of Insolvency means, in relation to the Contractor (as applicable):

(a) an application is made to a court for an order, or an order is made, that it be wound up, declared bankrupt or that a provisional liquidator or receiver or receiver and manager be appointed;

(b) a party is seeking, or makes a statement, or conducts itself in a manner, from which it may reasonably be deduced that the person is seeking, to take advantage of the safe harbour against insolvent trading available under Division 3, Part 5.7B of the Corporations Act;

(c) a liquidator or provisional liquidator is appointed to it;

(d) an administrator is appointed to it under sections 436A, 436B or 436C of the Corporations Act;

(e) a Controller (as defined in section 9 of the Corporations Act) is appointed to it or any of its assets;

(f) a receiver is appointed to it or any of its assets;

(g) it enters into an arrangement or composition with one or more of its creditors, or an assignment for the benefit of one or more of its creditors, in each case other than to perform a reconstruction or amalgamation while solvent on terms approved by the other party;

(h) it proposes a winding-up, dissolution or reorganisation, moratorium, deed of company arrangement or other administration involving one or more of its creditors;

(i) it is insolvent as disclosed in its accounts or otherwise, states that it is insolvent, is presumed to be insolvent under an applicable law (including under sections 459C(2) or 585 of the Corporations Act) or otherwise is, or states that it is, unable to pay all its debts as and when they become due and payable;

(j) it is taken to have failed to comply with a statutory demand as a result of section 459F(1) of the Corporations Act;

(k) a writ of execution is levied against it or its property which is not dismissed within 21 days; or

(l) anything occurs under the law of any jurisdiction which has a substantially similar effect to any of the events set out in the above paragraphs of this definition.

Act of Terrorism means an unlawful act of force or violence perpetrated by one or more individuals acting on behalf of or in connection with any organisation, with the apparent purpose of furthering a political, religious or ideological aim.

Additional Maintenance Works means any Maintenance Works which are not included in the SoR and performed by the Contractor pursuant to a Work Order issued under clause 8.9.

Additional Maintenance Works Price means the amount included in a Work Order reflecting the agreed price for Additional Maintenance Works, as issued by the Principal in accordance with clause 8.9(c).

Affiliate means, in respect of each party, any company which is controlled (as described in section 50AA of the Corporations Act) by the Principal or the Contractor (as the case may be).

AFSS Due Date means the date for completion of an AFSS for each Property as set out in Contract Area Property List.

Allocated Contract Area(s) means each of the Contract Areas identified in Item 5 of the Contract Details.

Alternative Contract Area(s) means each of the Contract Areas identified in Item 6 of the Contract Details.

Alternative Contractor means a third party engaged by the Principal under a SFSS Contract where one or more of the Allocated Contract Areas is listed as an "alternative contract area" in that SFSS Contract.

Annual Fire Safety Statements or AFSS has the meaning given in the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW).

Approvals means any authorisation, consent, approval, licence, accreditation or registration from or with any Responsible Authority that the Principal is required to obtain (excluding any Permit).

Approved Form means:

(a) the form of any document or other Deliverable as specified in a Schedule to this Contract (as modified from time to time by the Principal); or

(b) where the form of document or other Deliverable is not specified in a Schedule to this Contract, a form as reasonably approved by the Principal and notified to the Contractor prior to the delivery of such document or Deliverable.

Approved Provider means a bank or financial institution:

(a) with a credit rating or financial strength rating of A- (Standard & Poor's, Fitch) or A3 (Moody's);

(b) with a branch capable of accepting calls upon bank guarantees in Sydney NSW; and

(c) that is an Australian trading bank registered pursuant to the *Banking Act 1959* (Cth).

Bank Guarantee means an unconditional undertaking that complies with the requirements set out in clause 12.1.

Business Day means a day that is not:

(a) a Saturday or Sunday; or

(b) a public holiday in Sydney; or

(c) 27, 28, 29, 30 and 31 December.

CGC or Contract Governance Committee has the meaning given to it in clause 15.1(a).

CGC Members means the persons nominated by each party to sit on the CGC in accordance with clause 15.1.

Change in Control means any change whatsoever in Control, whether effected directly or indirectly.

Change in Law means the enactment, adoption, promulgation, modification, amendment or repeal of any Law or mandatory industry standard, after the Date of Contract, but does not include:

(a) any change in Law in any jurisdiction other than the Commonwealth or New South Wales; or

(b) any change in Law of which notice of the change or proposed change had been given publicly prior to the Date of Contract in a government gazette by way of bill, draft bill or draft statutory instrument and which is in the same or substantially the same form as the change in Law which occurred after the Date of Contract.

Civil Liability Act means *Civil Liability Act 2002* (NSW).

Claim includes any allegation, debt, cause of action, claim, entitlement, proceeding, suit or demand of any nature howsoever arising and whether present or future, fixed or unascertained, actual or contingent, whether at Law, in equity, under statute or otherwise made:

(a) under or in connection with this Contract (including the Maintenance Works); or

(b) against the Principal or its Personnel,

for monies (including damages) or for any adjustment to the Fee or for Loss on any basis whatsoever including a claim:

(c) under a Law;

(d) in tort (including negligence);

(e) on a quantum meruit;

(f) pursuant to quasi contract;

(g) for unjust enrichment; or

(h) pursuant to any other principle of law or equity.

Common Areas means those parts of a Property which do not form part of an SOU and includes the lobby, hallways, stairways, parking lots, roof, lift and lift shafts, maintenance rooms and utility spaces.

Completion means, in respect of a Work Order, the stage in the performance of the Work Order where:

(a) Works Completion has been achieved;

(b) the Contractor has submitted all relevant documentation and evidence required by section 1.1(h)(v) of Schedule 3 (Operational Requirements); and

(c) either, the Contractor has submitted a Contractor Invoice in accordance with clause 11.3, or the Principal has submitted an RCTI in accordance with clause 11.5.

Component Register means a register (in the Approved Form) which documents the services, utilities, systems and components (including the service or maintenance history of each) in a Property.

Confidential Information of a party means any information:

(a) about the business and affairs of that party;

(b) about the customers, clients, employees, subcontractors or other persons doing business with that party;

(c) which is by its nature confidential;

(d) which is designated as confidential by that party;

(e) which is Principal Supplied Information; or

(f) which the other party knows or ought to know, is confidential,

and all trade secrets, financial information (including but not limited to cost and pricing information), source codes, technical information, operations, and other commercially valuable information of that party, but does not include information or material which:

(g) is or becomes generally known to the public other than through a breach of this agreement;

(h) at the time it was first disclosed to a party, was already in that party's lawful possession;

(i) is developed independently by a party; or

is disclosed to a party by a third party entitled to disclose it.

Confirmation Notification means a written notification to the relevant Tenant, which sets out:

(a) the estimated time it will take the Contractor to complete the Maintenance Works the subject of the relevant Work Order;

(b) the contact details of the Contractor;

(c) any required disruption to utility services or other aspects/areas of the Property;

(d) the date and time (or time period) during which the Contractor will attend the Property; and

(e) any other relevant information (if any and including as directed by the Principal from time to time).

Consumables means any and all lubricants, seals, chemicals, nuts, bolts, string fuses, washers and other consumables that are required for the proper performance of the Maintenance Works.

Contract means this document entered into between the Principal and the Contractor, including the Contract Documents.

Contract Area(s) means each of the areas identified as such in Schedule 13 (Contract Areas).

Contract Area Property List means the list of Properties issued by the Principal in accordance with clause 7.6(d). Schedule 14 (Contract Area Property List) contains the Contract Area Property List as at the Date of Contract.

Contract Details means Schedule 1 (Contract Details).

Contract Documents means those documents forming this Contract, as set out in clause 1 of the Formal Instrument of Agreement.

Contract Objectives has the meaning given in clause 2.1(a).

Contract Year means:

(a) Contract Year 1; and

(b) each 12 month period during the Term commencing on each anniversary of the Maintenance Works Commencement Date.

Contract Year 1 means the period of 12 months commencing on the Maintenance Works Commencement Date.

Contractor Invoice means a valid and fully supported Tax Invoice issued by the Contractor which satisfies all of the requirements specified in clause 11.3.

Contractor IP means Intellectual Property owned by or licensed to the Contractor (including know-how and technical information) which exists prior to the Date of Contact or is developed or acquired by the Contractor independently of this Contract which is used by the Contractor in the performance of the Maintenance Works or otherwise made available to the Principal under or in connection with this Contract, but does not include the Project IP.

Contractor Plans, Policies and Procedures mean each of the plans, policies, systems and other documents to be developed by the Contractor, in accordance with the timing, form and content requirements set out in the Contract, including those required to be developed during the Transition In Period (and each subsequent revision).

Contractor-caused Suspension means a suspension by the Principal in accordance with clause 26 necessitated by a breach of this Contract by the Contractor.

Contractor's Equipment means any and all equipment supplied by the Contractor in order to properly perform the Maintenance Works but which is not incorporated into a Property.

Control means:

(a) control or influence of, or having the capacity to control or influence the composition of the board, or decision making, directly or indirectly, in relation to the financial and operating policies;

(b) being in a position to cast, or control the casting of, 50.1% or more of the maximum number of votes that may be cast at a general meeting; or

(c) having a relevant interest in 50.1% or more of the securities,

of a relevant entity.

Corporations Act means the *Corporations Act 2001* (Cth).

COVID19 means the coronavirus disease known as "COVID-19" and includes any variants or related strains.

Crown Development has the meaning given in the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW).

Data means all data, information, documents or records of whatever nature and in whatever form relating to:

(a) the business, networks and operations of the Principal, including data, information, documents or records in relation to the Personnel of the Principal; or

(b) the Maintenance Works, including data, information, documents or records provided or required to be provided by the Contractor to Tenants or Properties,

whether existing or created before, during or after the Date of Contract and all data, information, documents or records created, generated or processed by the Contractor as part of, or in connection with, the Maintenance Works or its other obligations under this Contract, and includes:

(c) data that is Personal Information;

(d) data that is corporate, proprietary or financial information;

(e) diagrammatic or schematic data, including data representing networks, maps or technology;

(f) all data (including metadata) processed, communicated or generated in performance of the Maintenance Works, including coding and performance data; and

(g) all transformations, modifications, derivations or insights created or generation from any other Data.

Data Breach means any:

(a) unauthorised access to, or unauthorised disclosure of, or breach of security relating to any Personal Information or Data; or

(b) loss, corruption or damage to any Personal Information or Data.

Date for Work Order Commencement means, with respect to a Work Order, the date stated as such in that Work Order.

Date for Works Completion means, with respect to a Work Order, the date and time stated in that Work Order as the date for Works Completion, as may be adjusted under clause 8.4.

Date of Contract means the date of this Contract, being the date that all parties have executed this Contract.

Defect means any defect, design error, error, deficiency, omission, non-conformity, fault, failure, shrinkage, subsidence, malfunction, irregularity or other defect in or of the Maintenance Works or the Equipment, excluding where due to fair wear and tear or operational misuse, and any failure of these to comply with this Contract (including any warranties given in relation to the Maintenance Works).

Defect Notice has the meaning given in clause 21.1.

Deliverable means each of the documents and other deliverables required under this Contract to be submitted by the Contractor to the Principal, including those specified in the Maintenance Works Specification.

Determination means *Goods and Services Tax: Classes of Recipient Created Tax Invoice Determination (No. 23) 2015* or any replacement determination from time to time.

Dispute means any dispute, difference of opinion or disagreement between the parties, arising out of or in connection with this Contract.

Dispute Panel means the panel established for the purpose of clause 36.3 comprising a senior executive from each party with the authority to resolve the Dispute, each as named in the Contract Details (or as otherwise notified by either party from time to time).

Environment includes all aspects of the surroundings of human beings including:

(a) the physical characteristics of those surroundings such as the land, the waters and the atmosphere; and

(b) the biological characteristics of those surroundings such as the animals, plants and other forms of life.

Environmental Notice means any notice, order or request for information issued by any Responsible Authority regarding a matter concerning the Environment.

Equipment means equipment, plant, fixtures, fittings, components, machinery, apparatus, materials, articles and things of all kinds to be provided by the Contractor in accordance with this Contract (including under the Maintenance Works Specification) including the Consumables which are intended to be installed at or form part of a Property, but does not include Contractor's Equipment.

Escalated Matter means any matter that is the subject of an order or direction of the NSW Civil and Administrative Tribunal or any other court or tribunal (including where Maintenance Works, or the need for Maintenance Works, is the subject of such an order or direction).

Event of Force Majeure means an event or circumstance, or combination of events or circumstances, which:

(a) is beyond the reasonable control of the party affected by the event or circumstance, or combination or events or circumstances (**Affected Party**);

(b) prevents the performance by the Affected Party of any of its obligations under this Contract;

(c) is not caused or contributed to by any acts or omissions of the Affected Party or is Personnel; and

(d) where the Contractor is the Affected Party, could not reasonably have been expected to have been prevented, avoided or overcome by exercising a standard of skill, care and diligence consistent with that of a prudent, competent and experienced contactor in the circumstances,

provided that such event or circumstance is limited to the following occurring in Australia:

(e) Act of Terrorism;

(f) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any Responsible Authority of any part of the Site;

(g) ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;

(h) strikes at national or State-wide level or industrial disputes at a national or State-wide level which prevents the performance of an essential portion of the Maintenance Works, but excluding any industrial dispute which is specific to the performance of the Maintenance Works or this Contract;

(i) an act of God, earthquake, lightning, cyclone, tsunami, fire emanating from outside the Property, explosion, flood, landslide, drought or meteor;

(j) a pandemic or epidemic (other than COVID19); or

(k) act of public enemy, sabotage, malicious damage, civil unrest or acts of piracy.

Expiry Date means the last day of the Term (as may be extended in accordance with clause 5.3(a)).

Failure Threshold means each of the failure thresholds for each KPI set out in Schedule 9 (Key Performance Indicators).

Fee means the fee to be paid to the Contractor for the performance of the Maintenance Works as set out and calculated strictly in accordance with this Contract (including Schedule 8 (Fee and Payment)).

Fire Safety Laws means any Laws for the regulation of fire safety activities including the:

(a) *Building and Development and Certifiers Act 2018* (NSW);

(b) *Environmental Planning and Assessment Regulation 2000* (NSW);

(c) *Environmental Planning and Assessment Regulation 2021* (NSW); and

(d) *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW).

Fire Safety Schedule or FSS has the meaning given in the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW) and, for the avoidance of doubt, with respect to 'Crown Developments' means a document which takes the form of a 'fire safety schedule' under the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW).

Fire Safety Statement means an Annual Fire Safety Statement or a Supplementary Fire Safety Statement.

First Extended Term has the meaning given in clause 5.3(a).

Fixed Percentage means the fixed percentage for each Contract Area as set out in Schedule 8 (Fee and Payment).

Follow Up Notice means a notice from the Principal that the Contractor has failed to rectify a Defect the subject of a Defect Notice.

General Terms has the meaning given in the Formal Instrument of Agreement.

GIPA Act means the *Government Information (Public Access) Act 2009* (NSW).

Good Industry Practices means the practices followed when work is undertaken in accordance with all of the following:

(a) in a sound and workmanlike manner;

(b) with due care and skill;

(c) using materials of acceptable quality and merchantable quality which are fit for the Intended Purpose;

(d) with due expedition and without unnecessary or unreasonable delays;

(e) in accordance with all applicable Laws;

(f) subject to clause 8.10, in accordance with the Principal Plans, Policies and Procedures and Contractor Plans, Policies and Procedures; and

(g) consistently with best practice for a nationally experienced contractor of the highest skill and quality, taking into account the nature of the Properties and the Portfolio.

Gross Negligence means a negligent act or omission which, in addition to constituting negligence, results from a deliberate, wilful or reckless disregard of the consequences of such act or omission, but does not include any innocent act or omission, mistake or error of judgement.

GST has the meaning given to that term in the GST Law.

GST Law has the meaning given to that term in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

Guarantor means the entity or person identified in Item 4 of the Contract Details.

Hazardous Substance means any substance which would or might reasonably be expected to cause damage or injury to human beings, property or the Environment.

Home Building Act means the *Home Building Act 1989* (NSW) and any regulations or other instruments made under it.

Housing Act means the *Housing Act 2001* (NSW).

Industrial Matter means industrial action of any sort involving or which could involve the Contractor (or its Personnel) or the Principal (or its Personnel) in connection with the performance of the Maintenance Works, including industrial action that is happening, threatened, impending, probable or being organised.

Initial Term means the period of five years commencing on the Maintenance Works Commencement Date.

Intellectual Property means all intellectual property rights conferred by Law, at common law or in equity and subsisting anywhere in the world, including:

(a) the following:

(i) copyright;

(ii) designs (whether registered or not);

(iii) inventions (including patents, innovation patents and utility models);

(iv) trademarks and service marks (whether registered or not); and

(v) circuit layout designs and rights in databases, whether or not any of these is registered, registrable or patentable;

(b) any similar rights resulting from intellectual activity in the industrial, commercial, scientific, literary or artistic fields which subsist now or in the future; and

(c) any applications and the right to apply for registration of any of the above,

but excluding non-assignable moral rights and similar personal rights which by Law are non-assignable.

Intended Purpose means the intended purpose of the Maintenance Works:

(a) as stated in this Contract (including the Maintenance Works Specification); and

(b) as could be reasonably inferred by a reasonable and prudent Contractor from what is stated in this Contract (including in the Maintenance Works Specification).

Invoice means a Contractor Invoice or an RCTI, as the case may be.

Key Personnel means the Contractor's Personnel specified in Item 7 of the Contract Details and engaged under clause 19.4 who are, in the opinion of the Principal, critical to the performance, quality and safety of the Maintenance Works.

KPI means each key performance indicator set out in Schedule 9 (Key Performance Indicators).

Law includes:

(a) statutes, regulations, subordinate legislation, Australian Standards, ordinance, code, rule or by-laws of a Responsible Authority;

(b) the laws of New South Wales or Commonwealth of Australia;

(c) requirements, orders, directives and mandatory approvals (including conditions) of a Responsible Authority;

(d) any guidelines or policy of a Responsible Authority notified to the relevant party;

(e) the requirements or conditions of any Permits,

irrespective of whether they are in force as at the Date of Contract or come into force on or after the Date of Contract.

Learning Worker means any person who is a:

(a) trainee; or

(b) a person who is updating their qualifications to meet the needs of the Maintenance Works.

Lien means any mortgage, lien, pledge, claim, charge, lease, easement, security interest or encumbrance of any kind.

Loss includes costs and expenses of whatsoever nature (including legal fees and expenses), loss, damages or liability (including any fine, penalty or fee) whether arising under contract or in equity, under statute (to the maximum extent possible), in tort (including for negligence) or otherwise.

Maintenance Works means all works and activities undertaken or required to be undertaken by the Contractor to comply with this Contract and includes:

(a) Programmed Maintenance Works (including Supplementary Works and Additional Maintenance Works);

(b) Responsive Maintenance Works (including Supplementary Works and Additional Maintenance Works);

(c) any rectification works; and

(d) any other ancillary or incidental works or activities (including the procurement and supply of Equipment and Consumables) in connection with the works identified in paragraphs (a) to (c) above.

Maintenance Works Commencement Date means the date stated in Item 8 of the Contract Details.

Maintenance Works Specification means the specifications and requirements in relation to the Maintenance Works set out in:

(a) Schedule 2 (Maintenance Works);

(b) the SoR;

(c) Schedule 4 (Servicing Requirements);

(d) Schedule 5 (Technical Specification); and

(e) Schedule 6 (Component Requirements).

Management Fee means the management fee described in Schedule 8 (Fee and Payment).

Message Card means a physical card which includes the Contractor's name and contact details, the reason for the Contractor's attendance at the relevant SOU and the date and time of the attempted attendance by the Contractor.

Non Conformance Notice or **NCN** has the meaning given to it in clause 14.1.

Non-residential Property means:

(a) any Property which is not used for residential purposes; or

(b) or any tenancy within a Property which is not used for residential purposes.

Notice of Work means a written notification in the Approved Form to the relevant Tenant, which sets out:

(a) the nature of the Maintenance Works;

(b) the date and time which the Contractor will be attending the Property to carry out the relevant Maintenance Works;

(c) the estimated time it will take the Contractor to complete the Maintenance Works at each SOU;

(d) the contact details of the Contractor and a request for the Tenant to call and confirm an appointment time;

(e) any required disruption to power, gas, water or sewerage or other aspects/areas of the Property; and

(f) any other relevant information (if any and including as directed by the Principal from time to time).

Observation Notice means a notice issued by the Principal under section 6.3 of Schedule 3 (Operational Requirements).

Occupied means tenanted under a tenancy arrangement.

Operational Requirements means Schedule 3 (Operational Requirements).

Parent Company Guarantee means the parent company guarantee provided by the Guarantor in the form specified in clause 12.2.

Performance Benchmark means each of the performance benchmarks for each KPI set out in Schedule 9 (Key Performance Indicators).

Permit means any authorisation, consent, approval, licence, accreditation or registration from or with any Responsible Authority that is required to be held by the Contractor to carry out the Maintenance Works or to perform any obligation under this Contract.

Personal Information means has the meaning given in the Privacy Laws.

Personnel means:

(a) for the Principal: each of the Principal's employees, agents, consultants, directors, representatives and contractors (other than the Contractor and its Personnel); and

(b) for the Contractor: each of the Contractor's employees, agents, consultants, directors, representatives (including the Contractor's Representative), each Subcontractor and each Subcontractor's employees, agents, consultants, representatives and subcontractors.

Portfolio means the portfolio of Properties owned and managed by the Principal from time to time.

Post Work Inspection has the meaning given to it in clause 14.2.

PPSA means the *Personal Property Securities Act 2009* (Cth) and any regulations made at any time under the PPS Act, as amended from time to time.

Pre-Completion Inspection has the meaning given to it in clause 14.2.

Principal Contractor means the principal contractor for the purposes of the Work Health and Safety Requirements.

Principal IP means Intellectual Property owned by or licensed to the Principal (including know-how and technical information) but does not include Contractor IP or Project IP.

Principal Plans, Policies and Procedures means the Principal's plans, policies and procedures as set out in Item 12 of the Contract Details (as amended from time to time in accordance with clause 8.10).

Principal Supplied Information means any information provided by the Principal to the Contractor, whether before or after the Date of Contract.

Principal Initiated Suspension means a suspension in accordance with clause 26 other than a Contractor-caused Suspension.

Privacy Laws means the *Privacy and Personal Information Protection Act 1998* (NSW), the *Health Records and Information Privacy Act 2002* (NSW) and the *Privacy Act 1988* (Cth).

Programmed Maintenance Works has the meaning given to it in Schedule 2 (Maintenance Works).

Programmed Work Orders means a Work Order which the Principal designates as a Work Order for Programmed Maintenance Works.

Programmed Works Plan or PWP means a plan prepared by the Contractor in the Approved Form which:

(a) describes each fire safety measure and the quantity installed;

(b) sets out the Maintenance Works including the frequency of all inspections, testing and assessments (with reference to AS1851 and the Maintenance Work Specifications); and

(c) whether the AFSS Due Date corresponds with the period for the submission of any Fire Safety Statement to the relevant Responsible Authority,

each for the relevant Property for the relevant Contract Year.

Project IP means all Intellectual Property arising out of, created or developed by the Contractor, a Subcontractor or any of the Contractor's Personnel in performing the Maintenance Works and its other obligations under or in connection with this Contract, including all software, documents, drawings, designs and other materials created or arising in the performance of the Maintenance Works, but does not include Contractor IP or Principal IP.

Property means any land, building or asset owned, maintained or managed by the Principal and includes:

(a) any and all fixtures and fittings; and

(b) any individual areas within that land, building or asset including Common Areas and any one or more SOUs (as relevant).

Qualifying Change in Law means a Change in Law which:

(a) necessitates a change to the Maintenance Works Specification; or

(b) makes completion of the Maintenance Works or the Contractor's activities to be performed under this Contract more burdensome than the requirements specified in this Contract prior to the Change in Law,

but for the avoidance of doubt excludes:

(c) *Environmental Planning and Assessment (Development Certification and Fire Safety) Amendment (Fire Safety) Regulation 2022* (NSW); and

(d) any changes associated with or arising from that regulation.

Quarter means each of the following periods:

(a) the period 1 July to 30 September (inclusive) in any year;

(b) the period 1 October to 31 December (inclusive) in any year;

(c) the period 1 January to 31 March (inclusive) in any year;

(d) the period 1 April to 30 June (inclusive) in any year.

RAPM Contract means a contract between the Principal and a third party contractor for the provision of responsive and programmed maintenance works at Properties in the Portfolio.

RAPM Contractor means a third party contractor engaged by the Principal under an RAPM Contract.

RCTI or **Recipient Created Tax Invoice** means a recipient created tax invoice issued in respect of a supply made by the Contractor under or in connection with this document and has the meaning given to that term in the GST Law.

Relevant Time means within 28 days of the relevant Taxable Supply being made, or the Principal determining the value of the relevant Taxable Supply, whichever is later.

Relief Event means:

(a) a Tenant:

(i) failing or refusing to make an appointment, attend an appointment or allow the Contractor to access the Site to enable the Contractor to carry out the Maintenance Works;

(ii) physically preventing or hindering the Maintenance Works;

(b) an industry-wide and market-wide unavailability of Equipment (not limited to the Contractor's Subcontractors or broader supply chain);

(c) a breach of the Contract by the Principal;

(d) Type 2 Supplementary Works directed by the Principal;

(e) an Event of Force Majeure;

(f) unforeseeable physical conditions of the Site, or the presence of a dangerous animal on the Site, which:

(i) renders it unsafe to perform the Maintenance Works in accordance with applicable Work Health and Safety Requirements;

(ii) physically prevents the Contractor from carrying out Maintenance Works; or

(iii) necessarily prevents the Contractor from completing the Maintenance Works by the Date for Works Completion;

(g) inclement weather (and the effects thereof), but only to the extent that the inclement weather or effects thereof occur at the relevant Site the subject of the relevant Work Order; or

(h) a delay by a Responsible Authority in providing an Approval (other than a Permit), which is required for the performance of the relevant Work Order, other than a delay which is attributable to the Contractor or its Personnel.

Replacement Security means any guarantee or other security procured or provided by the Contractor in favour of the Principal in accordance with clause 12.

Reporting Templates means each of the templates included in Schedule 10 (Reporting Templates) and any other report template provided by the Principal to the Contractor (whether before or after the Date of Contract).

Residential Tenancies Act or RTA means the *Residential Tenancies Act 2010* (NSW).

Responsible Authority means any national, local, regional, territorial or municipal government, ministry, governmental department, commission, board, bureau, agency, instrumentality, executive, legislative, judicial or administrative body, having jurisdiction over the Maintenance Works, the Properties, the Contractor or the Principal.

Responsive Maintenance Works has the meaning given to it in Schedule 2 (Maintenance Works).

Responsive Work Order means a Work Order which the Principal designates as a Work Order for Responsive Maintenance Works.

RTA means the *Residential Tenancies Act 2010* (NSW).

Ruling means Goods and Services Tax Ruling 2000/10, or any replacement ruling from time to time.

Second Extended Term has the meaning given in clause 5.3(b).

Security Interest means any mortgage, pledge, encumbrance, Lien or charge or any security or preferential interest or arrangement of any kind, including:

(a) anything which gives a creditor priority to other creditors with respect to any asset;

(b) any assignment by way of security, hypothecation, option, lease, trust or assignment;

(c) retention of title;

(d) a "security interest" as defined in sections 12(1) or 12(2) of the PPSA; or

(e) any agreement to create or give an arrangement to effect any of the above.

Security of Payment Act means the *Building and Construction Industry Security of Payment Act 1999* (NSW).

SFSS Contract means a contract between the Principal and a third party contractor for the provision of maintenance works of the same or similar nature to the Maintenance Works at Properties in the Portfolio.

SFSS Contractor means a third party contractor engaged by the Principal under an SFSS Contract.

Site means that part of a Property where the Contractor carries out, or is required to carry out, Maintenance Works (including any part used as access or egress).

Site Conditions means the conditions of the Site and its surrounds including:

(a) the general and local conditions for environment, meteorological, seismic activity, climatic conditions and solar and wind conditions;

(b) transportation, access, waste disposal, handling and storage of materials;

(c) the physical condition of any buildings and assets, including any and all fixtures, fittings and building materials;

(d) availability and quality of all necessary utilities and availability and condition of roads;

(e) topography and ground surface conditions, subsurface geology and conditions, nature and quantity of surface and subsurface materials to be encountered, location of underground utilities and the condition of existing structures; and

(f) any other site conditions set out in the Contract Documents or the Principal Supplied Information.

SoR means each of the schedules included in Schedule 7 (SoR).

SoR Code means the unique identifier for each SoR Item in column B of the SoR (except in relation to 'IT Admin Codes' where the reference is in column A).

SoR Item means each item of work with a designated number included in the SoR.

SoR Prices means the lump sum price for each SoR Item, as adjusted in accordance with Schedule 8 (Fee and Payment).

SOU or Sole Occupancy Unit or Unit means an individual dwelling within a Property, where the Property comprises multiple dwellings.

Specified Steps means each of the steps and activities set out in section 1.1 of Schedule 3 (Operational Requirements).

Subcontract means any agreement under which the Contractor subcontracts any part of the Maintenance Works to a Subcontractor.

Subcontractor means any person to whom performance of any part of the Maintenance Works is subcontracted by the Contractor.

SUI or Single User Interface means the Principal's IT system as described in Schedule 12 (IT Requirements).

SUI Interim Side Agreement (if applicable) means the agreement signed by the parties on or around the Date of Contract as an interim side agreement to this Contract, and which governs the parties' respective obligations in relation to the SUI integration and corresponding interim arrangements for the duration of that side agreement.

Supplementary Fire Safety Statement has the meaning given in *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* (NSW).

Supplementary Works means Type 1 Supplementary Works and Type 2 Supplementary Works.

Supply has the meaning given in the GST Law.

Tax means all taxes pursuant to any Law (whether currently in force or coming into force on or after the Date of Contract), including, all sales, excise and storage taxes, licence and permit fees, income, profit, fringe benefit, franchise, personal property taxes, payroll and employment taxes, levies, imposts, deductions, charges, withholdings and duties (including, stamp and transaction duties), together with any related interest, penalties, additional tax, fines and other statutory charges and whether imposed by Responsible Authority.

Tax Invoice has the meaning given to that term in the GST Law.

Taxable Supply has the meaning given in the GST Law.

Tenant means any person occupying a Property.

Term means the Initial Term, as may be extended under clause 5.3 (including the First Extended Term, Second Extended Term and Third Extended Term) and any period of holding over.

Third Extended Term has the meaning given in clause 5.3(c).

Transition Activities means all of the works and activities as specified in the Transition In Plan, which will cover:

(a) the Contractor's obligations under clause 3;

(b) communication;

(c) information technology (including the SUI);

(d) risk management;

(e) resourcing (including Key Personnel);

(f) quality systems;

(g) Contractor Plans, Policies and Procedures; and

(h) any other matters or items directed by the Principal.

Transition Completion has the meaning given in clause 3.5(f).

Transition In Payment means the amount determined under section 6 of Schedule 8 (Fee and Payment).

Transition In Period means the period commencing on the Date of Contract and ending one day prior to the Maintenance Works Commencement Date.

Transition In Plan means the Contractor's written plan for the performance of the Transition Activities approved by the Principal.

Type 1 Supplementary Works means, in respect of a Work Order, Responsive Maintenance Works that:

(a) are not expressly included in a Work Order issued by the Principal;

(b) relate to Responsive Maintenance Works that are included in a Work Order issued by the Principal in relation to a 4H or 24H Work Priority Code and are required to adequately address the need for Maintenance Works;

(c) either:

  (i) are required to be carried out (or, for practical reasons, should be carried out) before the Maintenance Works included in the Work Order are carried out; or

  (ii) are (or will be) required as a direct result of carrying out the Maintenance Works included in the Work Order; and

(d) have a total value equal to or less than the Type 1 Supplementary Works Threshold.

Type 1 Supplementary Works Threshold means:

(a) in respect of a Work Order with a Work Priority Code of 4H or 24H the sum of $650 (including any GST); and

(b) in respect of a Work Order with a Work priority Code which is not 4H or 24H the sum of $450 (including any GST),

each as may be amended at any time and from time to time by the Principal in its sole discretion.

Type 2 Supplementary Works means, in respect of a Work Order, Responsive Maintenance Works that:

(a) are not expressly included in a Work Order issued by the Principal;

(b) relate to Responsive Maintenance Works that are included in a Work Order issued by the Principal in relation to a 4H, 24H, 5D, 10D or 18D Work Priority Code and are required to adequately address the need for Maintenance Works;

(c) either:

(i) are required to be carried out (or, for practical reasons, should be carried out) before the Maintenance Works included in the Work Order are carried out;

(ii) are (or will be) required as a direct result of carrying out the Maintenance Works included in the Work Order; or

(iii) are required to adequately address the need for Maintenance Works; and

(d) where the Work Order that has been issued by the Principal relates to a 24H or 5D Work Priority Code, have a total value that exceeds the Type 1 Supplementary Works Threshold.

Vacant means not tenanted under a tenancy arrangement.

Warranty includes:

(a) an installation or workmanship warranty;

(a) a manufacturers' warranty;

(b) certification by, for, or as the result of a requirement of a Responsible Authority; or

(c) self-certification by the persons completing the performance of the relevant SoR Item.

Wilful Misconduct means, regarding a party:

(a) any fraud, fraudulent concealment or dishonesty;

(b) any conduct, act or omission having substantially harmful consequences, done or omitted to be done intentionally and with conscious or indifference to, or disregard for, the rights or welfare of those who are or may be thereby affected; or

(c) any criminal or malicious act or omission of the party or any of its Personnel.

Work Classification means each of the classifications identified in section 2.3 of Schedule 2 (Maintenance Works).

Work Health and Safety Requirements means the following requirements related to work health and safety, dangerous goods or electricity safety:

(a) the *Work Health and Safety Act 2011* (NSW) and the *Work Health and Safety Regulations 2017* (NSW) and lawful directions and notices issued thereunder;

(b) the 'SafeWork NSW Construction Work Code of Practice'; and

(c) all other relevant health and safety regulations, codes of practice or safety standards as applicable (where such standard and codes have the force of law) or any other Law dealing with work health and safety that may apply from time to time.

Work Order means a work order issued by the Principal under this Contract for Maintenance Works.

Work Priority Code means a work priority code identified in Attachment A of Schedule 3 (Operational Requirements).

Works Completion means, in respect of a Work Order, the stage in the performance of the Work Order where the Contractor has:

(a) completed the performance of every SoR Item in that Work Order (if any) in accordance with this Contract (and all such Maintenance Works are free of Defects);

(b) completed the performance of all Additional Maintenance Works (if any) in accordance with this Contract (and all such Maintenance Works are free of Defects);

(c) completed the performance of any Type 1 Supplementary Works (if any) in accordance with this Contract (and all such Maintenance Works are free of Defects);

(d) completed and submitted to the Principal any reports and certifications required by the Maintenance Works Specification, in the form of the Reporting Templates (where applicable);

(e) tidied the Site and secured the Property (where appropriate); and

(f) notified the Principal that it has completed all of the Maintenance Works for the relevant Work Order in accordance with section 1.1(h)(iii) of Schedule 3 (Operational Requirements).

1.2 General

In this Contract, unless the contrary intention appears:

(a) a term that is defined in these General Terms, Schedule 2 (Maintenance Works), Schedule 3 (Operational Requirements), Schedule 8 (Fee and Payment) or Schedule 9 (Key Performance Indicators) shall have that defined meaning in all Contract Documents;

(b) a reference to a document is to the document as varied, amended, supplemented, novated or replaced from time to time;

(c) a reference to a standard, statute, ordinance, code or other Law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;

(d) the singular includes the plural and vice versa;

(e) if a period of time is specified and dates from a given day or the day of an actual event, it is to be calculated exclusive of that day;

(f) a reference to time is to local time in Sydney;

(g) a reference to a party, clause, paragraph, Annexure or Schedule is a reference to a party, clause, paragraph, Annexure or Schedule to this Contract;

(h) headings and the table of contents are for reference only and do not form part of this Contract;

(i) references to the word "include" and "including" are not words of limitation and any time such term is used in this Contract it is to be construed as if the words "without limitation" are included immediately after such term;

(j) an example or a list of examples is not limited to those items or to items of a similar kind;

(k) a word that is derived from a defined word has a corresponding meaning;

(l) words denoting any gender include all genders;

(m) where an obligation or liability is imposed on a party under this Contract, that obligation or liability is not to be limited or affected by an obligation or liability imposed in another provision of this Contract unless expressly stated;

(n) the Principal does need not to have made any payments in respect of any cost or expense before enforcing any indemnity contained in this Contract;

(o) where a right or remedy is conferred on a party under this Contract, that right or remedy is in addition to, and not in substitution of, any other right or remedy conferred on the Principal under this Contract or otherwise according to Law;

(p) the term 'may' when used in the context of a power or right exercisable by a party means that that party can exercise that right or power in its absolute and unfettered discretion and that party has no obligation to the other party to do so;

(q) subject to the terms of this Contract, where under this Contract the Principal may (or it is otherwise contemplated that the Principal can) give or withhold its consent or approval, the Principal has an absolute and unfettered discretion as to whether it gives, conditionally or unconditionally, or withholds that consent or approval;

(r) references to '$' or 'AUD' is to Australian currency; and

(s) references to the word 'person' includes an individual, corporation, partnership, joint venture, association, trust, unincorporated organisation or Responsible Authority or any other entity, and includes executors their successors, personal representatives, permitted substitutes (including persons taking by novation) and permitted assigns.

1.3 Codes and standards

Wherever references are made in this Contract to codes and standards under which the Maintenance Works are to be performed, the most recent edition or the revised version of such codes and standards applies, unless otherwise specified.

1.4 Construction

Neither this Contract nor any part of it is to be construed against a party on the basis that the party or its lawyers were responsible for its drafting.

2 Contract Objectives

2.1 Contract Objectives

(a) The Contractor acknowledges that the high-level objectives of this Contract are as follows:

(i) maintaining the fire safety systems within each relevant Property in compliance with Law, all applicable standards and the Maintenance Works Requirements; and

(ii) minimising risk to persons and property through the delivery of high quality and timely Maintenance Works,

(each a **Contract Objective**).

(b) The Contract Objectives are flexible and are intended to generally describe the outcomes sought by the Principal under this Contract.

(c) The parties acknowledge and agree that the Contract Objectives are not a comprehensive statement of outcomes and that the provisions of this Contract will not be construed in a manner which alleviates the Contractor of or derogates in any way from any obligation under this Contract.

2.2 Continuous Improvement

The Contractor must:

(a) continuously review its activities, systems, ways of working and performance with a view to identifying ways in which the Contractor can improve the efficiency, quality and timeliness of delivery of the Maintenance Works, having regard to the Contract Objectives and the requirements of this Contract;

(b) continuously identify, consider and develop strategies to:

(i) improve the efficiency and effectiveness of the Maintenance Works (including cost savings to the Principal);

(ii) improve processes and procedures for achieving the Contract Objectives;

(iii) utilise capacity;

(iv) improve Tenant satisfaction;

(v) manage Tenant interference with fire safety measures within Properties in a manner which reduces the need for Maintenance Works; and

(vi) manage and implement changes in Good Industry Practice including by identifying to the Principal emerging trends in relation to the Maintenance Works; and

(c) when reasonably requested by the Principal, provide a written report to the Principal identifying the matters referred to in clauses 2.2(a) and 2.2(b) above, together with details of the steps taken by the Contractor to realise any opportunities identified by the Contractor.

3 Transition In

3.1 Transition In Period

Subject to clause 35, this Contract commences of the Date of Contract and will be in the Transition In Period until the Maintenance Works Commencement Date.

3.2 Access Keys

(a) The Principal may, during the Transition In Period, provide to the Contractor a set of keys for each Property and a key register of keys provided for that Property.

(b) Upon receipt of the keys and key register for a Property, the Contractor is responsible for the management, maintenance and safe keeping of those keys and key register.

(c) If, in the course of performing the Transition In Activities the Contractor identifies missing keys for any Property:

(i) the Contractor must identify the location of the relevant lock to the Principal;

(ii) the Principal may procure a key and provide it to the Contractor; and

(iii) upon receipt of a key from the Principal, the Contractor must update the relevant key register and maintain safe custody of that key.

(d) If at any time following the Maintenance Works Commencement Date:

(i) a key which is held by the Contractor is lost, stolen, broken or otherwise becomes unavailable for use, the Contractor must:

(A) procure such replacement at its cost;

(B) provide a copy of the replacement key to the Principal; and

(C) update the relevant key register;

(ii) another contractor of the Principal, including a RAPM Contractor or an SFSS Contractor replaces a lock, the Principal may:

(A) provide a copy of the replacement key to the Contractor; and

(B) the Contractor must update the relevant key register.

3.3 Building Inspections

(a) Promptly after the Date of Contract (and at times and within sufficient time periods to ensure that the Contractor complies with its obligations under clause 3.4(a)), the Contractor must inspect in person each Property in the Allocated Contract Areas for the purposes of the Contractor:

(i) auditing and verifying the number of SOUs in each Property; and

(ii) preparing each of the documents required under clause 3.4.

(b) Within 15 days after the Date of Contract (or such other time period as directed by the Principal in its sole discretion) the Contractor must provide to the Principal a schedule in an Approved Form setting out the dates and times upon which the Contractor will inspect each Property in the Allocated Contract Areas.

(c) The Principal may, acting reasonably, provide comments upon or require that the Contractor make changes to the inspection schedule, in which case the Contractor must make any changes to the inspection schedule and resubmit it to the Principal.

(d) Where the Contractor requires access to an SOU within a Property in order to inspect a Property or prepare the documents required under clause 3.4, it must promptly notify the

Principal. Following receipt of a notice from the Contractor, the Principal may take one or more of the following steps:

(i) procure access to the relevant SOU, in which case the Contractor must attend the SOU at the time organised by the Principal;

(ii) notify the Contractor of the services, systems and components located in the relevant SOU (in which case the Contractor will prepare the documents under clause 3.4 on the basis of that notification);

(iii) direct the Contractor to note the absence of an inspection of those SOUs in its draft documents submitted under clause 3.4; and

(iv) direct the Contractor to arrange and attend an inspection after the Maintenance Works Commencement Date (in which case the Contractor must update the relevant documents following completion of such inspection).

(e) The Contractor must not attend any Property (including for an inspection) unless and until it has provided to the Principal evidence that the Contractor has complied with its obligations under clause 24 (including providing copies of certificates of currency for all required insurance policies).

3.4 Component Register, Fire Safety Schedules and Programmed Works Plan

(a) For each Property in an Allocated Contract Area, the Contractor must:

(i) inspect the Property in accordance with the inspection schedule under clause 3.3(a);

(ii) check whether the number and location of SOUs within the Property matches the SOUs set out in the Contract Area Property List and if the Contractor discovers any discrepancy, it must immediately provide the details of the discrepancy to the Principal;

(iii) prepare and provide to the Principal a draft:

(A) Component Register; and

(B) Programmed Works Plan for Contract Year One,

progressively as each document is completed for each Property following the Contractor's inspection and in any event, ensure that each such document is prepared and provided to the Principal for every Property in the Contract Area Property List on or before the earlier of:

(C) the date which is 90 days after the Date of Contract; and

(D) 1 May 2024,

or a later date notified to the Contractor by the Principal in its sole discretion.

(b) Subject to clause 3.3(d)(iii), any Component Register or Programmed Works Plan prepared by the Contractor must meet or exceed the requirements of clause 6.1.

(c) If the Principal, acting reasonably, has comments in relation to a Component Register or Programmed Works Plan (as applicable), the Principal will provide notice to the Contractor and the Contractor must, within 10 Business Days after receiving the Principal's comments, address any such comments and amend the Component Register or Programmed Works Plan (as applicable) so that it:

(i) addresses the Principal's comments; and

(ii) complies with the requirements of this Contract,

in which case clause 3.4(a) will apply to the amended document.

(d) Where the Contractor identifies and notifies a discrepancy under clause 3.4(a)(ii), the Principal will confirm the number of SOUs in each Property by updating the relevant Contract Area Property List within 20 days of the Maintenance Works Commencement Date (such update will also constitute a notice from the Principal for the purposes of section 4.2(a) of Schedule 8 (Fee and Payment)).

(e) If the Principal provides to the Contractor an existing Fire Safety Schedule for a Property, the Contractor must review the Fire Safety Schedule and must identify and notify the Principal of any material errors or omissions in the Fire Safety Schedule, when it submits the Programmed Works Plan under clause 3.4(a)(iii) for the Property to which the Fire Safety Schedule relates.

(f) The Contractor acknowledges and agrees that any existing component registers, Fire Safety Schedules and annual fire safety statements provided by the Principal to the Contractor is Principal Supplied Information.

3.5 Transition In Plan

(a) Within 15 days after the Date of Contract (or such later time period as directed by the Principal in its sole discretion):

(i) the Contractor must attend a 'start up' workshop with the Principal (on a date and at a time and location as reasonably notified by the Principal); and

(ii) the Contractor must provide to the Principal a Transition In Plan.

(b) If, following receipt of the Transition In Plan, the Principal requires, acting reasonably, any amendments to the Transition In Plan, the Principal may notify the Contractor, in which case the Contractor must promptly issue a revised Transition In Plan addressing all such matters raised in the Principal's notice.

(c) After the Principal receives a revised Transition In Plan, the Principal must either:

(i) notify the Contractor that the revised Transition In Plan requires further amendments, in which case clause 3.5(b) applies; or

(ii) approve the revised Transition In Plan.

(d) Notwithstanding that the Principal has required amendment to the Transition In Plan, the Contractor must continue to perform the Transition In Activities such that it will achieve Transition Completion on or before the Maintenance Works Commencement Date, including complying with any reasonable directions from the Principal directing the Contractor to carry out and progress the Transition In Activities.

(e) During the Transition In Period, the Contractor must comply with the Transition In Plan in accordance with the specified requirements and timelines, including completion of milestones by the relevant milestone date. Without limiting the foregoing, the Contractor must achieve Transition Completion by the Maintenance Works Commencement Date.

(f) The parties acknowledge and agree that Transition Completion will occur on successful completion of all Transition Activities (and associated milestones) in accordance with the Transition In Plan and satisfaction of all criteria or requirements for the performance or completion of the Transition Activities as are specified in the Transition In Plan.

(g) The Contractor must perform all Transition Activities in a way that causes no disruption to the existing maintenance works on the Properties in the Portfolio undertaken by existing contractors.

(h) The Contractor must provide the Principal with weekly progress reports (or as otherwise required by the Principal) that describe in reasonable detail the current status of the Transition Activities, identify any actual or potential issues, delays and anticipated risks and proposed solutions for them that enables Transition Completion to be achieved by the Maintenance Works Commencement Date.

(i) The Contractor must implement all agreed solutions referred to in clause 3.5(h) and promptly take all reasonable actions necessary to resolve issues with transition.

3.6 Failure to comply with the Transition In Plan

(a) If:

(i) there is no Transition In Plan approved by the Principal by the date which is 30 days after the Date of Contract;

(ii) the Contractor fails to comply with the Transition In Plan in accordance with clause 3.1; or

(iii) the Principal reasonably considers that the Contractor will not achieve Transition Completion by the Maintenance Works Commencement Date,

the Principal may terminate this Contract by notice in writing to the Contractor with immediate effect and this Contract will be of no further effect.

(b) If the Principal terminates this Contract during the Transition In Period in accordance with this clause 3.6 due to a failure by the Contractor, the Principal has no liability to the Contractor and the Contractor will not be entitled to Claim any amount, including for set-up costs or any other costs incurred during or before the Transition In Period (including for the Transition In Payment).

4 SUI Interim Side Agreement

4.1 SUI Interim Side Agreement

(a) In circumstances where an SUI Interim Side Agreement applies, the parties agree to fully comply with the terms of this Contract as amended by the SUI Interim Side Agreement, until such time as the SUI Interim Side Agreement expires or is terminated in accordance with the provisions of that SUI Interim Side Agreement.

(b) For the avoidance of doubt, an SUI Interim Side Agreement will only apply where it is has been executed by both the Principal and the Contractor in accordance with the provisions of that SUI Interim Side Agreement.

5 Term

5.1 Commencement of the Maintenance Works

(a) From the Maintenance Works Commencement Date to the Expiry Date, the Contractor will diligently and expeditiously perform the Maintenance Works in accordance with Work Orders for the Fee.

(b) Other than payment of the Transition In Payment calculated strictly in accordance with Schedule 8 (Fee and Payment), and notwithstanding anything to the contrary contained

in this Contract, the Principal will not be liable under this Contract or otherwise for any payment to the Contractor, prior to the Maintenance Works Commencement Date or for any activities carried out prior to the Maintenance Works Commencement Date.

5.2 Initial Term

Subject to the terms of this Contract, the Principal engages the Contractor to perform the Maintenance Works for the Initial Term.

5.3 Extension to Term

(a) The Principal may in its absolute discretion extend the Initial Term for a period of, or up to, 2 years (**First Extended Term**) by giving the Contractor written notice no later than 3 months prior to the expiry of the Initial Term.

(b) The Principal may in its absolute discretion extend the First Extended Term for a period of, or up to, 2 years (**Second Extended Term**) by giving the Contractor written notice no later than 3 months prior to the expiry of the First Extended Term.

(c) The Principal may in its absolute discretion extend the Second Extended Term for a period of, or up to, 1 year (**Third Extended Term**) by giving the Contractor written notice no later than 3 months prior to the expiry of the Second Extended Term.

(d) If the Principal exercises its option to extend the Initial Term, the First Extended Term or the Second Extended Term (as applicable):

(i) this Contract will be extended for the relevant period as contemplated by clauses 5.3(a), 5.3(b) or 5.3(c) (as applicable); and

(ii) the parties will continue to be bound by the terms of this Contract and the First Extended Term, the Second Extended Term and the Third Extended Term will be governed by the same terms and conditions that apply to the Initial Term.

6 SFSS Document Deliverables

6.1 Requirements

(a) The Contractor must (and warrants that it will) prepare and maintain throughout the Term, each Component Register, Fire Safety Statement and Programmed Works Plan so that each document (as applicable):

(i) is at all times complete, comprehensive and accurate;

(ii) complies with and satisfies the requirements of any applicable Law and any Responsible Authority;

(iii) complies with the requirements of AS1851:2012;

(iv) complies with and satisfies the requirements of the Maintenance Works Specification; and

(v) is fit for the Intended Purpose.

(b) The Contractor must (and warrants that it will) prepare and maintain throughout the Term, each Programmed Works Plan so as to ensure that each and every service, system and component identified in each Component Register and Fire Safety Statement will, if maintained in accordance with the Programmed Works Plan:

(i) complies with and satisfies the requirements of any applicable Law and any Responsible Authorities;

(ii) complies with and satisfies the requirements of AS1851:2012;

(iii) complies with and satisfies the requirements of the Maintenance Works Specification;

(iv) complies with and satisfies the Principal's Plans, Policies and Procedures; and

(v) is fit for the Intended Purpose.

(c) Clauses 6.1(a) and 6.1(b) apply to all Component Registers, Fire Safety Statements and Programmed Works Plan prepared by the Contractor during the Term.

6.2 Monthly Walkthrough

(a) The Contractor must, at least once each month from the Maintenance Works Commencement Date, complete a walkthrough and inspection of Common Areas in each Property in the Contract Area Property List to:

(i) identify any changes to the Component Register;

(ii) identify any aspect of the Property which may require Maintenance Works not already included in the relevant Programmed Works Plan (in which case the Contractor must identify such Maintenance Works to the Principal upon completion of the inspection); and

(iii) satisfy any other requirement of the Maintenance Works Specification.

(b) The Contractor must, promptly following completion of each walkthrough and inspection, submit a report to the Principal in the Approved Form.

6.3 Updates to Component Register

The Contractor must regularly (and at least once per month) throughout the Term update and maintain the Component Register for each relevant Property in the Contract Area Property List.

6.4 Initial Programmed Works Plan

For each Property in the Contract Area Property List, the Programmed Works Plan for Contract Year 1 is the document prepared by the Contractor under clause 3.4.

6.5 Annual Update to Programmed Works Plan

(a) After 30 April but no later than 1 June in each Contract Year commencing in Contract Year 1, the Contractor must prepare and issue to the Principal an updated Programmed Works Plan for each Property in the Contract Area Property List.

(b) The Principal may (but is not required to) review any Programmed Works Plan prepared by the Contractor and may provide comments in relation to the relevant Programmed Works Plan.

(c) If the Principal, acting reasonably, provides comments in relation to any Programmed Works Plan, the Contractor must, within 10 Business Days after receiving the Principal's comments, update the Programmed Works Plan such that it:

(i) addresses the Principal's comments; and

(ii) complies with the requirements of this Contract,

in which case clause 6.5(b) will apply to the amended Programmed Works Plan.

(d) A Programmed Works Plan prepared for a Property which is classified as a Crown Development must comply with the requirements of clause 6 as if the Property were not a Crown Development.

6.6 Update to Fire Safety Schedule

(a) Where requested by the Principal, the Contractor must prepare and issue to the Principal:

(i) a new Fire Safety Schedule (where an existing Fire Safety Schedule is not available); or

(ii) an updated Fire Safety Schedule (including where the fire safety measures within the Property have changed),

for the relevant Property within 15 days of a request by the Principal to do so.

(b) The Principal may (but is not required to) review any Fire Safety Schedule prepared by the Contractor and may provide comments in relation to the relevant Fire Safety Schedule.

(c) If the Principal, acting reasonably, provides comments in relation to any Fire Safety Schedule, the Contractor must, within 5 Business Days after receiving the Principal's comments, update the Fire Safety Schedule such that it:

(i) addresses the Principal's comments; and

(ii) complies with the requirements of this Contract,

in which case clause 6.6(b) will apply to the amended Fire Safety Schedule.

(d) A Fire Safety Schedule prepared for a Property which is classified as a Crown Development must comply with the requirements of clause 6 as if the Property were not a Crown Development.

6.7 Fire Safety Statement

(a) The Contractor must:

(i) ensure that an Accredited Practitioner (Fire Safety) completes the Fire Safety Statement including:

(A) any applicable assessment required by AS1851:2012 and Schedule 4 (Servicing Requirements);

(B) any inspection or assessment of fire safety measures, exits and paths of travel; and

(C) fitness for purpose verification of each fire safety measure;

(ii) coordinate the preparation of each Fire Safety Statement with any other party which may also be required to execute the relevant Fire Safety Statement, such that the Fire Safety Statement is complete before the AFSS Due Date; and

(iii) prepare and submit to the Principal a Fire Safety Statement for each relevant Property in the Contract Area Property List on or before the AFSS Due Date and

in accordance with the relevant Work Order issued by the Principal for that Property.

(b) Any Fire Safety Statement prepared for a Property which is classified as a Crown Development must comply with the requirements of clause 6 as if the Property were not a Crown Development.

6.8 Fire Safety Statement Work Orders

If the Contractor does not receive a Work Order for the preparation of a Fire Safety Statement for one or more relevant Properties in the Contract Area Property List, then the Contractor must, not earlier than 90 days prior to the AFSS Due Date for the relevant Property (but not later than 60 days prior to the AFSS Due Date for the relevant Property), notify the Principal in writing that it has not received a Work Order for that Property.

6.9 Interactions with Responsible Authority

(a) If the Contractor becomes aware of anything which may delay the finalisation of a Fire Safety Statement for any Property, the Contractor must immediately notify the Principal and comply with any reasonable directions from the Principal, including a direction to submit a 'stay of penalty infringement notice' to the relevant Responsible Authority in connection with the delayed submission of a Fire Safety Statement.

(b) Following receipt of a Fire Safety Statement from the Contractor, the Principal may require the Contractor to:

(i) address any error in the Fire Safety Statement (such that it complies with all of the requirements of the Contract and applicable Laws); or

(ii) submit the Fire Safety Statement to the relevant Responsible Authority, in which case the Contractor must submit the Fire Safety Statement to the Responsible Authority within 2 days.

(c) The Principal may:

(i) sign the relevant Fire Safety Statement as the owner of the relevant Property; or

(ii) may require the Contractor to sign Fire Safety Statement as 'owner's agent'.

6.10 Recovery of cost

If the Principal incurs any cost (including fines, penalties and fees) in connection with a Fire Safety Statement as a result of the Contractor failing to comply with its obligations under this Contract, the Principal may issue a notice in writing to the Contractor, providing details of the amount incurred. The Principal may recover such amount as a debt due and payable 10 Business Days after the Contractor receives the Principal's notice.

6.11 Changes to the Contract Area Property List

(a) Where:

(i) the Principal adds a Property to any Allocated Contract Area or Alternative Contract Area under clause 7; or

(ii) the Principal issues a notice under clause 7.7(b) in respect of an Alternative Contract Area,

the Principal may direct the Contractor to:

(iii) promptly inspect the Property; and

(iv) prepare and provide to the Principal drafts of any one or more of the following in respect of the relevant Property (including, where directed by the Principal, by reviewing and providing comments upon any such documents prepared by another SFSS Contractor):

(A) the Component Register; and

(B) the Programmed Works Plan for the current Contract Year,

within:

(v) 20 Business Days of the date on which the Contractor is notified by the Principal that the Property will be added to the relevant Contract Area; or

(vi) four months of the date on which the Principal issues a notice under clause 7.7(b).

(b) Any Component Register or Programmed Works Plan prepared by the Contractor must meet or exceed the requirements of clause 6.1.

(c) If the Principal provides to the Contractor an existing Fire Safety Schedule, the Contractor must identify and notify the Principal of any material errors or omissions in the Fire Safety Schedule, when it submits the Programmed Works Plan under clause 6.11(a) for that Property.

(d) If the Principal, acting reasonably, has comments in relation to a Component Register or Programmed Works Plan (as applicable), the Principal will provide notice to the Contractor and the Contractor must, within 10 Business Days after receiving the Principal's comments, address any such comments and amend the Component Register or Programmed Works Plan (as applicable) so that it:

(i) addresses the Principal's comments; and

(ii) complies with the requirements of this Contract,

in which the process in this clause 6.11(d) will apply to the amended document.

6.12 Display

The Contractor must ensure that the relevant Fire Safety Statement is displayed as a hard copy at the entrance to the relevant Property.

6.13 Reliance

(a) The Contractor acknowledges and agrees that:

(i) the Principal is and will be relying upon the skill, care, experience and diligence of the Contractor in relation to each Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan.

(ii) the Principal is and will be relying on each Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan to inform the nature and extent of any Programmed Work Orders to be issued for the relevant Property in the relevant Contract Year;

(iii) the Principal has no obligation to issue any Programmed Work Orders contemplated by any Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan;

(iv) it is not entitled to receive Work Orders or otherwise perform any Maintenance Works contemplated in the relevant Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan at any time during the Term; and

(v) the Principal may (in its sole discretion) issue Programmed Work Orders for a Property which were not contemplated by the Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan for that Property.

6.14 No Effect

The Contractor's obligations, warranties and liabilities under or in connection with this Contract are not reduced, limited or otherwise affected by any review of, comment on, or acceptance of by the Principal of any Component Register, Fire Safety Schedule, Fire Safety Statement and Programmed Works Plan (including drafts of such documents).

7 Contract Areas

7.1 Allocated and Alternative Contract Areas

(a) Subject to clauses 7.2, 7.4, 7.5, 7.6, 7.7, 21.2(b) and 35, the Contractor will, during the Term, carry out the Responsive Maintenance Works and Programmed Maintenance Works at the Properties in the Contract Area Property List for each Allocated Contract Area and Alternative Contract Area in accordance with Work Orders issued by the Principal.

(b) The Contractor:

(i) has been appointed by the Principal as an 'alternative contractor' to each of the Alternative Contract Areas;

(ii) acknowledges that the Principal has also appointed other contractors as 'Alternative Contractors' to each of the Alternative Contract Areas and Allocated Contract Areas; and

(iii) must carry out and complete Maintenance Works in accordance with Work Orders issued by the Principal under clause 7.5.

7.2 Maintenance Works performed by others

Without limiting any other provision of this Contract, or the Principal's rights under this Contract or otherwise at law, the Contractor acknowledges and agrees that:

(a) the Principal has no obligation to issue any Work Orders to the Contractor under this Contract; and

(b) the Principal may at any time, and from time to time, in its absolute discretion engage third parties to carry out any Maintenance Works (or any part of the Maintenance Works) in the Allocated Contract Areas, the Alternative Contract Areas or any other Contract Area.

7.3 No representation or warranty

(a) The Principal makes no representation or warranty as to:

(i) the value of Maintenance Works that may be required to be performed under this Contract;

(ii) the number of Work Orders that will or may be issued under this Contract (if any);

(iii) the proportion of Responsive Maintenance Works to Programmed Maintenance Works (and of Programmed Maintenance Works to Responsive Maintenance Works);

(iv) the nature, composition and type of SoR Items or Additional Maintenance Works that may be carried out under this Contract; and

(v) the specific locations of the Maintenance Works that may be carried out in the relevant Contract Areas;

(vi) whether and the extent to which it will add Properties to or remove Properties from the Contract Area Property List under clause 7.6.

7.4 Composition of Contract Areas

(a) The Contractor acknowledges and agrees that at any time and from time to time during the Term, the Principal may make changes to the composition of the Portfolio, including by buying, selling or otherwise transferring responsibility for the management of any Property to or from a third party (including a Responsible Authority).

(b) Notwithstanding clause 7.6, where the Principal purchases, sells or otherwise transfers responsibility for the management of any Property to or from a third party, the Principal may update the Contract Area Property List to add that Property to, or omit that Property from, the relevant Contract Area on not less than 15 days notice.

7.5 Rectification of defective or incomplete work

At any time and from time to time during the Term, the Principal may direct the Contractor to rectify any defective or incomplete works of another contractor in any Allocated Contract Area or Alternative Contract Area, by issuing a Work Order identifying the rectification works. The Contractor must carry out such rectification works in accordance with the Work Order and this Contract.

7.6 Removal or Addition of Properties

(a) The Principal may from time to time and in its absolute discretion provide written notice to the Contractor:

(i) directing that any Property is removed from any Allocated Contract Area or Alternative Contract Area, in which case the Principal may add such Property to an 'alternative Contract Area' or an 'allocated Contract Area' under another SFSS Contract; and/or

(ii) directing that any Property is added to any Allocated Contract Area or Alternative Contract Area, including where:

(A) the Principal removes that Property from an 'alternative Contract Area' or an 'allocated Contract Area' under another SFSS Contract; and/or

(B) the Principal has previously removed that Property from any Allocated Contract Area or Alternative Contract Area under clause 7.6(a)(i).

(b) A notice from the Principal under clause 7.6(a) may be given in relation to any number of Properties in any Allocated Contract Area or Alternative Contract Area (including all Properties in any Allocated Contract Area or Alternative Contract Area).

(c) Any notice under clause 7.6(a) will take effect on the first day of the month which is three months after the month in which the notice is given. For example, if the notice is given any time in January, the notice will take effect on 1 April.

(d) For each month in which a notice under clause 7.6(a) takes effect the Principal will, on or before the last Business Day of the prior month issue to the Contractor an updated Contract Area Property List. For example, if the notice takes effect on 1 April, the Principal will issue an updated Contract Area Property List on or before the last Business Day of March.

(e) This clause 7.6 does not in any way limit any other provision of this Contract or any of the Principal's rights under or connection with this Contract or otherwise at law.

7.7 Step-in to Alternative Contract Areas

(a) The Contractor acknowledges that the Principal may have or accrue a right under an SFSS Contract to omit from that SFSS Contract any one or more of the Alternative Contract Areas (noting that such Alternative Contract Areas are 'allocated Contract Areas' under that SFSS Contract).

(b) If the Principal has exercised a right to omit an Alternative Contract Area from an SFSS Contract, the Principal may in its absolute discretion direct the Contractor to step-in to that Alternative Contract Area on 6 months' prior written notice.

(c) If the Principal issues a notice under clause 7.7(b) in respect of an Alternative Contract Area, then on and from the date that is 6 months after the date on which the Contractor receives the notice:

(i) the Alternative Contract Area will be (and will for all purposes be treated as) an Allocated Contract Area under this Contract;

(ii) any clause or requirement of this Contract that applies to an Allocated Contract Area will apply to the relevant Alternative Contract Area (as if the Alternative Contract Area is an Allocated Contract Area under this Contract);

(iii) all of the pricing applicable to the relevant Alternative Contract Areas (comprising the Alternative Contract Area) as set out in Schedule 8 (Fee and Payment) will continue to apply to that Contract Area and there will be no adjustment to any of the rates or prices as a consequence of the Principal issuing a notice under clause 7.7(b); and

(iv) the Contractor will be entitled to claim the Management Fee in respect of those Contract Areas, in accordance with clauses 10 and 11.3(a) and Schedule 8 (Fee and Payment).

8 Work Orders

8.1 Contractor's readiness

The Contractor warrants that:

(a) it is (and will remain at all times during the Term) ready, willing and able to undertake the Maintenance Works; and

(b) it will, for the duration of the Term, maintain a level of committed resources and personnel to enable the Contractor to undertake the Maintenance Works and fulfil all other obligations under the Contract,

in response to Work Orders issued by the Principal in accordance with this Contract.

8.2 Issuing Work Orders

(a) The Principal may, from time to time and at any time during the Term, issue a Work Order to the Contractor for the carrying out of Maintenance Works:

(i) at any of the Properties in each of the Contract Area Property Lists (as amended and updated from time to time in accordance with this Contract); and

(ii) in accordance with clause 7.5.

(b) The Contractor acknowledges and agrees that:

(i) the Principal will issue Work Orders via the SUI (subject to the provisions of this clause 8.2);

(ii) all communication between the Contractor and the Principal in relation to the Maintenance Works will be governed by clause 9 and the Operational Requirements;

(iii) if the SUI becomes unavailable for any reason:

(A) the Principal may direct that communication in relation to all or part of the Maintenance Works will occur by email, in which case:

(1) the Principal will issue Work Orders by email to the email address set out in Item 19 of Schedule 1 (Contract Details);

(2) the Principal will issue communications to the email address set out in Item 19 of Schedule 1 (Contract Details); and

(3) the Contractor must send all communications to the Principal to any email addresses(s) notified by the Principal; and

(B) the Contractor must otherwise comply with all directions from the Principal regarding communication and the giving of notices under or in connection with the Contract.

(c) The Principal will include in each Work Order:

(i) the address of the Property (as applicable), where the Maintenance Works are to be carried out;

(ii) (if applicable) the identity and contact details of the relevant Tenant;

(iii) a Date for Work Order Commencement;

(iv) a Date for Works Completion;

(v) (if applicable) the specific SoR Items comprising the scope of the Maintenance Works covered by the Work Order;

(vi) (if applicable) a description of the Additional Maintenance Works comprising the scope of the Maintenance Works covered by the Work Order; and

(vii) a designation of whether the Work Order is a Programmed Work Order or a Responsive Work Order.

(d) The Principal may (but is not obliged to) include additional information in a Work Order which the Principal considers is relevant to the Maintenance Works the subject of the Works Order. Any such inclusion will not invalidate a Work Order or derogate from the Contractor's obligations.

(e) If the Contractor receives a Work Order, the Contractor must:

(i) carry out and complete the Maintenance Works the subject of the Work Order in accordance with the Contract (including the Operational Requirements and Maintenance Works Specification); and

(ii) without limiting any other provision of the Contract, comply with the processes and requirements set out in the Operational Requirements.

(f) The Principal may at any time and from time to time:

(i) cancel a Work Order; and

(ii) vary any aspect of a Work Order in accordance with the Operational Requirements.

(g) If the Principal cancels or varies any aspect of a Work Order under clause 8.2(f), then:

(i) the Contractor will be entitled to recover from the Principal the direct, reasonable and substantiated costs (excluding any profit, profit component or overheads) necessarily incurred by the Contractor as a result of the cancellation or variation, provided such costs:

(A) could not have been reasonably mitigated or avoided; and

(B) do not exceed the Fee payable in respect of the relevant Work Order (calculated strictly in accordance with Schedule 8 (Fee and Payment); and

(ii) the Contractor must take all reasonable steps to mitigate those costs incurred by it as a result of such cancellation or variation.

8.3 No works without Work Order

(a) The Contractor must not, and warrants that it will not:

(i) carry out any Maintenance Works on Site unless it has received a Work Order from the Principal under this clause 8 (and then only to the extent that such Maintenance Works are expressly specified in the Work Order);

(ii) carry out any SoR Items unless those SoR Items:

(A) are expressly set out in a Work Order issued by the Principal under this clause 8 (including where the Work Order includes Type 2 Supplementary Works); or

(B) form part of Type 1 Supplementary Works which the Contractor is permitted to carry out under this Contract in accordance with Schedule 3 (Operational Requirements); and

(iii) carry out any Additional Maintenance Works unless those Additional Maintenance Works are expressly set out in a Work Order issued by the Principal under this clause 8.

(b) If the Contractor carries out:

(i) any Maintenance Works on Site in breach of clause 8.3(a)(i);

(ii) any SoR Items in breach of clause 8.3(a)(ii);

(iii) any Additional Maintenance Works in breach of clause 8.3(a)(iii),

the Contractor has no entitlement to payment for those Maintenance Works.

8.4 Work Order Extension

(a) If, in relation to a Work Order, the Contractor:

(i) is or will be prevented by a Relief Event from achieving Works Completion of the Work Order by the Date for Works Completion;

(ii) takes all reasonable steps to avoid, mitigate and overcome the Relief Event and the effects of the Relief Event;

(iii) has, in relation to the Work Order, satisfied each of the applicable Specified Steps by the dates and times required in the Operational Requirements; and

(iv) as soon as practicable after becoming aware that the Contractor is or will be prevented by a Relief Event from achieving Works Completion by the Date for Works Completion (and in any event, no later than the Date for Works Completion), provides to the Principal a written Claim for an extension of the Date for Works Completion, including all appropriate written substantiation and evidence of each of the matters set out in clause 8.4(a)(i) to 8.4(a)(iii) (inclusive),

then the Principal will determine, acting reasonably, whether (and the extent to which) the time for Works Completion of the Work Order will be extended.

(b) The Contractor acknowledges and agrees that the matters set out in clause 8.4(a) are a mandatory precondition to any extension of the time for Works Completion of a Work Order. If the Contractor does not satisfy each of the matters set out in clause 8.4(a), the Principal is under no obligation to make any determination under clause 8.4(a) (or to extend the time for Works Completion of a Work Order).

(c) If the Principal determines to extend the time for Works Completion of a Work Order, the Principal will provide written notification to the Contractor and will extend the date and time for Works Completion of the Work Order by the period so determined, in the SUI as soon as practicable.

(d) The Principal may at any time in its discretion, extend the time for Works Completion of any Work Order.

8.5 Late completion of Work Order or rectification work

(a) Without limiting any other provision of this Contract, if the Contractor:

(i) does not achieve Works Completion of a Work Order by the Date for Works Completion; or

(ii) does not rectify a Defect by the date specified in a Defect Notice,

and such failure is not due to a Relief Event, then the Principal may recover from the Contractor as a debt due and payable:

(iii) a liquated sum determined under Item 10 of Schedule 1 (Contract Details) for each and every occasion that the Principal (or a third party engaged by the Principal) attends the Site for an inspection (including the first inspection) in connection with the Work Order or Defect (as applicable);

(iv) where the Property the subject of the Work Order is Vacant, liquidated damages at the applicable daily rate (determined by reference to the relevant Contract Year and 'property type') set out in Item 11 of Schedule 1 (Contract Details):

(A) for each day after the Date for Works Completion until Works Completion is achieved (either by the Contractor or a third party); or

(B) for each day after the date for Defect rectification specified in a notice from the Principal directing the Contractor to rectify the Defect until the Defect is rectified (either by the Contractor or a third party),

(as applicable); and

(C) any other Loss incurred by the Principal as a result of the Contractor's failure(s) referred to in clause 8.5(a)(i) or 8.5(a)(ii) (as applicable).

(b) The parties acknowledge and agree that:

(i) the liquidated sum referred to in clause 8.5(a)(iii) is genuine pre-estimate of the cost that the Principal will incur in the event of an inspection (including the first inspection); and

(ii) each of the rates of liquidated damages set out in Item 10 and Item 11 of Schedule 1 (Contract Details) are a genuine pre-estimate of Loss that the Principal will incur by way of loss of rent.

(c) The Principal may give a demand (or demands) for liquidated damages and other Losses payable to the Principal in accordance with clause 8.5(a), up to the date of the demand at any time after:

(i) the Date for Works Completion; or

(ii) the date for Defect rectification specified in the relevant notice from the Principal,

(as applicable).

(d) Liquidated damages and Losses payable under clause 8.5(a) become a debt due and payable 5 Business Days after demanded under clause 8.5(c).

(e) Nothing in this clause limits or otherwise affects the operation of the Key Performance Indicators, including any Abatements under Schedule 9 (Key Performance Indicators).

8.6 Type 1 Supplementary Works Threshold

The Contractor acknowledges and agrees that the Principal may by notice in writing, at its absolute discretion and from time to time and at any time, amend the Type 1 Supplementary Works Threshold (including to $nil).

8.7 No Separate Agreement

(a) Work Orders are not and do not form separate or independent contracts between the Principal and the Contractor.

(b) Each Work Order forms an independent scope of works for the Maintenance Works carried out under this Contract.

8.8 Amendment of SoR

(a) Without in any way limiting or affecting clause 20.1, if the Contractor considers that it has been directed by the Principal to carry out Maintenance Works that are not included in any of the SoR Items (or any combination of SoR Items), the Contractor will provide written notice to the Principal no later than 3 days after receiving the direction, setting out details of the relevant Maintenance Works and why the Contractor considers that such Maintenance Works are not included in the any of the SoR Items (or any combination of SoR Items).

(b) If the Principal requires Maintenance Works to be carried out that are not included in the SoR, the Principal may add additional SoR Items, provided that such additional SoR Items relate to the Properties and are required for the maintenance, repair, operation or management of a Property or the Portfolio.

(c) If the Principal wishes to add an additional SoR item, the Principal:

(i) will engage a quantity surveyor to prepare an SoR price for that SoR Item using:

(A) the same methodology which was used to determine the SoR Prices for other SoR Items in the SoR; and

(B) current market pricing for New South Wales; and

(ii) will provide written notice to the Contractor, setting out the additional SoR item including the SoR price; and

(iii) may issue the same notice to one or more SFSS Contractors.

(d) The additional SoR Item together with the SoR Price will be added to the SoR on or after the date of the Principal's notice under clause 8.8(c)(ii).

(e) The Principal may, at any time and from time to time, update the short or long description of any SoR item in the SoR to clarify the scope of the Maintenance Works required to be performed by that SoR Item.

(f) For the avoidance of doubt, but subject to the Contractor's obligation to perform any Supplementary Works or Additional Maintenance Works in accordance with the terms of this Contract, the Contractor will not otherwise be liable to perform any Maintenance Works that are not included in the SoR Items until such time as they are included in the SoR Items.

8.9 Additional Maintenance Works

(a) The Principal may at any time request in writing the Contractor to provide a quotation to perform Additional Maintenance Works.

(b) The Contractor must, within a reasonable time period stated in the Principal's notice, provide a written quotation for the Additional Maintenance Works the subject of the Principal's notice.

(c) The Principal is under no obligation to accept the Contractor's quotation.

(d) The Contractor must, if requested by the Principal:

(i) provide a breakdown of its quotation; and/or

(ii) provide, where practicable, 3 quotations from Subcontractors for the performance of the Additional Maintenance Works; and/or

(iii) consider any pricing provided by the Principal and identify any aspects of the Contractor's quotation which differs from that pricing provided by the Principal; and

(iv) submit a revised written quotation to carry out the Additional Maintenance Works, which must take into account anything identified under 8.9(d)(i) to 8.9(d)(iii).

(e) If the Principal wishes to accept the Contractor's quotation, the Principal may issue a Work Order for the Additional Maintenance Works, in which case the Contractor will perform the Additional Maintenance Works in accordance with the Contract and will be paid the amount included in the Work Order in accordance with clause 11.

(f) The Contractor acknowledges and agrees that the Fee includes adequate compensation for the preparation of quotations for Additional Maintenance Works.

8.10 Amendment of Principal Plans, Policies and Procedures

(a) The Principal may, acting reasonably, amend the Principal Plans, Policies and Procedures by notice to the Contractor.

(b) If the Contractor considers, acting reasonably, that the amended Principal Plans, Policies and Procedures:

(i) require it to carry out Maintenance Works that are not included in the SoR Items, the Contractor may invoke the procedure set out in clause 8.8; or

(ii) will materially increase the Contractor's cost for performing an existing SoR Item beyond the stipulated SoR Prices, the Contractor must, within 3 days of the Principal's notification to the Contractor of the amended Principal Plans, Policies and Procedures:

(A) notify the Principal of its concern; and

(B) provide the Principal with details as to why it considers that the amended Principal Plans, Policies and Procedures will materially increase the Contractor's cost for performing an existing SoR Item beyond the stipulated SoR Price,

in which case, the parties must, promptly and in good faith, agree to an adjustment to the SoR Price for that SoR Item in accordance with Schedule 8 (Fee and Payment) to take account of any material increase in the Contractor's cost for performing that SoR Item.

9 Communication and Information Technology Requirements

9.1 Single User Interface (SUI) and IT Requirements

(a) If:

(i) "Option 1" has been selected in Item 13 of the Schedule 1 (Contract Details), then the provisions set out in "Option 1" in Schedule 12 (IT Requirements) apply; and

(ii) "Option 2" has been selected in Item 13 of the Schedule 1 (Contract Details), then the provisions set out in "Option 2" in Schedule 12 (IT Requirements) apply.

(b) The Contractor must at all times:

(i) comply with Schedule 12 (IT Requirements) (as applicable);

(ii) ensure that its own information technology system has the required capability and is configured (and at all times during the Term remains configured) so as to enable the Contractor to comply with Schedule 12 (IT Requirements) (as applicable); and

(iii) must ensure that any and all information, documents, data and other Deliverables to be provided by the Contractor or its Personnel to the Principal are each in a format that is compatible with the SUI.

(c) If, during the Term, the Contractor wishes to change the 'option selected' in Item 13 of the Schedule 1 (Contract Details) it must notify the Principal in writing and if the Principal agrees to change the 'option selected' in Item 13 of the Schedule 1 (Contract Details), then:

(i) the parties will work together to agree a program for transition in the method of interface between the Contractor and the SUI;

(ii) the Contractor will comply with:

(A) before and during the transition, the reasonable directions of the Principal for the transition; and

(B) after the transition is complete, the requirements of either "Option 1" or "Option 2" as applicable; and

(iii) the Principal may recover any cost it incurs as a result of the transition from the Contractor as a debt due and payable.

9.2 Communication

(a) Unless otherwise stated in this Contract, all notices, correspondence, approvals, Work Orders, consents, directions, instructions, orders, requests and certificates or other communication (**notice**) given under or in connection with this Contract must:

(i) be given in accordance with Schedule 11 (Communication Requirements) and clause 9.2(b); and

(ii) be typed or legibly written in English.

(b) All notices will be issued in accordance with Schedule 11 (Communication Requirements) such that, for any given notice, where in Schedule 11 (Communication Requirements):

(i) 'SUI' is selected, the notice must be issued on the SUI in accordance with Schedule 12 (IT Requirements);

(ii) 'email' is selected, the notice must be sent by email to the email address(es) set out at Item 18 of Schedule 1 (Contract Details), or any other email addresses notified by the Principal from time to time; or

(iii) both 'SUI' and 'email' are selected, the notice must be issued on the SUI and sent by email to the prescribed email address(es) set out at Item 18 of Schedule 1 (Contract Details), or any other email addresses notified by the Principal from time to time.

(c) Where a:

(i) notice is required to be issued on the SUI; or

(ii) a document is required to issued on the SUI; and

(iii) the means of submitting the relevant notice or document requires the Contractor to update the SUI by inputting data (for example, into a webform with date and text fields),

the Contractor will have discharged its obligation to notify the Principal when:

(iv) it has completed the relevant means of identifying the update to the Principal (e.g. by clicking 'submit'); or

(v) it has otherwise accurately inputted all of the required data into the SUI.

(d) The Contractor acknowledges and agrees that the Principal may, at any time and from time to time, change Schedule 11 (Communication Requirements) by notice in writing to the Contractor (and such notice will include the amended Schedule 11 (Communication Requirements)). If the Principal issues a notice under this clause 9.2(d), the amended Schedule 11 (Communication Requirements) will take effect promptly upon the Contractor receiving the Principal's notice.

(e) Contractor must be responsive, courteous, polite and respectful in any communication with the Principal.

9.3 When taken to be received

A notice is taken to be received:

(a) if issued on the SUI, the time recorded in the SUI as the time at which the notice was issued;

(b) if sent by email, at the time the email is received by the recipient's email server (as recorded on the recipient's server); and

(c) if both issued on the SUI and sent by email, the time recorded in the SUI as the time at which the notice was issued.

10 Fees

10.1 Fee

The Fee is comprised of:

(a) the value of Work Orders;

(b) the Management Fee;

(c) the Transition In Payment; and

(d) the Additional Maintenance Works Price for Additional Maintenance Works carried out under a Work Order,

each calculated strictly in accordance with Schedule 8 (Fee and Payment).

10.2 Contractor's Warranty in relation to Fee

The Contractor warrants that:

(a) it has relied solely upon its own assessment, skill, expertise and enquiries in respect of all information relevant to the risks, contingencies and other circumstances having an effect on the Maintenance Works and determining the Fee;

(b) it has made full and adequate allowance in the Fee for the costs of:

(i) all Taxes and fees for which the Contractor is responsible for paying;

(ii) all matters and things necessary for the performance of the Maintenance Works in accordance with this Contract, including all risks, contingencies and other allowances; and

(iii) complying with all of the Contractor's obligations under this Contract; and

(c) the Fee represents its full and complete payment for:

(i) all matters and things necessary for the performance of the Maintenance Works in accordance with the Contract; and

(ii) all of the Contractor's obligations under this Contract.

10.3 Adjustments

(a) Each of the SoR Prices will be adjusted annually in accordance with Schedule 8 (Fee and Payment).

(b) The Fixed Percentage will remain fixed and firm for the duration of the Term and will not be subject to any adjustment for any reason.

(c) The Management Fee

(i) for Contract Year 1 is as stated in Schedule 8 (Fee and Payment);

(ii) for each Contract Year (other that Contract Year 1) will be determined in accordance with Schedule 8 (Fee and Payment).

(d) Except for any adjustments made strictly in accordance with Schedule 8 (Fee and Payment), each of the SoR Prices, the Fixed Percentage and the Management Fee will not be adjusted or be subject to any rise and fall for any reason whatsoever, including:

(i) the value of Maintenance Works performed;

(ii) the number of Work Orders issued by the Principal;

(iii) the proportion of Responsive Maintenance Works to Programmed Maintenance Works (and of Programmed Maintenance Works to Responsive Maintenance Works);

(iv) the nature, composition and type of SoR Items carried out by the Contractor;

(v) the specific location of the Maintenance Works carried out within the relevant Contract Areas;

(vi) market conditions, economic conditions and macro-economic conditions, including inflation;

(vii) supply chain disruption and delays;

(viii) the nature and condition of the Site and the Properties;

(ix) a change in the composition of the Portfolio;

(x) the cost to the Contractor of performing the Maintenance Works (however arising), including any increase in such costs at any time throughout the Term;

(xi) any Events of Force Majeure; and

(xii) any directions from the Principal:

(A) requiring the Contractor to carry out Maintenance Works (including rectification works) in Alternative Contract Areas (or Alternative Contract Areas);

(B) requiring the Contractor to step-in to an Alternative Contract Area (or Alternative Contract Areas); and

(C) omitting an Allocated Contract Area or an Allocated Work Area from the Contract.

10.4 Currencies

The Fee is payable in Australian Dollars. The Contractor agrees that it has no right to receive payment in a currency other than Australian Dollars, or for any adjustment to be made to the Fee for any foreign exchange fluctuations or the Contractor making any expenditure in a currency other than Australian Dollars.

11 Terms of Payment

11.1 Payments

(a) The parties agree that the Principal is not required to make any payment under this Contract unless the Contractor has:

(i) achieved Transition Completion;

(ii) delivered the Parent Company Guarantee to the Principal under clause 12.2;

(iii) delivered the Bank Guarantee to the Principal under clause 12.1;

(iv) provided to the Principal evidence of the required insurances in compliance with clause 24; and

(v) provided a statutory declaration in accordance with, and at the times required by, clause 11.10.

(b) Unless otherwise agreed by the parties, all payments by the Principal to the Contractor will be by electronic funds transfer to a bank account notified by the Contractor to the Principal.

11.2 Invoicing Methodology

(a) Instead of the Contractor issuing a Contractor Invoice, the Contractor acknowledges and agrees that the Principal has the option of issuing an RCTI to the Contractor in respect of supplies made by the Contractor under or in connection with this document.

(b) If:

(i) "Option 1" has been selected in Item 9 of Schedule 1 (Contract Details), then:

(A) clauses 11.3, 11.4 and 34.3 will apply; and

(B) clauses 11.5, 11.6 and 34.4 will not apply; or

(ii) "Option 2" has been selected in Item 9 of Schedule 1 (Contract Details), then:

(A) clauses 11.5, 11.6 and 34.4 will apply; and

(B) clauses 11.3, 11.4 and 34.3 will not apply.

(c) At any time during the Term, the Principal may change the 'option selected' in Item 9 of Schedule 1 (Contract Details) by providing the Contractor with not less than 30 days notice of such change.

11.3 Contractor Invoices

(a) The Contractor:

(i) will issue a single Contractor Invoice for each Work Order:

(A) after Works Completion is achieved for that Work Order and the Contractor has provided all documentation and evidence in accordance with section 1.1(h)(v) of Schedule 3 (Operational Requirements); and

(B) no later than the date required by section 1.1(h)(vi) of Schedule 3 (Operational Requirements);

(ii) will issue a single Contractor Invoice for the:

(A) the Transition In Payment; and

(B) Management Fee for the prior month, once per month,

in each case calculated strictly in accordance with Schedule 8 (Fee and Payment).

(b) Each Contractor Invoice must include the value of the Fee being claimed, which is payable in arrears, including:

(i) details of each and every Work Order to which the Contractor Invoice relates, together with the value of the Fee claimed for each Work Order (if any); and

(ii) the amount being claimed for the Management Fee (if any).

(c) The Principal may, acting reasonably, request any further information from the Contractor regarding any Contractor Invoice submitted under clause 11.3(a) and the Contractor must promptly provide such information in the Approved Form.

(d) If the Principal considers that the documents and information submitted with any Work Order and the Contractor Invoice are insufficient to enable it to make a proper

assessment of the invoice, the Principal may reject the Contractor Invoice or delay payment of the Contractor Invoice until the Contractor has provided the information reasonably required by the Principal under clause 11.3(c).

11.4 Payment of Contractor Invoices

(a) If the Principal, acting reasonably, considers that a Contractor Invoice contains any amount:

(i) that has not been calculated strictly in accordance with Schedule 8 (Fee and Payment) or any other provision of this Contract; or

(ii) that is not properly due and payable to the Contractor (including where the Contractor has not fully complied with its obligations relevant to the Maintenance Works and amounts claimed in the Contractor Invoice),

the Principal may reject the Contractor Invoice (and in doing so will provide brief reasons for any rejection).

(b) If the Principal rejects a Contractor Invoice under clause 11.4(a), the Contractor may re-submit that Contractor Invoice in accordance with clause 11.3.

(c) In respect of each Contractor Invoice, if the Principal has not rejected the Contractor Invoice within 15 Business Days after receiving it, the Principal will (subject to clause 11.7) pay the amount claimed in the Contractor Invoice within 15 Business Days after receiving it, less any amounts retained, withdrawn or set off under clause 11.8.

11.5 RCTIs

(a) The Contractor will provide the Principal with any information necessary to enable the Principal to determine the value of a Taxable Supply and issue an RCTI in accordance with clause 34.4. Such information will:

(i) be provided to the Principal in the Approved Form within 7 days of the completion of the relevant Maintenance Works to which that information relates; and

(ii) include the value of the Fee being claimed by the Contractor, including:

(A) the value of all Work Orders being claimed;

(B) the amount being claimed for the Management Fee (if any);

(C) the amount being claimed for any Additional Maintenance Works Price (if any); and

(D) the amount being claimed for any Transition In Payment (if any);

(iii) details of any Maintenance Works performed; and

(iv) details of each Work Order to which the RCTI should relate, together with the value of the Fee claimed for each Work Order (if any).

(b) Upon the Principal's request, the Contractor will promptly provide such further information (in the Approved Form) as is required by the Principal to enable the Principal to make a proper assessment of the value of the Taxable Supply to be invoiced under the RCTI.

(c) In the event of any Dispute arising in relation to the information provided by the Contractor under either clause 11.5(a) and 11.5(b), such Dispute will be resolved by the parties in accordance with clause 36.

(d) Subject to the Contractor's compliance with its obligations under clause 11.5(a), 11.5(b) and 11.5(c), the Principal will issue to the Contractor:

(i) a single RCTI for Maintenance Works after the relevant Maintenance Works have been completed in accordance with this Contract;

(ii) a single RCTI once per month for the value of the Management Fee in that month; and

(iii) if applicable, a single RCTI for the Transition In Payment after the Transition Activities have completed in accordance with this Contract,

in each case calculated strictly in accordance with Schedule 8 (Fee and Payment) by the Relevant Time.

(e) The Contractor acknowledges and agrees that the Principal is reliant on the Contractor's compliance with its obligations under clause 11.5(a), 11.5(b) and 11.5(c) for the Principal to be able to determine the value of the relevant Taxable Supply applicable under an RCTI and issue the relevant RCTI to the Contractor.

11.6 Payment of RCTIs

In respect of each RCTI, the Principal will (subject to clause 11.7) pay the amount set out in the RCTI, less any amounts retained, withdrawn or set off under clause 11.8.

11.7 Payment on account

(a) Neither payment by the Principal of an Invoice, nor the failure to reject an Invoice (including a failure to reject a Contractor Invoice before making payment or within 15 Business Days after receiving it):

(i) constitutes the Principal's acceptance of, or agreement with, the Invoice;

(ii) constitutes acceptance by the Principal of the Maintenance Works or any part thereof;

(iii) constitutes acceptance by the Principal that the Contractor has fully complied with its obligations relevant to the Maintenance Works and amounts set out in the Invoice; or

(iv) releases or relieves the Contractor in any way from any of its warranties, obligations or liabilities under or in connection with this Contract.

(b) Payment by the Principal is on account only and the Principal may (at any time and from time to time) revisit, revalue or reassess any:

(i) Invoice; and

(ii) payment made by the Principal.

(c) If the Principal wishes to recover from the Contractor any amount previously paid by the Principal, the Principal will issue a notice in writing to the Contractor, providing details of the amount claimed and brief reasons why the Principal considers such amount to be owing to the Principal. The Principal may, in the absence of any Dispute with the

Contractor, recover such amount as a debt due and payable 10 Business Days after the Contractor receives the Principal's notice.

11.8 Set off

Without limiting clause 11.7, and without prejudice to any other rights or remedies, the Principal may at any time deduct from or set off against any moneys which are or may be payable to the Contractor under or in connection with this Contract, any money which the Principal considers is or may become payable by the Contractor to the Principal under or in connection with this Contract. Nothing in this clause 11.8 affects the right of the Principal to recover from the Contractor the whole of the debt or any balance that remains owing after any deduction.

11.9 Security of Payment Act

(a) The Contractor must as soon as practicable (taking into account any relevant timeframes under the Security of Payment Act) give the Principal a copy of any notice the Contractor receives from (or is otherwise given to the Contractor by) a Subcontractor under any section of the Security of Payment Act.

(b) The Contractor indemnifies, and holds harmless, the Principal against any Loss or Claim of any nature arising under, out of or in connection with:

(i) a suspension by a Subcontractor of work (which forms part of the Maintenance Works) pursuant to a relevant section of the Security of Payment Act;

(ii) a failure by the Contractor to comply with its obligations under this clause 11.9; and

(iii) a notice or Claim under the Security of Payment Act or any other Law being served on the Principal in connection with a Subcontractor exercising a Lien or charge over the Maintenance Works.

11.10 Statutory Declaration

On the last Business Day of each month, the Contractor must provide to the Principal a statutory declaration in the form set out in Schedule 15 (Form of Statutory Declaration) (or, if directed by the Principal, in the Approved Form) executed by a current director of the Contractor (or an authorised representative of the Contractor).

12 Security

12.1 Bank Guarantee

(a) The Contractor must, within 5 days after the Date of Contract deliver to the Principal Bank Guarantees for each Contract Area in the Approved Form, from a bank that is an Approved Provider and for amounts equal to that set out in Item 15 of the Contract Details.

(b) The Bank Guarantees will be returned by the Principal to the Contractor within 20 Business Days after the later of:

(i) the Expiry Date; and

(ii) the completion by the Contractor of all of its obligations under or arising out of this Contract.

12.2 Parent Company Guarantee

The Contractor must, on or before the Date of Contract, provide to the Principal the Parent Company Guarantees from the Guarantor in the Approved Form.

12.3 Bank Guarantee Replacement

(a) If a Bank Guarantee has been provided to the Principal under this clause 12, and the financial institution that issued that Bank Guarantee:

(i) ceases to hold a Required Rating; or

(ii) ceases to maintain a Sydney branch,

then the Contractor must immediately notify the Principal and provide the Principal with a replacement Bank Guarantee within 10 Business Days of the date upon which the above event (as applicable) occurs.

(b) Each replacement Bank Guarantee which the Contractor is required to provide to the Principal under clause 12.3(a) must be:

(i) for the same amount as the Bank Guarantee it is replacing (subject to clause 12.1(b));

(ii) provided with an expiry date no earlier than the expiry date of the Bank Guarantee it is replacing;

(iii) in the Approved Form; and

(iv) issued by an Approved Provider,

and the provisions of clause 12.3 will apply in relation to any such replacement Bank Guarantee.

12.4 Conversion of Bank Guarantee

(a) Without limiting the unconditional nature of the Bank Guarantee and the Principal's right to demand, receive or use the proceeds of the Bank Guarantee, the Principal may demand, receive and use the proceeds of the Bank Guarantee, without notice to the Contractor, whenever the Principal asserts a right to the payment of money by the Contractor under, arising out of or in connection with this Contract.

(b) Where the Principal makes a demand on the Bank Guarantee in respect of an amount and it is subsequently determined that the amount was not payable, or the Contractor is not liable to the Principal for the amount,

the Principal must pay that amount to the Contractor within 20 Business Days.

(c) The Contractor warrants that it will not institute any proceedings, or exercise any right or take any steps to restrain or injunct either the bank or financial institution that issued the Bank Guarantee or the Principal from, performing its obligations or exercising its rights (as the case may be) under the Bank Guarantee.

(d) Nothing in clause 12.4(c) prejudices the Contractor's right to commence proceedings under clause 36 to dispute the Principal's Claim forming the basis of the Principal making a demand on the Bank Guarantee pursuant to clause 12.4(a).

12.5 Invalidity and unenforceability

(a) Notwithstanding the foregoing provisions of this clause 12, where the Principal considers that a Bank Guarantee provided pursuant to this clause 12 is or may become void, invalid, unenforceable or expires before the relevant expiry date stated in clauses 12.3 for any reason, the Contractor must provide a replacement Bank Guarantee in accordance with the relevant requirements of this clause 12 not later than:

(i) 10 Business Days following the date on which the Principal notifies the Contractor that it considers that the Bank Guarantee is or may be found to be void, invalid or unenforceable; or

(ii) 20 Business Days prior to the date on which the Bank Guarantee expires.

(b) If the Contractor does not comply with this clause 12.5, without limiting the Principal's rights under or in connection with this Contract, the Principal may immediately convert into money the full amount of the relevant Bank Guarantee.

13 Key Performance Indicators

13.1 Key Performance Indicators

The Contractor must carry out the Maintenance Works and take all other steps to meet or exceed the Performance Benchmark for each of the KPIs in accordance with Schedule 9 (Key Performance Indicators).

13.2 Abatements

(a) The Principal may recover as a debt due and payable, the amount of any Abatement calculated in accordance with, and at the times stated in, Schedule 9 (Key Performance Indicators).

(b) The Contractor acknowledges and agrees that each of the Abatements:

(i) are not a sole and exclusive remedy for the Contractor's failure to meet or exceed the Performance Benchmark for any KPI or the Contractor's failure to comply with any other provision of this Contract; and

(ii) reflect an agreed and appropriate reduction of the Fee, based upon:

(A) the requirements that underpin each of the KPIs and applicable Performance Benchmarks; and

(B) the outcomes achieved by the Contractor, as measured and calculated in accordance with Schedule 9 (Key Performance Indicators).

13.3 Tenant Surveys

(a) The Principal may from time to time and at any time conduct surveys of Tenants (**Tenant Surveys**). Tenant Surveys may be conducted directly by the Principal or by third parties (including other government agencies or organisations).

(b) The Contractor acknowledges and agrees that:

(i) the purpose of Tenant Surveys is to gauge and record the level of satisfaction of Tenants with the Maintenance Works (including the way in which the Contractor goes about carrying and completing the Maintenance Works); and

(ii) the Principal may from time to time and at any time (and in its discretion), with reasonable prior notice to the Contractor, change the Tenant Survey questions if the Principal considers that such change will facilitate the process of ascertaining the level of satisfaction of Tenants with the Maintenance Works (including the way in which the Contractor goes about carrying and completing the Maintenance Works).

(c) The Contractor must not, for any reason, discuss a Tenant Survey with any Tenant. Any enquiry received by the Contractor from a Tenant in relation to a Tenant Survey (or the Tenant Survey process) must immediately be referred to the Principal.

14 NCNs, Audits and Records

14.1 Non-conformance notices

(a) Without limiting any other provision of this Contract (including the Principal's rights under any other provision of this Contract), the Principal may issue a notice to the Contractor requiring the Contractor to remedy any non-conformance or non-compliance with any requirement of this Contract (**Non-conformance Notice** or **NCN**).

(b) An NCN:

(i) will identify the non-conformance or non-compliance; and

(ii) may specify a date by which the Contractor must remedy the relevant non-conformance or non-compliance.

(c) Following receipt of an NCN:

(i) the Contractor must, at its cost, remedy (as applicable) the relevant non-conformance or non-compliance by the date(s) identified in the NCN;

(ii) notify the Principal when the Contractor has remedied all of the non-conformance or non-compliance and provide evidence of that fact to the reasonable satisfaction of the Principal; and

(iii) if requested by the Principal:

(A) demonstrate to the Principal how the Contractor will comply with its obligation under clause 14.1(c)(i);

(B) identify and demonstrate to the Principal what steps the Contractor proposes to take (and will take) to ensure that the Contractor does not commit the same non-conformance or non-compliance set out in the NCN in the future; and

(C) attend any meeting to discuss the NCN or the proposed steps and/or the Contractor's implementation of those steps.

(d) The Contractor acknowledges and agrees that:

(i) an NCN may include a Defect in the Maintenance Works as the relevant non-conformance or non-compliance in circumstances where it appears to the Principal that there is a repetition of that Defect in the Maintenance Works; and

(ii) if an NCN includes a Defect in the Maintenance Works as the relevant non-conformance or non-compliance, the issuance of the NCN by the Principal does

not in any way derogate from or otherwise affect the Contractor's obligations under clause 21, including to comply with a Defect Notice.

14.2 Inspections

(a) The Principal may in its absolute discretion inspect any Property, Site or Maintenance Works the subject of a Work Order:

(i) at any time during the performance of the Work Order (**Pre-Completion Inspection**); and/or

(ii) following notification from the Contractor that it has achieved Works Completion for that Work Order (**Post Work Inspection**).

(b) The Contractor must allow the Principal full and unfettered access to the Property, Site or Maintenance Works for the purposes of the Principal performing a Pre-Completion Inspection or a Post Work Inspection.

(c) If the Principal discovers a Defect (or any other non-compliance with any requirement of the Contract) at or following any Post Work Inspection, the Principal may recover from the Contractor as a debt due and payable the liquidated sum set out in Item 10 of the Contract Details for:

(i) the first Post Work Inspection; and

(ii) each subsequent Post Work Inspection in connection with the relevant Defect, associated rectification works or other non-compliance.

14.3 Audits

(a) The Principal (and any person authorised by the Principal) may, from time to time, audit and investigate any matter in connection with this Contract with reasonable prior notice to the Contractor, including:

(i) the performance or non-performance of the Maintenance Works;

(ii) KPIs and Abatements, including any KPI Improvement Plan;

(iii) Contractor Invoices and RCTIs;

(iv) Defects and the rectification of Defects;

(v) Work Health and Safety Requirements;

(vi) the reasonableness and value for money of any quotation for any Additional Maintenance Works;

(vii) the activities being performed by the Contractor's Key Personnel, supervisory personnel and any other personnel included in the Contractor's organisational chart referred to in clause 19.2;

(viii) the Contractor's compliance with Schedule 3 (Operational Requirements); and

(ix) the Contractor's compliance or non compliance with any of its other obligations under this Contract (including with the warranty in sections 2.1(e) and 7.5 in Schedule 8 (Fee and Payment)).

(b) The Contractor must:

(i) provide all reasonable assistance to the Principal (and any person authorised by the Principal) in the conduct of an audit or investigation under this clause 14.3;

(ii) make available to the Principal (and any person authorised by the Principal) all records, data, documents and accounts reasonably requested by the Principal in the conduct of an audit or investigation under this clause 14.3, including providing access to the Contractor's information management system;

(iii) make the Contractor's relevant Personnel available to respond to questions and requests from the Principal in order to facilitate an audit or investigation;

(iv) if requested by the Principal, meet with the Principal to discuss the outcomes of an audit or investigation;

(v) if requested by the Principal, provide a secure and private area in the Contractor's office to conduct an audit or investigation;

(vi) comply with any reasonable directions from the Principal regarding corrective actions that the Principal requires the Contractor to take following the outcome of an audit or investigation; and

(vii) if requested by the Principal, provide a detailed written cure plan to the Principal in an Approved Form, outlining how the Contractor propose to address any issues arising out of the audit or investigation, or how the Contractor will carry out and complete any corrective actions required by the Principal.

14.4 Other investigations

The Contractor must, within the time required by the Principal, provide all assistance reasonably requested by the Principal in respect of any complaint, investigation or inquiry in connection with Maintenance Works or this Contract (including in connection with any Tenant complaint, the requirements of any Responsible Authority including the New South Wales Auditor General, any 'fire safety orders', a coronial inquiry or the requirements of Parliamentary accountability).

14.5 Contractor's records

(a) The Contractor must, and must ensure all Subcontractors engaged in respect of the Maintenance Works, keep and maintain at its or their own cost (as the case may be) complete and detailed records, data, documents and accounts in relation to the performance of the Maintenance Works and any other obligations under this Contract.

(b) The Contractor must ensure full and unfettered access to all such records, data, documents and accounts for the purposes of any audit conducted by or on behalf of the Principal.

14.6 Records retention

Without limiting the Contractor's obligation to provide information on the SUI, the Contractor must retain and preserve all records, reports, documents and data, including all data retrievable from an electronic data storage source, created in connection with the Maintenance Works, and all costs and operating data, subject to any requirements under applicable Law. The Contractor must maintain custody of such material until either the date which is three years after the Term or such other time as the Principal notifies the Contractor to dispose or hand-over such material.

15 Contract Governance Committee

15.1 Organisation

(a) The contract governance committee (the '**CGC**') will be made up of no more than six persons, comprising up to three representatives of the Principal and up to three representatives of the Contractor (**CGC Members**).

(b) A representative of the Principal, nominated by the Principal will be the chairperson of the CGC and will initially be responsible for confirming the CGC Members.

(c) The CGC Members selected as the Contractor's CGC Members must be selected by the Contractor on a 'best for project' basis to ensure optimum leadership and management.

(d) The CGC must hold its first meeting within three months of the Date of Contract and subsequent meetings at the times reasonably directed by the Principal and notified to the Contractor.

(e) In the absence of CGC Members, alternative representatives of the parties may be nominated.

15.2 Duties of CGC

The CGC will have a monitoring role on a strategic leadership and management level, including:

(a) proactively identifying any material issues that arise, or that either party anticipates may arise, in connection with the Maintenance Works or the Contract;

(b) reviewing any relevant reports;

(c) reviewing any Disputes;

(d) reviewing the Contractor's performance of the Maintenance Works; and

(e) considering any other matter in respect to this Contract or the Maintenance Works relevant for its consideration.

15.3 Meetings

(a) In preparation of each meeting, the Contractor must develop for review by the Principal, a report summarising the key elements of the Contractor's monthly report and the agenda of items to be discussed.

(b) A minimum of two representatives of the Principal and one representative of the Contractor is required to constitute a quorum for a meeting.

(c) Minutes of each CGC meeting will be taken by the chairperson of the CGC, or such person as the Chairperson may nominate.

(d) Minutes of a CGC meeting will be confirmed at the next CGC meeting.

15.4 Non-binding nature

(a) The meetings of the CGC are primarily for oversight and discussion purposes.

(b) No decisions of the CGC will constitute a 'direction' for the purposes of the Contract.

(c) A decision by the CGC in respect of any question referred to it will not be binding on the Principal or the Contractor unless otherwise ratified by the parties in writing.

16 Plans, Reporting and Meetings

16.1 General

(a) The Contractor must prepare and submit for review all Deliverables and other plans, documentation and reports required by any provision of this Contract or as otherwise reasonably requested by the Principal from time to time.

(b) The Contractor must develop, implement, maintain and comply with the plans specified in clause 16.3.

16.2 Reports

(a) The Contractor must provide regular reports to the Principal:

(i) at the times and intervals directed by the Principal; and

(ii) in the Approved Form (including the Reporting Templates, where applicable).

16.3 Contractor Plans, Policies and Procedures

The Contractor must:

(a) within 28 days of the commencement of the Transition In Period, prepare and issue to the Principal a completed:

(i) Quality Management Plan;

(ii) Safety Management Plan;

(iii) Social Obligations Plan;

(iv) Training Management Plan;

(v) Aboriginal Participation Plan;

(vi) Workplace Relations Management Plan; and

(vii) Environmental Management Plan; and

(b) amend each of the Contractor Plans, Policies and Procedures to address any comments which the Principal, acting reasonably, may have (if any);

(c) ensure appropriate linkages and consistency between each of the Contractor Plans, Policies and Procedures;

(d) keep each of the Contractor Plans, Policies and Procedures updated throughout the Term;

(e) when reasonably requested by the Principal, demonstrate active compliance with each of the Contractor Plans, Policies and Procedures; and

(f) provide copies of each of the Contractor Plans, Policies and Procedures to the Principal upon request.

16.4 Works Reports

The Contractor must maintain all reports and records (documenting the performance of the Maintenance Works) consistent with Good Industry Practice.

16.5 No relief

The Contractor acknowledges and agrees that any submission or review of the plans, reports and other information under this clause 16.5 does not detract from or otherwise affect the Contractor's warranties, obligations or liabilities under or in connection with this Contract.

16.6 Meetings

(a) The Contractor must attend any ad hoc or regular meetings as reasonably directed by the Principal from time to time.

(b) The Contractor must ensure that:

(i) it is appropriately represented at all meetings, having regard to the subject matter and attendees of each meeting; and

(ii) (where requested) it circulates to all attendees meeting agendas and meeting minutes.

16.7 Reviews

The Principal may hold monthly, quarterly and or annual reviews. The agenda for such reviews will be specified by the Principal but may include:

(a) Work Orders (including those which have and have not achieved Works Completion);

(b) the KPI scores during the relevant period, along with the Contractor's compliance with any KPI Improvement Plan and or Executive Improvement Plan;

(c) each Programmed Works Plan and the Work Orders with upcoming Dates for Works Completion;

(d) any Defect Notices and NCN Notices (whether rectified or un-rectified);

(e) changes to any of the Contractor's Plans, Policies or Procedures or the Principal's Plans, Policies or Procedures;

(f) outcomes of any Post Work Inspections or audits;

(g) changes to any Subcontractors or Key Personnel;

(h) the Contractor's usage of the SUI; and

(i) the effectiveness of coordination and contract administration between the parties.

16.8 Briefings

The Contractor must prepare and provide briefings (at a location nominated by the Principal) on aspects of the Maintenance Works to the Principal, other contractors of the Principal (including any other SFSS Contractor or RAPM Contractor), its Subcontractors and Tenants as required (including as reasonably directed by the Principal) during the Term.

17 Subcontracts

17.1 Subcontracting

Subject to this clause 17, the Contractor:

(a) may subcontract any part of the Maintenance Works but not the whole of the Maintenance Works;

(b) must only engage Subcontractors who are safe, careful, skilled, qualified, experienced and competent and, where applicable, licenced and accredited in their respective disciplines. If requested by the Principal, the Contractor must demonstrate to the Principal that proposed Subcontractors have these attributes before engaging the Subcontractor;

(c) must not allow a Subcontractor to sub-subcontract any part of the Maintenance Works; and

(d) must not subcontract or otherwise outsource the:

(i) personnel or the responsibilities of those personnel who are Accredited Practitioner (Fire Safety) in accordance with the Fire Safety Laws; or

(ii) supervisory personnel or the responsibilities of those personnel,

without the prior written consent of the Principal, which may be withheld at its sole discretion.

17.2 Responsibility

(a) Subcontracting does not relieve the Contractor from any of its warranties, liabilities or obligations under or in connection with this Contract.

(b) The Contractor is fully and vicariously liable to the Principal for the acts and omissions of each of its Personnel if they were acts or omissions of the Contractor.

17.3 Subcontractors

(a) The Contractor must ensure that:

(i) each Subcontract includes provisions which enable the Contractor to discharge each of the Contractor's warranties, obligations and liabilities to the Principal under or in connection with this Contract; and

(ii) where the Contract requires the Contractor to procure or provide a warranty in respect of Equipment supplied as of the Maintenance Works, each Subcontractor supplying such Equipment provides the Contractor with any and all warranties in the Approved Form for the benefit of, or transferable to, the Principal.

(b) If the Principal considers, acting reasonably, that any Subcontractor engaged by the Contractor is not fit to carry out any part of the Maintenance Works, the Principal may direct the Contractor to terminate the Subcontract with that Subcontractor. The Contractor must promptly comply with such direction and must not:

(i) engage that Subcontractor in connection with the Maintenance Works; and

(ii) be entitled to any compensation or to make any Claim, arising out of or in connection with the Principal's direction.

(c) The Contractor must keep a written report of all Subcontractors engaged by the Contractor in connection with the Maintenance Works recording, at a minimum, the identity of the Subcontractor, the type of work the Subcontractor is engaged to carry out, the locations where the Subcontractor does or will carry out works and any and all licences and accreditations held (and required to be held) by each Subcontractor. The Contractor must:

(i) provide the Principal with a copy of an update report at least monthly; and

(ii) when reasonably requested by the Principal, provide evidence that any Subcontractors or any other Personnel hold appropriate and required licences and accreditations.

18 Representatives

18.1 Contractor's Representative

(a) The Contractor's Representative as at the Date of Contract is the person named in Item 3 of the Contract Details.

(b) The Contractor must ensure that the Contractor's Representative is suitably experienced, qualified and licensed, and able, to carry out the obligations of the Contractor's Representative in accordance with the Contract.

(c) The Contractor's Representative represents and acts for the Contractor at all times during the Term of this Contract.

(d) The Contractor is bound by the actions and omissions of the Contractor's Representative. Matters within the knowledge of the Contractor's Representative are deemed to be within the knowledge of the Contractor.

(e) The Contractor's Representative must be fluent (verbally and in writing) in the English language.

(f) All notices, instructions, information and all other communications to be given by the Principal to the Contractor under this Contract may be given to the Contractor's Representative, except as otherwise provided by the Contract.

(g) The Contractor may replace the Contractor's Representative with a substitute Contractor's Representative upon 10 Business Days' prior written notice to the Principal by the Contractor. The Contractor must ensure that any substitute of the Contractor's Representative is suitably experienced, qualified and licensed, and able, to carry out the obligations of the Contractor's Representative in accordance with the Contract.

19 Contractor's Personnel

19.1 Contractor to appoint suitable personnel

Without limiting its obligations under clauses 19.2 to 19.5 (inclusive), the Contractor must provide sufficient numbers of suitably qualified, experienced and competent personnel as are required for the performance of the Maintenance Works and the Contractor's other obligations under this Contract.

19.2 Organisation and Personnel

(a) Within the time specified in Item 16 of the Contract Details, the Contractor must submit for approval an organisation chart showing (at a minimum):

(i) the proposed organisation to be established by the Contractor for performing the Maintenance Works;

(ii) the identities of the Contractor's proposed Key Personnel, together with the curricula vitae of such proposed Key Personnel to be employed in the Maintenance Works; and

(iii) the identities of the Contractor's supervisory personnel that will be involved in the supervision of any aspect of the Maintenance Works carried out on Site, together with the curricula vitae of such proposed personnel.

(b) The Contractor must promptly inform the Principal of any proposed revision or alteration of the organisation chart, including supervisory personnel. Where practical the Contractor must obtain the Principal's consent (not to be unreasonably withheld) before affecting any proposed changes to the organisation chart, including the supervisory personnel.

19.3 Inductions and Site requirements

The Contractor must ensure that all Personnel:

(a) have undertaken any required induction and other training before being permitted to access the Site; and

(b) comply with the Contractor's and the Principal's other requirements,

including as required by the Maintenance Works Specification.

19.4 Key Personnel

(a) The Contractor must engage the Key Personnel (if any) for the performance of the Maintenance Works in accordance with Item 7 of the Contract Details.

(b) The Contractor must ensure that any individual member of its Key Personnel:

(i) where relevant, satisfies the qualification requirements specified in the Contract Details; and

(ii) is readily available to discuss, explain or make presentations on that part of the Maintenance Works for which it is responsible.

(c) The Contractor must not remove or replace any Key Personnel without prior approval of the Principal. Any substitute Personnel must be at least equally qualified for the duties of the position as the persons for whom they are substituted. The Contractor must provide an uninterrupted transition between the Key Personnel and their replacements.

19.5 Replacement of persons

(a) The Principal may by notice to the Contractor direct the removal of any person engaged in the performance of the Maintenance Works if in the Principal's reasonable opinion that person's performance or conduct is or has been unsatisfactory.

(b) Upon receipt of that notice, the Contractor must at its own expense remove, or arrange to be removed, such person from the Site and must not employ that person on the Site or in activities connected with the Maintenance Works without the Principal's prior approval. The Contractor must appoint a suitable replacement at its sole expense.

20 Warranties and standard of Maintenance Works

20.1 Contractor must do all necessary work

The Contractor acknowledges and agrees that:

(a) the description of the Maintenance Works specified in this Contract (including the Maintenance Works Specification) represents the Principal's and the Contractor's best efforts to define the technical information and tasks necessary for performance of the Maintenance Works;

(b) the Contractor must perform and provide all works, activities, services, materials, Equipment and Maintenance Works that are not specifically mentioned in this Contract but which are required for the proper performance of the Maintenance Works and the Contractor's other obligations under this Contract (as if such works, activities, services, materials, Equipment and Maintenance Works were expressly mentioned in this Contract), including any all works, activities, services, materials, Equipment and Maintenance Works:

(i) that could be reasonably inferred from the Contract Documents; or

(ii) which a reasonable and prudent contractor ought to have inferred from the Contract Documents;

(c) except as expressly stated otherwise in this Contract, the Contractor is not entitled to Claim any adjustment to any part of the Fee regarding its compliance with clauses 20.1(a) and 20.1(b).

20.2 Warranties relating to the Maintenance Works

(a) Without prejudice to any other warranties expressed elsewhere in this Contract, the Contractor warrants that:

(i) the Maintenance Works will be performed with all the skill and care to be expected of professional, appropriately qualified and experienced contractors with experience in performing Maintenance Works of a similar size, type, nature, purpose and complexity to the Maintenance Works and in accordance with Good Industry Practices;

(ii) the Maintenance Works will be performed in accordance with all applicable Laws and the requirements of this Contract (including the Maintenance Works Specification);

(iii) subject to clause 8.10, the Maintenance Works will be performed in accordance with the Principal Plans, Policies and Procedures and Contractor Plans, Policies and Procedures;

(iv) the Maintenance Works will be performed with the highest regard for safety and protection of the safety and wellbeing of Tenants and the Environment, and so that the Property is capable of being utilised under all applicable Laws;

(v) the Maintenance Works will be fit for the Intended Purpose;

(vi) the Equipment will be new and unused, fit for the Intended Purpose and of a quality reasonably expected in the Australian manufacturing and construction industries, free from Defects of any kind, and free from any encumbrance or Security Interest and must conform to the requirements specified in this Contract;

(vii) the Maintenance Works, the Equipment and the Contractor's Equipment will comply with all applicable Laws;

(viii) it is familiar with and has the capabilities (including workplace, health and safety management systems and safe work procedures in which all relevant officers and employees have been instructed and trained) to comply with all Work Health and Safety Requirements;

(ix) it has and will maintain:

(A) a quality management system equivalent or greater to ISO: 9001-2015;

(B) a safety management system equivalent or greater to ISO: 45001 – 2018; and

(C) an environmental management system equivalent or greater to ISO: 14001 – 2015; and

that each system is and will remain certified by accredited third parties; and

(x) the Maintenance Works Specification has been examined and thoroughly reviewed, and is suitable, appropriate and adequate for the Intended Purpose.

(b) The Contractor acknowledges that the Principal has entered into this Contract on the basis of and in full reliance upon the Contractor's warranties.

(c) Each of the warranties is construed as a separate and independent warranty and (save where expressly provided to the contrary) is not limited or restricted by reference to or inference from any other terms of this Contract or any other warranty.

20.3 Disclosure

The Contractor must as soon as practicable disclose in writing to the Principal any event or circumstance which becomes known to it after the Date of Contract which is materially inconsistent with any of the warranties it has provided under this Contract or which has or is likely to have an adverse effect on a Property or the Portfolio.

20.4 No warranty from the Principal

(a) The Contractor acknowledges and agrees that:

(i) unless expressly provided otherwise in this Contract, the Principal Supplied Information is supplied for the information convenience of the Contractor only and may not be relied on by the Contractor; and

(ii) the Contractor enters into this Contract based on its own investigations and determinations as to the completeness, accuracy and adequacy of the Principal Supplied Information, the SoR and the Maintenance Works Specification and any other information the Contractor may have regarding the Properties, the Maintenance Works, the Sites and the Contract Documents.

20.5 Contractor deemed to satisfy itself

The Contractor is deemed to have:

(a) satisfied itself as to the nature and extent of the risks assumed by it under or in connection with this Contract; and

(b) gathered all information necessary to perform its obligations under or in connection with this Contract.

20.6 Warranty of Equipment and workmanship

(a) The Contractor warrants that all Equipment used by the Contractor in the provision of Maintenance Works during the Term will be free from Defects in design, material and workmanship.

(b) Where:

(i) required by Law;

(ii) appropriate to meet standards of Good Industry Practice;

(iii) obtainable in the market; or

(iv) otherwise required by any provision of this Contract (including the Maintenance Works Specifications),

the Contractor must obtain and provide to the Principal all Warranties in connection with the Maintenance Works and any Equipment (including from, any Personnel, manufacturers, agents, suppliers or installers);

(c) If the Contractor is not able to obtain and assign such Warranties to and for the benefit of the Principal:

(i) the Contractor must hold the benefit of such warranties on trust for the Principal and must, if requested by the Principal, enforce them on behalf of the Principal; and

(ii) the Contractor is responsible for the administration of any claims, whether made by the Principal or by the Contractor, made under warranties for components procured by the Contractor in accordance with clause 20.6(b).

(d) The Contractor acknowledges and agrees that the cost of any repair, refurbishment or replacement of damaged or defective components used by the Contractor in the Maintenance Works, or stored for use in the Maintenance Works, during the Term and are included as part of the Fee.

(e) Notwithstanding any other provision of this Contract, the cost for the supply of a material or a part (as contemplated by this clause 20.6) will be borne by the Contractor.

20.7 Interface with Tenants

(a) The Contractor must ensure that, at all times when it interfaces with Tenants (including when carrying out Maintenance Works), it will be courteous, respectful, helpful, facilitative, will strive to ensure the achievement of the Contract Objectives and will at all times comply with the Operational Requirements.

(b) The Contractor will ensure that its Subcontractors and other Personnel comply with the requirements of clause 20.7(a).

(c) The Contractor must as soon as practicable notify the Principal upon becoming aware of a breach or potential or suspected breach of clause 20.7(a), providing adequate details and any additional information required by the Principal.

20.8 Cleaning up

(a) The Contractor must at all times keep the Site clean and tidy.

(b) The Contractor must regularly remove rubbish, refuse and surplus material from the Site which is brought onto the Site or produced by the Contractor or its Personnel.

(c) The Contractor must ensure that all Contractor's Equipment are clean before those vehicles enter the Site in order to minimise the possibility of bringing weeds and other contaminants from other areas onto the Site.

20.9 Supervision

The Contractor

warrants that it has made appropriate allowances:

(a) in its resources and organisational chart; and

(b) in the relevant components of the Fee,

for the full level of management supervision (including appropriately experienced and qualified management and supervisory personnel) required to enable the Contractor to satisfy and comply with all of its obligations under this Contract (including all of the warranties and obligations in clause 20).

21 Defects

21.1 Contractor to rectify

(a) The Contractor must rectify all Defects at its cost.

(b) The Principal may direct the Contractor in writing to rectify a Defect (**Defect Notice**).

(c) The Principal's Defect Notice may specify a date by which the Contractor must complete the relevant rectification work.

21.2 General obligations

(a) Upon receipt of a Defect Notice, the Contractor must, at its cost:

(i) rectify the Defect by the date specified in the Defect Notice (if any), or if no date is specified, within a reasonable time, having regard to the nature of the Defect and Good Industry Practice; and

(ii) comply with the requirements of the Operational Requirements relating to Defects and the rectification of Defects.

(b) Without limiting any other provision of this Contract or any of the Principal's rights under or in connection with this Contract if the Contractor fails to perform its obligations with respect to identifying, rectifying or procuring the rectification of Defects (including in response to Defect Notice issued by the Principal), the Principal may engage other contractors (including an Alternative Contractor) to rectify the Defect at the Contractor's cost.

(c) The Losses incurred by the Principal in having the rectification work carried out will be a debt due and payable from the Contractor to the Principal 5 Business Days after the Principal makes written demand for such payment.

21.3 Rights at Law

Neither the Principal's rights, nor the Contractor's liabilities, under this Contract or at Law in respect of Defects, will be affected or limited by:

(a) the rights conferred on the Principal by this clause 21;

(b) the exercise of such rights, or the failure to exercise any such rights, by the Principal; or

(c) any direction by the Principal, including a Defects Notice issued by the Principal, under this clause 21.

For the avoidance of doubt, the Principal may rectify, or have rectified, any Defect at any time without the need to notify the Contractor, issue a Defects Notice or allow the Contractor the opportunity to remedy the Defect under this clause 21 or otherwise.

22 Risk and Ownership

22.1 Transfer of ownership

The ownership of any item that is supplied by or on behalf of the Contractor as part of the Maintenance Works (including the Equipment and Consumables) transfers to the Principal on the earlier of:

(a) payment to the Contractor for those items; and

(b) installation at the Site.

22.2 Risk in and ownership of Contractor's Equipment

The ownership of and risk of loss in the Contractor's Equipment and all other property owned and used by the Contractor and its Subcontractors in connection with the Maintenance Works remains at all times with the Contractor or its Subcontractors.

22.3 Risk and Reinstatement

The Contractor acknowledges and agrees to the following:

(a) in respect of each Work Order the Contractor is responsible for the care and custody of the Site and the Maintenance Works (including any Equipment) while the Contractor is on Site performing the Maintenance Works; and

(b) where any loss or damage is caused to any part of the Site or the Maintenance Works (including any Equipment) while the Contractor is responsible for their care and custody, the Contractor must:

(i) as soon as practicable notify the Principal of the relevant loss or damage (and provide all information as reasonably requested by the Principal) and make the Site and Property safe;

(ii) unless and to the extent otherwise directed in writing by the Principal, at its own cost immediately reinstate the relevant loss or damage using Good Industry Practices; and

(iii) promptly notify the Principal when the relevant loss or damage is reinstated by the Contractor.

22.4 Liens and Encumbrances

Notwithstanding any other provision in this Contract, the Contractor must ensure that the Maintenance Works (and Equipment) are free of any Liens upon installation.

23 Indemnities

23.1 Contractor's indemnity

(a) The Contractor indemnifies and holds harmless the Principal from and against any and all Claims under any applicable Law, at common law, in equity or otherwise and Losses of any nature arising under, out of, or in connection with:

(i) damage to, loss of or destruction of, any real or personal property (including property belonging to the Principal), which is caused or contributed to by the Contractor or its Personnel;

(ii) any amount payable by the Principal to a third party to the extent caused or contributed to by a breach by the Contractor of its obligations under this Contract;

(iii) any injury to, or death or disease of, persons which is caused or contributed to by the Contractor or its Personnel;

(iv) a breach of its obligations under clause 31.6; and

(v) damage to persons, property, roads, bridges or any other traffic facilities which is caused or contributed to by the Contractor or its Personnel in connection with the procurement, transportation or delivery of all such materials or things to the Site or the failure by the Contractor to obtain the required Permits for the transportation of the Equipment or Contractor's Equipment.

(b) The Contractor's liability to indemnify the Principal and its Personnel under clause 23.1(a) will be reduced proportionally to the extent that any breach, negligence, fraud, or Wilful Misconduct by the Principal or its Personnel contributed to the relevant Claim or Loss.

(c) Clause 23.1(a) does not apply to:

(i) exclude any other right of the Principal to be indemnified by the Contractor; and

(ii) claims in respect of the right of the Principal to have the Maintenance Works performed.

23.2 Mitigation

The Contractor's obligation to indemnify the Principal under this Contract is reduced to the extent that the relevant Loss or Claim arose due to a failure of the Principal to take reasonable steps to mitigate that Loss or Claim.

23.3 Indemnification Procedures

(a) The Principal may, by notice to the Contractor, seek to enforce an indemnity given under this Contract. It is not necessary for the Principal or its Personnel to incur an expense before enforcing a right of indemnity conferred by this Contract.

(b) The Contractor must pay, as debt due and payable on demand, any amount it is obliged to pay to the Principal or any of its Personnel under an indemnity in this Contract.

23.4 Survival

The indemnities given under this clause 23 and each indemnity given by the Contractor under this Contract, is a continuing obligation, separate and independent from the other obligations of the parties and survives the completion, expiry or termination of this Contract.

24 Insurance

24.1 Principal Insurances

(a) The Principal will take out and maintain a contract works 'Material Damage' insurance policy for material damage arising from the provision of Maintenance Works in respect of any one occurrence, in the name of the Principal and the Contractor. Sub-limits apply to expenses, fees, debris removal, formwork and temporary works. The policy contains a number of exclusions, including the exclusion of construction plant and equipment and existing property. The policy shall include:

(i) coverage for the reinstatement value of the works up to a maximum of $2,000,000; and

(ii) a deductible of $25,000 each and every claim.

(b) The Principal will take out and maintain a contract works 'Public, Products and Environmental Impairment Liability' (third party legal liability) insurance policy in the name of the Principal and the Contractor. Subject to its terms and provisions, the policy provides an indemnity for those Insured (as such term is defined in the relevant Principal insurance policy) where legally liable, for any third party personal injury or property damage arising out of the provision of the Maintenance Works. The policy shall be:

(i) for an amount not less than $20,000,000 any one Occurrence (as such term is defined in the relevant Principal insurance policy) (and in the aggregate for 'Environmental Impairment Liability');

(ii) with a deductible of $150,000 for each and every loss in respect of 'worker to worker' claims (a claim brought by a worker employed by another company for personal injury damages following an incident in which the host employer or other contractors are liable); and

(iii) with a deductible of $100,000 for each and every claim in respect of all other losses.

(c) Where the Contractor makes a claim in respect of the contract works 'Material Damage' or contract works 'Public, Products and Environmental Impairment Liability' insurance policies under this clause 24.1, the Contractor shall be liable in all circumstances to pay the insurance policy deductibles stated in paragraphs 24.1(a)(ii), 24.1(b)(ii) and 24.1(b)(iii).

24.2 Contractor Insurances

Before commencing any activities under this Contract, the Contractor must at its cost take out and maintain the following insurance policies:

(a) 'Motor vehicle (third party liability)' insurance written on an occurrence basis:

(i) for an amount not less than $20,000,000 in respect of any one occurrence;

(ii) with a maximum deductible determined by the Contractor for each occurrence covering the Contractor (and the Contractor's Personnel) for third party property

damage in respect of all vehicles used in connection with the project or the Maintenance Works.

(b) 'Compulsory Third Party (CTP)' insurance as required by Law. The Contractor must ensure that the Contractor's Personnel procure equivalent policies.

(c) 'Workers compensation' insurance as required by Law. The Contractor must ensure that the Contractor's Personnel procure equivalent policies. The policy must, where permitted by Law, extend to indemnify the Principal for the Principal's vicarious liability and common law liability of the Principal to persons employed by the Contractor.

(d) Professional Indemnity (PI)' insurance:

(i) for an amount not less than $5,000,000 in respect of any one occurrence and in the annual aggregate;

(ii) covering liability arising from an act error or omission of the insured in relation to the performance of each insured's professional activities and duties in connection with the Maintenance Works;

(iii) ensuring that the policy includes:

(A) liability under the *Competition and Consumer Act 2010* (Cth) and similar state legislation elsewhere in Australia;

(B) if the policy covers multiple insureds, an extension to provide an indemnity to the Principal and non-imputation clauses;

(C) include cover for cost and expenses incurred to rectify the act or to mitigate the act, error or omission;

(D) liability of the Principal in respect of their vicarious liability arising out of or in connection with the Maintenance Works;

(E) one reinstatement of the full sum insured in any one period of the insurance;

(F) fraud, dishonesty, defamation, breach of confidentiality, infringement of patent, copyright, design and intellectual property;

(G) loss of or damage to documents and data; and

(H) to the extent available on commercially reasonable terms contractual liability, in respect of hold harmless provisions, and proportionate liability; and

(iv) for a period commencing on the Date of Contract until the period which is 6 years after the end of the Term.

(e) 'Home warranty' insurance as required by the Home Building Act, to the extent the exemption set out in section 103E of the Home Building Act does not apply. The Contractor must pay all required premiums and provide a copy of the 'Certificate of Insurance to do Residential Building Work' covering the relevant property to the Principal.

24.3 Obligations on Contractor

(a) The insurances required to be taken out and maintained in accordance with clause 24.2 must be taken out with reputable insurers having a financial strength rating of at least A- (Standard and Poor's, Fitch) or A3 (Moody's).

(b) Evidence of:

(i) the currency of the required insurances; and

(ii) the Contractor's compliance with this clause 24,

must be given in writing to the Principal prior to commencement of the Maintenance Works, and otherwise at any time upon reasonable request by the Principal.

(c) The Contractor is responsible for insuring the Contractor's Equipment. The Contractor is solely liable and responsible for any and all loss and damage to any of the Contractor's Equipment (including where such loss and damage occurs on Site).

24.4 Duration of insurances

The Contractor must ensure that each of the policies referred to in clause 24.2 are in force prior to the Date of Contract and maintained until the expiry of the Term.

24.5 Failure to insure

If the Contractor fails to obtain or maintain any insurance required under clause 24.2 or fails to provide satisfactory evidence of insurance, the Principal may obtain the relevant insurance and the Contractor will be indebted to the Principal for its costs of doing so.

24.6 Insurance excess

The Contractor will be liable for any deductibles or excesses for any claim the Contractor makes under any policy of insurance effected by the Principal or the Contractor, which relate to the Contract or the Maintenance Works.

24.7 General Obligations

(a) The Contractor must ensure that, in respect of each insurance required to be taken out and maintained by the Principal under this Contract, it:

(i) does not do anything which prejudices any insurance;

(ii) if necessary, rectifies anything which might prejudice any insurance;

(iii) immediately notifies the Principal of any event which may prejudice any insurance (including anything which may result in an insurance policy being cancelled); and

(iv) gives full and true information to its insurer of all matters and things the non-disclosure of which might in any way prejudice or affect any such policy or the payment of all or any benefits under the insurance.

(b) The Contractor must ensure that, in respect of each insurance required to be taken out and maintained by the Contractor under this Contract, it:

(i) does not do anything which prejudices any insurance;

(ii) if necessary, rectifies anything which might prejudice any insurance;

(iii) immediately reinstates an insurance policy if it lapses;

(iv) does not cancel, vary in a way to make the policy non-compliant with the Contract, or allow an insurance policy to lapse;

(v) immediately notifies the Principal of any event which may result in an insurance policy lapsing or being cancelled;

(vi) gives full and true information to its insurer of all matters and things the non-disclosure of which might in any way prejudice or affect any such policy or the payment of all or any benefits under the insurance; and

(vii) ensures that any non-disclosure by one insured does not prejudice the right of any other insured to claim on the policy.

Nothing in this Contract relating to insurances will operate as a limitation of the Contractor's liability (however arising) or the Contractor's obligations under this Contract or otherwise at law.

25 Event of Force Majeure

25.1 No responsibility

Neither party is responsible for any failure to perform its obligations under this Contract, to the extent it is prevented in performing those obligations by an Event of Force Majeure.

25.2 Notification of Event of Force Majeure

(a) Where there is an Event of Force Majeure, the Affected Party must immediately notify the other party giving:

(i) full particulars of the Event of Force Majeure;

(ii) details of each of the obligations prevented or delayed by the Event of Force Majeure;

(iii) the reasons for the Event of Force Majeure preventing that party from performing its obligations under this Contract;

(iv) the estimated time required to overcome the Event of Force Majeure; and

(v) the proposed actions for mitigating the consequences of the Event of Force Majeure.

(b) If, following the issue of any notice referred to in clause 25.2(a), the Affected Party claiming relief receives or becomes aware of any further information relating to the Event of Force Majeure (or any failure to perform), it must submit such further information to the other party as soon as reasonably possible.

25.3 Obligation to mitigate

(a) The Affected Party must:

(i) use all reasonable diligence and reasonable means to remedy, abate, mitigate or minimise the effect of the Event of Force Majeure;

(ii) notify the other party in writing when the Event of Force Majeure has terminated or abated to an extent which permits the resumption of performance to occur; and

(iii) promptly resume performance (and give written notice of such resumption) as soon as reasonably possible after the termination of the Event of Force Majeure and its consequences or after the Event of Force Majeure and its consequences have abated to an extent which permits the resumption of performance to occur.

(b) The Affected Party is not relieved from liability under this Contract to the extent that it is not able to perform, or has not in fact performed, its obligations under this Contract due to its failure to comply with its obligations under clause 25.3(a).

25.4 Recommencement of performance

Upon completion of the Event of Force Majeure, the Affected Party must, as soon as reasonably practicable, recommence the performance of its obligations under this Contract.

25.5 No relief from pre-existing obligations

An Event of Force Majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.

25.6 Liability for costs

The Affected Party has no entitlement, and the other party has no liability for:

(a) any costs, losses, expenses or damages suffered by the Affected Party or, where applicable, the payment of any part of the Fee during an Event of Force Majeure; and

(b) any delay costs in any way incurred by the Affected Party due to an Event of Force Majeure.

26 Suspension

26.1 Suspension by the Principal

(a) The Principal may by notice to the Contractor order the Contractor to suspend performance of all or any of its obligations under this Contract.

(b) A notice provided in accordance with clause 26.1(a) must specify:

(i) the obligation which is to be suspended;

(ii) the effective date of the suspension; and

(iii) the reasons for the suspension (including whether the suspension is a Principal Initiated Suspension or a Contractor-caused Suspension),

and state that it is a notice under this clause 26.1.

(c) Upon receipt of such notice from the Principal, the Contractor must promptly suspend performance of the obligation until directed to resume performance by the Principal.

26.2 Resumption of Maintenance Works

(a) At any time during a suspension directed under clause 26.1 the Principal may give notice to the Contractor to resume the obligations which are the subject of the suspension as directed under clause 26.1.

(b) Upon receipt of such a notice to resume the obligations, the Contractor must resume the Maintenance Works by the date specified in the Principal's notice.

26.3 Costs incurred during Principal's Suspension

(a) Where all or some of the performance of the Maintenance Works is suspended due to a Principal Initiated Suspension:

(i) the Principal will continue to pay the Management Fee during the period of suspension;

(ii) the Principal will pay to the Contractor any unavoidable costs that the Contractor necessarily incurs as a direct result of the suspension, provided that the Contractor takes all reasonable steps to avoid and mitigate such costs (and provides evidence to the Principal of all such steps); and

(iii) during the period of the suspension, the Contractor must continue to provide all Maintenance Works not affected by the Principal's Suspension.

(b) Despite any other provision of this Contract, the Contractor has no entitlement, and the Principal has no obligation or liability for, any costs, losses, expenses, damages, or the payment of any part of the Fee, in the case of a suspension caused by the failure of the Contractor to fulfil its obligations under this Contract or a Contractor-caused Suspension.

27 Intellectual Property Rights

27.1 Contractor to obtain all necessary rights

The Contractor must at its own cost ensure that it has (where necessary in the Principal's name) all necessary rights and licences:

(a) to Intellectual Property subsisting in any matter, thing or process (including documentation, drawings and software) used or to be used by or on behalf of the Contractor in performing the Maintenance Works or delivered or to be delivered by it to the Principal under this Contract, including any third party Intellectual Property forming part of the Contractor IP or the Project IP; and

(b) to grant the rights required by the Principal to use such Intellectual Property in accordance with clause 27.5.

27.2 Ownership of the Principal IP

The Principal IP is and remains the sole property of the Principal. Unless otherwise agreed in writing between the parties or as expressly provided under clause 27.4, the Contractor will have no rights regarding any of the Principal IP.

27.3 Ownership of Project IP

Subject to clause 27.4, upon creation, all Project IP vests in and is the sole and exclusive property of the Principal and to the extent permitted by Law the Contractor hereby assigns all rights, title and interest in and to such Project IP to the Principal.

27.4 Licence of Project IP and Principal IP

The Principal grants to the Contractor a non-exclusive, royalty-free, non-transferable licence (with the right to sublicence) to use, reproduce, modify and adapt the Project IP and the Principal IP for the sole purpose of performing the Maintenance Works and performing its other obligations under or in connection with this Contract. The licence will continue until the earlier of termination of this Contract and the Expiry Date.

27.5 Licence of Contractor IP

(a) The Contractor grants to the Principal, its Affiliates, their assignees, transferees and successors in title a perpetual, irrevocable, non-exclusive, transferable (in whole or in part, whether by assignment or otherwise), royalty-free, worldwide licence (or sublicence, as the case may be) of the Contractor IP to use, reproduce, modify and adapt the Contractor IP to the extent necessary to exercise its rights regarding the Project IP with the right to sublicence (or sub-sublicence) to any person, for any purpose it deems fit in connection with the Site or the Property. Any fees regarding the granting of this licence are deemed to form part of the Fees. The Principal may permit any other person to exercise the rights granted under this clause 27.5(a).

(b) The Contractor must procure that all agreements which the Contractor may enter into with any Subcontractor in connection with this Contract will provide for an irrevocable, perpetual, non-exclusive, transferable (in whole or in part, whether by assignment or otherwise), royalty-free, worldwide licence (or sublicence, as the case may be) to the Contractor to use, reproduce, modify and adapt all third party Intellectual Property comprising Contractor IP, with the right to sublicence (or sub-sublicence) to the Principal on the terms of clause 27.5(a) in connection with the Site or the Property.

27.6 Intellectual Property warranty

The Contractor warrants and represents that:

(a) it either owns or has the right to use all Intellectual Property which is necessary or desirable for the purposes of performing the Maintenance Works;

(b) it has, or prior to the commencement of Maintenance Works will have, all rights and licences necessary to grant the Principal the licence (or sublicence, as the case may be) of the Contractor IP granted under clauses 27.5(a) and 27.5(b) and all other rights which are necessary or desirable for the purposes of performing the Maintenance Works and it is, or prior to the commencement of the Maintenance Works will be, entitled to grant the licence (or sublicence, as the case may be); and

(c) the performance of the Maintenance Works, the provision of the Project IP and the Contractor IP and any use of it by or on behalf of the Principal or any other person with a right to use the Project IP or Contractor IP under clauses 27.4 and 27.5, whether in the operation, maintenance, repair, refurbishment or modification of Property or otherwise, will not infringe the Intellectual Property rights of any third party.

27.7 Intellectual Property indemnity

The Contractor agrees to hold harmless and indemnify on demand the Principal from and against all Claims and Losses (including but not limited to legal costs on an indemnity basis) arising out of or in any way in connection with:

(a) any Claim that the Project IP or the Contractor IP or any use, reproduction, modification or adaptation by or on behalf of the Principal infringes the Intellectual Property, moral rights or any other rights of any third party or entitles any third party to Claim any compensation, royalty fee or other amount; and

(b) any breach by the Contractor of the warranties in clause 27.6 or 27.8.

27.8 Moral rights

The Contractor warrants and represents that the performance of the Maintenance Works, the provision of the Project IP or Contractor IP to the Principal and the use of the Project IP or the Contractor IP by the Principal or its licensees and sub-licensees will not:

(a) require the Principal or its licensees and sub-licensees to identify the authority of any such work; or

(b) infringe or contravene any moral rights or similar personal rights which by Law are not assignable, of any person,

and all necessary consents or waivers to give effect to this warranty have been or will be obtained, and will be effective and irrevocable.

27.9 No third party payments

The Contractor represents and warrants that except for amounts included in the Fee, no royalties or other payments are due or payable by the Principal to the Contractor or any other person regarding the Project IP or the Contractor use of or the grant of a right to use the Contractor IP.

27.10 Return of material forms of Principal IP

Within 20 Business Days after the earlier of termination of this Contract and Expiry Date, the Contractor must deliver to the Principal in the Approved Form all forms of the Principal IP in the possession, power or control of the Contractor or its Personnel.

27.11 Survival obligations

Subject to clause 27.10, the rights and obligations in this clause 27 will not cease on the completion, expiry or termination of this Contract.

28 Confidential Information

28.1 Non-disclosure of Confidential Information

Subject to clause 28.2, each party must:

(a) keep the other party's Confidential Information secret and confidential;

(b) not access, use or reproduce the other party's Confidential Information for any purpose other than performing this Contract, nor assist or permit any other person to do so;

(c) not disclose the other party's Confidential Information except as permitted under this Contract; and

(d) take all steps reasonably necessary to safeguard the other party's Confidential Information from unauthorised access, use or disclosure.

28.2 Permitted disclosure

(a) Each party may use and disclose Confidential Information of the other party only:

(i) to its Personnel on a "need to know" basis provided it takes all reasonable precautions to ensure that such Personnel comply with clause 28.1;

(ii) with the other party's written consent;

(iii) to a court, government agency, as required by applicable law, or under compulsion of law by a court or government agency, or by the rules of any relevant stock exchange or regulator, as long as the disclosing party:

(A) discloses the minimum amount of Confidential Information required to satisfy the law or rules; and

(B) before disclosing any information, gives a reasonable amount of notice to the other party in writing and takes reasonable steps (whether required by the other party or not) to maintain that Confidential Information in confidence; or

(iv) in the case of the Principal:

(A) where required by the GIPA Act (in which case the Contractor must comply with clause 30);

(B) to satisfy the disclosure requirements of the New South Wales Auditor General or to satisfy the requirements of Parliamentary accountability; or

(C) satisfy the disclosure requirements of any other applicable Law.

(b) Without limiting clause 30, the Contractor must provide to the Principal any information which the Principal reasonably requires to comply with its obligations referred to in clause 28.2(a).

28.3 Publicity and media releases

Except for notices which the Contractor is required to disclose to any recognised stock exchange, the Contractor must:

(a) not make any public announcements or statements in relation to the Maintenance Works or the Contract (including by posting any information on any) without the Principal's prior consent;

(b) give the Principal a draft of any proposed media release relating to the Maintenance Works or the Contract and obtain the Principal's approval of the media release before distributing it;

(c) prior to release, revise the wording and timing of all media releases, public announcements and statements by the Contractor or the Contractor's Personnel relating to the Maintenance Works or the Contract as requested by the Principal;

(d) not issue any post of any nature on any social media platform relating to the Maintenance Works or the Contract;

(e) ensure that the Contractor's Personnel comply with the requirements referred to in this clause 28.3.

28.4 Community liaison

The Contractor must, as reasonably requested by the Principal, participate in liaison with the public and community groups regarding this Contract. The Contractor must not perform any such liaison other than in conjunction with the Principal.

28.5 Disclosure to professional advisors

All obligations imposed on the Principal by this clause 15 are subject to the Principal's unfettered right to disclose any information to its professional advisors, including Confidential Information of the Contractor.

28.6 Survival of obligations

The obligations in this clause 28 survive the completion, expiry or termination of this Contract.

29 Privacy

29.1 Privacy Compliance

(a) If the Contractor collects, uses, discloses, transfers or otherwise handles any Personal Information in connection with this Contract or the Maintenance Works, it must:

(i) comply with all applicable Privacy Laws as if it were a person subject to the Privacy Laws;

(ii) comply with any of Principal Plans Policies and Procedures related to privacy; and

(iii) not do or omit to do anything or engage in any practice which if done or engaged in by the Principal, would be a breach of any Privacy Laws.

(b) The Principal must comply with all applicable Privacy Laws in its handling of any Personal Information.

29.2 General Privacy Obligations

Without limiting clause 29.1, the Contractor must:

(a) (and must ensure its Personnel) collect, use, disclose, transfer or handle any Personal Information only to the extent necessary to perform its obligations in accordance with this Contract;

(b) not disclose any Personal Information to any other person (including to a Subcontractor) without the prior consent of the Principal or, subject to clause 29.2(e), as required by Law;

(c) ensure that its Personnel with access to any Personal Information:

(i) are made aware of the obligations in this clause 29; and

(ii) if requested by the Principal, ensure that such Personnel sign written undertakings (in a form acceptable to the Principal) to comply with the obligations in this clause 29;

(d) without limiting any of the Contractor's other obligations under this Contract, take all technical, organisational and other security measures as are reasonably within the Contractor's power to protect any Personal Information from:

(i) misuse, interference and loss; and

(ii) unauthorised access, modification or disclosure;

(e) notify the Principal:

(i) as soon as reasonably practicable after the Contractor receives any request or complaint concerning any Personal Information;

(ii) immediately after the Contractor becomes aware that a disclosure of any Personal Information may be required by Law; and

(iii) immediately if the Contractor becomes aware of any breach of this clause 29, or of any Data Breach which has occurred or which the Contractor has reasonable grounds to suspect may have occurred;

(f) promptly comply with any reasonable requests and/or directions from the Principal from time to time:

(i) concerning the collection, use, disclosure, transfer, handling, access or correction of any Personal Information; and

(ii) for information, assistance and co-operation to allow the Principal to investigate breaches of this clause 29, or a Data Breach and to comply with its obligations under the Privacy Laws; and

(g) without limiting the above, in relation to the Data Breach, if the Contractor forms the view that it is or may be required to notify affected individuals of a Data Breach under the Privacy Laws, ensure that:

(i) before making any such notification it promptly discusses such matter with the Principal and complies with any reasonable directions issued by the Principal in relation to such notification, including as to whether the Contractor or the Principal will be the person responsible for fulfilling the relevant notification requirements; and

(ii) where the Principal determines that the Contractor will be the party responsible for fulfilling the relevant notification requirements, comply with all such notification requirements in accordance with the Privacy Laws.

29.3 Consents

(a) In relation to any Personal Information collected by Contractor or its Personnel in connection with the Maintenance Works, the Contractor must ensure that it obtains all consents and makes all disclosures required under Privacy Law for the collection, use and disclosure of that Personal Information to and by the Principal and the Principal's Personnel.

(b) Without limiting the Contractor's obligations under clause 29.3(a):

(i) in obtaining such consents and making such disclosures in connection with the Maintenance Works, the Contractor must include in its privacy policy a statement which covers the requirements of clause 29.3(a); and

(ii) the Contractor must provide a copy of its privacy policy and associated collection statements to the Principal for its review and approval prior to the Date of Contract.

29.4 Images of Properties

The Contractor must not, and the Contractor must ensure that its Personnel do not, provide to any third party or share or post on any website any images of any Properties or the property of any Tenant.

30 GIPA

30.1 Disclosure log

The Contractor acknowledges that the Principal may disclose certain information about this Contract in accordance with the Principal's obligations under the GIPA Act, including making certain information about this Contract (and a copy of this Contract) publicly available in any disclosure log of contracts the Principal is required to maintain.

30.2 Access to information

(a) The Contractor must, within 5 Business Days of receiving a written request by the Principal, provide the Principal with immediate access to the following information contained in records held by or under the control of the Contractor or the Contractor's Personnel:

(i) information that relates directly to the performance of the Maintenance Works provided to the Contractor by the Principal pursuant to this Contract;

(ii) information collected by the Contractor from members of the public in relation to or pursuant to this Contract; and

(iii) information received by the Contractor from the Principal to enable it to perform the Maintenance Works pursuant to this Contract.

(b) For the purposes of clause 30.2(a), such information does not include:

(i) information that discloses or would tend to disclose the Contractor's financing arrangements, financial modelling, cost structure or profit margin;

(ii) information that the Contractor is prohibited from disclosing to the Principal by provision made by or under any Laws, whether of any Australian state or territory, or of the Commonwealth; or

(iii) information that, if disclosed to the Principal, could reasonably be expected to place the Contractor at a substantial commercial disadvantage in relation to the Principal, whether at present or in the future.

(c) The Contractor must provide copies of any of the information requested by the Principal in accordance with clause 30.2(a) at the Contractor's own expense.

30.3 Consultation

(a) The Principal will take reasonably practicable steps to consult with the Contractor before providing any person with access to information relating to this Contract, in response to an access application under the GIPA Act, if it appears that:

(i) the information:

(A) includes Personal Information about the Contractor or its employees;

(B) concerns the Contractor's business, commercial, professional or financial interests; or

(C) concerns research that has been, is being, or is intended to be, carried out by or on behalf of the Contractor;

(ii) the Contractor may reasonably be expected to have concerns about the disclosure of the information; and

(iii) those concerns may reasonably be expected to be relevant to the question of whether there is a public interest consideration against disclosure of the information.

(b) If, following consultation between the Principal and the Contractor, the Contractor objects to disclosure of some or all of the information, the Contractor must provide details of any such objection (including the information objected to and the reasons for

any such objection) to the Principal within 5 Business Days of the conclusion of the consultation process.

(c) In determining whether there is an overriding public interest against disclosure of the information, the Principal will take into account any objection received from the Contractor.

(d) If the Contractor objects to the disclosure of some or all of the information but the Principal nonetheless decides to release the information, the Principal must give the Contractor notice of the Principal's decision and notice of the Contractor's right to have that decision reviewed.

(e) Where the Principal has given notice to the Contractor in accordance with clause 30.3(d), the Principal must not provide access to the information:

(i) before the period for applying for review of the decision under Part 5 of the GIPA Act has expired; or

(ii) where any review of the decision duly applied for is pending.

31 Statutory and NSW Government Requirements

31.1 Laws and Responsible Authorities

The Contractor must comply with, and must ensure that its Personnel comply with:

(a) all Laws that are applicable to the Maintenance Works, the Properties, this Contract and the Contractor and its Personnel; and

(b) subject to clause 31.3, any changed or additional Laws that commence or come into force after the Maintenance Works Commencement Date and that are applicable to the Maintenance Works, the Properties, this Contract and the Contractor and its Personnel.

31.2 Permits

(a) Without limiting clause 31.1, the Contractor must:

(i) acquire, renew and maintain the Permits;

(ii) upon the Principal's request and as otherwise required by this Contract, provide the Principal with evidence of its compliance with this clause 31.2 (including original approvals and other documents);

(iii) comply with, and must ensure that its Personnel comply with, the Permits; and

(iv) notify the Principal in writing as soon as the Contractor becomes aware in the performance of the Maintenance Works of any non-compliance or otherwise with the terms of the Permits or other requirements of any applicable Laws.

(b) The Contractor agrees to hold harmless and indemnifies on demand the Principal from and against any and all Claims and Losses of whatever nature arising out of or in any way in connection with any failure by the Contractor to comply with clause 31.

31.3 Change in Law

(a) The Contractor must comply with any Change in Law. The Contractor agrees that such compliance does not detract from or otherwise affect the Contractor's warranties, obligations or liabilities under or in connection with this Contract.

(b) If there is a Qualifying Change in Law, the Contractor must promptly upon becoming aware of any actual or impending Change in Law give notice to the Principal with:

(i) details of the Qualifying Change in Law;

(ii) details of any change it believes is required to the Maintenance Works Specification; and

(iii) any other information which the Principal reasonably requires (including the Contractor's estimate of any increase or decrease in any component of the Fee arising from complying with a Qualifying Change in Law).

(c) The Principal must notify the Contractor as to whether it agrees to a change in the Fee within 15 Business Days after receiving the Contractor's notification.

(d) If the Principal, acting reasonably, determines that the Qualifying Change in Law requires a variation to the Maintenance Works Specification or this Contract, the Principal will within 15 Business Days after receiving the Contractor's notification provide a direction to either:

(i) change the Maintenance Works Specification and/or the Fee as proposed by the Contractor; or

(ii) vary the Maintenance Works Specification on a different basis.

(e) Either party may refer the proposed Qualifying Change in Law to Dispute resolution in accordance with clause 36 if:

(i) the Principal does not agree to a variation to the Maintenance Works Specification or this Contract; or

(ii) the parties cannot agree to the required changes to the Maintenance Works Specification or this Contract in accordance with clause 31.3(d)(i) within 40 Business Days after the Contractor has notified the Principal under clause 31.3(b).

(f) If the Contractor considers, acting reasonably, that the Principal's variation to the Maintenance Works Specification under clause 31.3(d)(ii) does not address the Qualifying Change in Law, the Contractor may:

(I) notify the Principal and provide detailed reasons regarding why it considers that the variation does not address the Qualifying Change in Law; and

(ii) give a further notice to the Principal in accordance with clause 31.3(b).

31.4 Industrial Relations

(a) The Contractor must:

(i) comply with, and ensure its Personnel comply with:

(A) all applicable Laws regarding industrial and employment relations;

(B) subject to clause 8.10, the Contractor Plans, Policies and Procedures and Principal Plans, Policies and Procedures regarding industrial and employment relations; and

(C) any industrial and employment relations requirements specified in the Maintenance Works Specification or elsewhere in this Contract;

(ii) establish and maintain all necessary policies to secure harmonious industrial and employment relations in connection with the performance of the Maintenance Works;

(iii) conduct its industrial and employment relations with its Personnel in a manner conducive to preventing any disruption in, the Maintenance Works, including by taking all prudent steps to maintain harmonious and productive relations with its Personnel; and

(iv) perform the Maintenance Works, and must ensure that its Personnel perform the Maintenance Works, in a manner which avoids Industrial Matters.

(b) If an Industrial Matter arises, the Contractor must:

(i) immediately notify the Principal on becoming aware of any Industrial Matter;

(ii) meet with the Principal, as soon as practicable after such notification, for the purpose of discussing and agreeing on any necessary or appropriate action to be taken to resolve the Industrial Matter;

(iii) perform any necessary or appropriate action to be taken to resolve the Industrial Matter as agreed between the Principal and the Contractor under clause 31.4(b)(ii); and

(iv) in the absence of agreement regarding necessary or appropriate action to be taken to resolve an Industrial Matter:

(A) prevent or minimise any potential or likely harm or prejudice caused by the Industrial Matter;

(B) rectify any harm or prejudice caused by the Industrial Matter; and

(C) prevent or minimise any further harm or prejudice.

31.5 Work health and safety and the Environment

The Contractor must:

(a) comply with, and ensure its Personnel comply with:

(i) all applicable Laws regarding work health and safety and the Environment;

(ii) subject to clause 8.10, the Contractor Plans, Policies and Procedures and Principal Plans, Policies and Procedures regarding work health and safety and the Environment; and

(iii) the Work Health and Safety Requirements; and

(iv) when reasonably requested to do so by the Principal, submit to the Principal documents in the Approved Form that show that the Contractor and its Personnel are complying with their respective duties under the Work Health and Safety Requirements;

(b) proactively ensure that its working environment is safe, that safety and health hazards and risks to its Personnel, Tenants and the Principal, or any member of the public or any other party on Site are managed to levels which are as low as reasonably practicable;

(c) if required to notify a Responsible Authority of an incident concerning any aspect of the Contractor's performance of the Maintenance Works, also notify the Principal as soon as

possible of the incident (and in any event within 1 Business Day) and provide the Principal with a copy of any notification documentation provided to such Responsible Authority;

(d) if requested to do so by the Principal, give to the Principal all other documents relevant to the incident notified under clause 31.5(c) and authorise the Principal and its Personnel to conduct interviews with the Contractor's Personnel regarding the incident;

(e) as soon as reasonably practical, but in any case within 1 Business Days, after an actual occurrence or incident notify the Principal of any other incident (including an incident that had potential to result in injury to a person, or damage to property or the environment (commonly referred to as a 'near miss')), injury, loss or damage of any kind which occurs in connection with the Maintenance Works; and

(f) at all times maintain accreditation under the Australian Government Building and Construction WHS Accreditation Scheme, as established by the *Building and Construction Industry (Improving Productivity) Act 2016* (Cth) and enabled by the *Fair Work (Building Industry – Accreditation Scheme) Regulation 2016* (Cth), as though the project was being funded directly or indirectly by the Australian Government.

31.6 Appointment as Principal Contractor

(a) The Principal appoints the Contractor as the Principal Contractor for the Maintenance Works and authorises the Contractor to:

(i) have management and control of the Site; and

(ii) discharge the duties imposed on the Principal Contractor for the Maintenance Works under the *Work Health and Safety Regulation 2017* (NSW),

for the period during which the Contractor is the 'person in control' of the Site on which the Maintenance Works are performed, unless and to the extent that such authorisation is withdrawn by the Principal in writing prior to the end of that period (and only for the period of time such authorisation is withdrawn).

(b) The Contractor acknowledges and accepts:

(i) its appointment as the Principal Contractor; and

(ii) that it must discharge and perform the responsibilities and functions of the Principal Contractor for the Maintenance Works.

31.7 Hazardous Substance

(a) The Contractor must:

(i) handle, transport, store and dispose of Hazardous Substances in a manner which:

(A) complies with all applicable Laws;

(B) reflects Good Industry Practices; and

(C) is safe and appropriate given the nature of the Hazardous Substance;

(ii) not leave any Hazardous Substance at the Site or any Property (or allow any Hazardous Substance to be abandoned or dumped at the Site or any Property);

(iii) not handle or deal in any way with Hazardous Substances in a manner which may or is likely to cause danger to human beings or the Environment, whether imminent or otherwise, including resulting from the location, storage, handling or release of any substance having toxic, corrosive, flammable, explosive, infectious or otherwise dangerous characteristics;

(iv) at all times carry out, and ensure its Personnel carry out, the Maintenance Works in an environmentally responsible manner, in accordance with Good Industry Practice, and so as to protect the Environment and keep the Site in a good and safe condition, including keeping the Site free from pollution and contamination;

(v) comply with, and ensure that its Personnel in performing the Maintenance Works, comply with:

(A) all applicable Laws regarding the Environment;

(B) subject to clause 8.10, all Principal Plans, Policies and Procedures and Contractor Plans, Policies and Procedures regarding the Environment; and

(C) all Environmental Notices;

(vi) immediately notify the Principal in writing as soon as the Contractor:

(A) becomes aware in the course of the performance of the Maintenance Works of any non-compliance with the requirements of any Law or Permit regarding the Environment;

(B) becomes aware of any information, fact or circumstance where, if the Principal were to be aware of such information, fact or circumstance, the Principal would be required to notify any Responsible Authority of that information, fact or circumstance under any Law relating to the Environment (without limiting any other obligation of the Contractor regarding the information, fact or circumstances); or

(C) notifies any Responsible Authority of any matter under any Law relating to the Environment, in which case the Contractor must provide to the Principal a copy of such notification and of any subsequent correspondence with the Responsible Authority regarding the subject of the notification;

(vii) provide all reasonable assistance to the Principal (at the Contractor's cost) if the Principal is required to respond to any Responsible Authority in relation to any environmental matter arising out of or in connection with the Maintenance Works; and

(viii) hold harmless and indemnify on demand the Principal from and against any claim, loss, damage, expense or cost brought against, suffered or incurred by the Principal arising out of or in any way in connection with a breach by the Contractor of its obligations under this clause 31.7.

(b) The Contractor acknowledges that there is a likelihood that:

(i) asbestos will be present at any Properties constructed in or before 1987; and

(ii) lead based paint will be present at any Properties constructed in or before 1970,

and the Contractor must take all necessary steps to deal with any asbestos and lead based paint in accordance with this Contract and all applicable Laws.

31.8 Notification

The Contractor must as soon as practicable (taking into the account the nature of the breach (or potential breach), the notice or direction, and / or the incident or accident (as the case may be)) notify the Principal of:

(a) any breach (or potential breach) by the Contractor or any Personnel of the Work Health and Safety Requirements;

(b) any notice or direction received by the Contractor or any Personnel under or in connection with the Work Health and Safety Requirements (including by providing a copy of the notice or direction to the Principal); and

(c) all safety incidents or accidents to any person (including 'notifiable incidents' under the Work Health and Safety Requirements).

31.9 Home Building Act

(a) This clause 31.9 applies to the extent that the Maintenance Works is 'residential building work' as defined in the Home Building Act.

(b) The Contractor warrants that:

(i) the Maintenance Works will be done with due care and skill and in accordance with the plans and specifications set out in the Contract;

(ii) all materials supplied by the Contractor will be good and suitable for the purpose for which they are used and, unless otherwise required by the Contract, will be new;

(iii) the Maintenance Works will be done in accordance with, and will comply with, the Home Building Act and any other applicable Laws;

(iv) the Maintenance Works will be done with due diligence and within the time stipulated in this Contract or if no time is stipulated, within a reasonable time;

(v) any 'dwelling' (or part of a 'dwelling'), as defined by the Home Building Act, which forms part of the Maintenance Works, will be reasonably fit for occupation as a dwelling; and

(vi) the Maintenance Works and all materials used in doing the Maintenance Works will be reasonably fit for the specified purpose or result, if the Principal expressly makes it known to the Contractor, the particular purpose for which the work is required or the result that the Principal desires the Maintenance Works to achieve, so as to show that the Principal relies on the Contractor's skill and judgment.

(c) The Contractor warrants that:

(i) it has, and will hold, a valid licence when doing the Maintenance Works, as required under the Home Building Act;

(ii) the Contractor's licence number authorising the Contractor to contract to Principal is stated in Item 14 of the Contract Details;

(iii) it has not done, and will not do, anything that could give rise to the cancellation or suspension of the Contractor's licence or the issuing of a warning notice in relation to the Contractor's licence under the Home Building Act; and

(iv) all plans and specifications for the Maintenance Works, including any variations to those plans and specifications, are taken to form part of the Contract.

(d) The Maintenance Works must comply with:

(i) the Building Code of Australia (to the extent required under the *Environmental Planning and Assessment Act 1979* (NSW), including any regulation or other instrument made under the *Environmental Planning and Assessment Act 1979* (NSW);

(ii) all other relevant codes, standards and specifications that the Principal is required to comply with under any Laws; and

(iii) the conditions of any relevant development consent or complying development certificate.

(e) The warnings and explanations of any provisions of this Contract which may vary any consideration payable to the Contractor are included to satisfy the requirements of the Home Building Act. None of the provisions of this Contract will be construed or interpreted by reference to those warnings and explanations.

(f) The checklist required to be included as part of this Contract pursuant to section 8 of the *Home Building Regulation 2014* (NSW) is included at Schedule 17 (Home Building Act Requirements).

(g) Each of the Principal and the Contractor acknowledge and agree that this Contract may be terminated in circumstances provided by the general law and that this does not prevent the parties agreeing to additional circumstances in which this Contract may be terminated.

(h) The Contractor acknowledges and agrees that the warranties and obligations in this clause 31.9:

(i) are required by the Home Building Act; and

(ii) do not derogate from, or limit, the other provisions of this Contract.

(i) The parties acknowledge and agree that the Contractor relies upon the exemption set out in section 103E(2) of the Home Building Act.

31.10 Conflicts of Interest

(a) The Contractor warrants that the Contractor and its Personnel have no conflicts of interest in the performance of its obligations under this Contract.

(b) The Contractor must:

(i) notify and consult with Principal immediately upon becoming aware of the existence of or potential for a conflict of interest; and

(ii) comply with any reasonable direction given by the Principal in relation to those circumstances to manage the conflict of interest (or potential conflict of interest).

(c) For the purposes of this clause 31.10, a 'conflict of interest' includes engaging in any activity, or obtaining any interest, likely to conflict with or in any way restrict the performance by the Contractor of it obligations under this Contract.

32 Social Obligations

32.1 Employment Opportunities

The Contractor must provide employment opportunities to persons who are unemployed and/or persons with physical, mental or social limitations which hinder their active participation in the community.

32.2 Local Industry and Community Participation

The Contractor must engage with and provide opportunities to local industry in each Allocated Contract Area. In doing so, the Contractor must maximise opportunities for local participation, promote workforce development and management and contribute to the sustainable long-term industry development.

32.3 Engagement of Community Service Organisations

Where the Contractor seeks to engage a Subcontractor in connection with this Contract, it must consider and where appropriate, provide opportunities for, organisations registered with the National Disability Services as Australian Disability Enterprises or with the Australian Charities and Not-for-Profits Commission as not-for-profit community service providers, to perform aspects of the Maintenance Works.

32.4 Tenant Employment

The Contractor must, throughout the Term, actively identify and provide opportunities of employment and training to the Tenants.

32.5 Social Obligations Plan

The Contractor must prepare and provide to the Principal a Social Obligations Plan in accordance with clause 16.3. The Social Obligations Plan must, at a minimum, address the Contractor's obligations regarding:

(a) the promotion, support and development of local industry in each of the Allocated Contract Area(s) and Alternative Contract Area(s), including:

  (i) the means of identifying suitable opportunities;

  (ii) the actions which the Contractor will take to meet its obligations; and

  (iii) the means of monitoring, reporting and improving upon the Contractor's actual performance of these obligations; and

(b) engagement of community service providers as required by clause 32.3; and

(c) engagement of Tenants as required by clause 32.4.

32.6 Aboriginal Participation

(a) The Contractor must provide genuine opportunities for persons identifying as Aboriginal or Torres Straight Islander to perform aspects of the Maintenance Works.

(b) Without limiting clause 32.6(a), the Contractor must ensure that not less than 1.5% of:

  (i) the Fee in each Contract Year is subcontracted to Aboriginal Businesses; or

(ii) the full-time equivalent workforce engaged by the Contractor and its Personnel are Aboriginal or Torres Straight Islander peoples; or

(iii) the Fee in each Contract Year is applied to the cost of education, training or capability building for Aboriginal staff or businesses directly contributing to the Contract.

32.7 Skills and Diversity

The Contractor acknowledges and agrees that where the total value of Maintenance Works performed under this Contract exceeds an amount prescribed by the 'NSW Procurement Board' (such amount at the Date of Contract being $10,000,000) the Principal may, by notice to the Contractor, require that the Contractor throughout the remainder of the Term ensures that:

(a) with respect to the total project workforce:

(i) 20% of all roles are filled with Learning Workers; and

(ii) 8% of all roles are filled by persons who are less than 25 years old; and

(b) with respect to trade roles:

(i) 20% of all roles are filled by persons who are apprentices; and

(ii) 2% of all roles are filled by women.

32.8 Changes to targets

(a) The Contractor acknowledges and agrees that:

(i) each of the targets in clauses 32.3 and 32.6 may be subject to change in the event that there is a change to the Principal Plans, Policies and Procedures or any relevant Law; and

(ii) the change contemplated in clause 32.8(a)(i) may involve an increase in any one or more of the targets specified in clauses 32.3 and 32.6; and

(b) In the event of any change contemplated in clause 32.8(a)(i):

(i) the Principal will provide 6 months' written notice to the Contractor prior to the effective date of such change, including details of the revised target(s);

(ii) the Contractor must comply with and achieved the revised target(s) from the effective date set out in the Principal's notice; and

(iii) the Contractor will have no Claim against the Principal, and irrevocably releases the Principal from any Claim, arising out of or in connection with the Contractor's compliance with and achievement of the revised target(s).

33 Taxes

33.1 Contractor to pay Taxes

(a) Unless specifically stated elsewhere in this Contract, the Contractor is solely liable for payment of, or to ensure the payment of:

(i) all Taxes imposed and assessments made regarding the Contractor's Equipment, Equipment and the Maintenance Works;

(ii) all contributions payable by Law, award and under any contract with an industrial or trade union or other association of employees or otherwise regarding or ascertained by reference to the wages, salaries or other compensation paid to the Contractor's Personnel regarding the Maintenance Works, including taxes or contributions for workers' compensation, unemployment or sickness benefit, old age benefit, welfare funds, pensions and disability insurance;

(iii) the cost of all import or export licences if required and all import or export Taxes or duties (including anti-dumping duties, if any) or tariffs on Maintenance Works and Equipment imported or exported by the Contractor in connection with or for the purposes of this Contract; and

(iv) all harbour dues, pilotage fees, port fees, wharf fees, loading or unloading costs, gang fees and all excesses for such dues, costs or fees.

(b) The Contractor holds harmless and indemnifies on demand the Principal from and against all liability for payment or non-payment of all of the above Taxes, assessments and contributions, dues, costs and fees and all Claims or Losses arising from or in connection with any non-payment.

33.2 Exemptions and concessions

(a) The benefit of any Tax exemption or concessional rate available when the Contractor purchased Equipment must, as far as possible, be claimed by the Contractor and passed onto the Principal if the cost of the relevant Equipment is charged to the Principal under this Contract.

(b) Where the Principal and its contractors (including the Contractor) are entitled to an exemption or concession concerning any Tax or import duty regarding Equipment, under this Contract, the Principal will use reasonable endeavours to assist the Contractor in its claim for such concession or exemption.

33.3 Survival

The obligations of the parties under this clause 33 will survive the completion, expiry or termination of this Contract.

34 GST

34.1 Definitions

Any terms capitalised in clause 34 and not already defined in clause 1.1 have the same meaning given to those terms in the GST Law.

34.2 GST Exclusive

Except under this clause 34, the consideration for a Supply made under or in connection with this document does not include GST.

34.3 Taxable Supply

If a Supply made under or in connection with this document is a Taxable Supply, then at or before the time any part of the consideration for the Supply is payable:

(a) the Recipient must pay the Supplier an amount equal to the total GST for the Supply, in addition to and in the same manner as the consideration otherwise payable under this document for that Supply; and

(b) except where a Recipient Created Tax Invoice is issued in accordance with clause 34.4, the Supplier must give the Recipient a Tax Invoice for the Supply.

34.4 Recipient Created Tax Invoices

The parties acknowledge and agree that the Principal may issue a Recipient Created Tax Invoice in respect of all Supplies provided by the Contractor under this document in accordance with the GST Law and Determination.

34.5 Principal GST warranties

The Principal warrants to the Contractor that:

(a) it is Registered for GST purposes and will notify the Contractor immediately in writing if it is no longer Registered;

(b) it will issue each Recipient Created Tax Invoice relating to Supplies under this document:

(i) by the Relevant Time; and

(ii) only if it is eligible to do so;

(c) it will cease to issue Recipient Created Tax Invoices if either the Principal or the Contractor fail to comply with the requirements of the GST Law, the Determination and any relevant ATO commentary, including the Ruling;

(d) it will immediately notify the Contractor in writing if it is of the view that requirements of the GST Law, the Determination or the Ruling have not been complied with;

(e) it will reasonably comply with its obligations under the taxation laws; and

(f) if for any reason the Principal is not eligible to issue Recipient Created Tax Invoices, the Principal will provide sufficient information (and supporting evidence) to the Contractor to enable the Contractor to issue a Tax Invoice in relation to the Supply.

34.6 Contractor GST warranties

(a) The Contractor warrants to the Principal that:

(i) it is Registered for GST purposes and will notify the Principal immediately in writing if it is no longer Registered; and

(ii) it is able to issue, but will not issue Tax Invoices regarding Supplies it makes to the Principal under this document for which the Principal has issued a Recipient Created Tax Invoice.

(b) If the Principal notifies the Contractor that it is not eligible (or otherwise does not propose) to issue a Recipient Created Tax Invoice in respect of a Supply made by the Contractor under this document, the Contractor must provide a valid Tax Invoice to the Principal for that Supply in accordance with clause 34.3.

34.7 Later GST charge

For clarity, the GST payable under clause 34.3 or 34.4 (as applicable) is correspondingly increased or decreased by any subsequent adjustment to the amount of GST for the Supply for which the Supplier is liable, however caused.

34.8 Reimbursement or indemnity

If either party has the right under this document to be reimbursed or indemnified by another party for a cost incurred in connection with this document, that reimbursement or indemnity excludes any GST component of that cost for which an Input Tax Credit may be claimed by the party being reimbursed or indemnified, or by its Representative Member, Joint Venture Operator or other similar person entitled to the Input Tax Credit (if any).

34.9 Progressive or Periodic Supplies

Where a Supply is made under or in connection with this Contract is a Progressive or Periodic Supply, clause 34.3 or 34.4 (as applicable) apply to each component of the Progressive or Periodic Supply as if it were a separate Supply.

35 Termination

35.1 Termination of Contract for convenience

The Principal may, in its sole and absolute discretion at any time, terminate this Contract on 6 months' written notice for any reason or no reason (and without any obligation to give any reason).

35.2 Removal of Contract Area for convenience

The Principal may, in its sole and absolute discretion at any time (and without the need to give any reasons), remove:

(a) one or more Allocated Contract Area; and/or

(b) one or more Alternative Contract Area,

from this Contract on 6 months' written notice.

35.3 Immediate termination for the Contractor's default

The Principal may, without prejudice to any other rights or remedies it may possess under or in connection with this Contract, immediately:

(a) terminate this Contract;

(b) remove one or more Allocated Contract Area from the Contract; and/or

(c) remove one or more Alternative Contract Area from the Contract,

by giving a notice of termination to the Contractor referring to this clause 35.3 if:

(d) an Act of Insolvency occurs in respect of the Contractor or the issuer of the Parent Company Guarantee under clause 12;

(e) the Contractor is in breach of clause 38;

(f) the Contractor has provided a statutory declaration which the Contractor is required to provide in accordance with clause 11.10 and such statements are untrue, false or misleading (as applicable);

(g) the Contractor fails to provide a statutory declaration which the Contractor is required to provide in accordance with clause 11.10;

(h) the Contractor fails to procure or maintain any of the insurances required by this Contract;

(i) the Contractor:

(i) breaches any Work Health and Safety Requirements which presents, or in the Principal's reasonable opinion could present, an actual or potential risk to the health, safety or welfare of any person;

(ii) the Contractor fails to perform the Maintenance Works in accordance with the Maintenance Works Specification and such failure presents, or in the Principal's reasonable opinion could present, an actual or potential risk to the health, safety or welfare of any person,

and either:

(iii) the breach or failure is incapable of remedy; or

if the breach or failure is capable of remedy, the Contractor has failed to remedy the breach or failure within 15 Business Days after receiving notice from the Principal requiring it to do so;

(j) any Permit is terminated or revoked; or

(k) the Contractor fails to provide a replacement Parent Company Guarantee (as applicable) in accordance with clause 12.2.

35.4 Principal may issue notice

(a) If the Contractor:

(i) has without valid reason:

(A) failed to diligently commence and proceed with the Maintenance Works; or

(B) suspended the Maintenance Works without due cause;

(ii) provides a KPI Improvement Plan in any Allocated Contract Area(s) and the Principal is not reasonably satisfied with the contents of the KPI Improvement Plan or the actions taken by the Contractor to address any matters included in the KPI Improvement Plan;

(iii) refuses or is unable to provide sufficient materials or labour to perform and complete the Maintenance Works in the manner specified in this Contract;

(iv) breaches any obligation under or in connection with this Contract or defaults in the performance of any provision of this Contract; or

(v) the Contractor abandons any part of the Maintenance Works or repudiates this Contract,

then the Principal may, without prejudice to any other rights it may have under or in connection with this Contract, give a notice to the Contractor stating the nature of the default, and requiring the Contractor to:

(vi) remedy the default; and/or

(vii) show cause why the Principal should not exercise any of the rights under clause 35.4(d).

(b) If the Principal has required the Contractor to remedy the default in accordance with clause 35.4(a)(vi) and, in the Principal's reasonable opinion, the Contractor fails to remedy or to take adequate steps to remedy the default within 15 Business Days after its receipt of the Principal's notice (or within any other time as the parties may agree), then the Principal may immediately:

(i) terminate this Contract;

(ii) remove one or more Allocated Contract Area from the Contract; and/or

(iii) remove one or more Alternative Contract Area from the Contract,

by giving a notice of termination or removal (as applicable) to the Contractor which refers to this clause 35.4.

(c) On giving a notice under clause 35.4(a), the Principal may suspend payments to the Contractor until the date on which the Contractor remedies the relevant default. Upon the suspension being lifted after the relevant default being remedied, the Principal will promptly make payment of the amounts outstanding.

(d) If the Principal has required the Contract to show cause in accordance with clause 35.4(a)(vii) and, in the Principal's opinion (in its sole discretion), the Contractor fails to show cause within 5 Business Days after its receipt of the Principal's notice, why the Principal should not take any of the steps contemplated under this clause 35.4(d), then the Principal may immediately:

(i) terminate this Contract;

(ii) remove one or more Allocated Contract Area from the Contract; and/or

(iii) remove one or more Alternative Contract Area from the Contract,

(e) by giving a notice of termination or removal (as applicable) to the Contractor which refers to this clause 35.4.

35.5 Termination for Principal's default

(a) If the Principal has failed to pay the Contractor an undisputed amount due to the Contractor, the Contractor may give a notice to the Principal stating the nature of the default, and requiring the Principal to remedy the default (**Principal Default Notice**).

(b) If the Contractor gives the Principal a notice under clause 35.5(a), the Principal must comply with the Principal Default Notice.

(c) If within 15 Business Days after the Principal has received a notice under clause 35.5(a) the Principal fails to remedy the relevant default, the Contractor may by written notice to the Principal suspend the whole or any part of the Maintenance Works.

(d) The Contractor must immediately lift any suspension pursuant to clause 35.5(c) if the Principal remedies the relevant default.

(e) If the Principal fails to remedy the relevant default referred to in the Principal Default Notice, then within 60 Business Days after receipt of the Principal Default Notice, the Contractor may by a further notice to the Principal which refers to this clause 35.5, terminate this Contract.

35.6 Termination for Event of Force Majeure

(a) If the performance of the whole of the Maintenance Works is suspended for a continuous period of 180 days by reason of an Event of Force Majeure, either party may terminate this Contract by at least 20 Business Days prior written notice referring to this clause 35.6 and the particular Event of Force Majeure.

(b) Subject to clause 35.6(c), if this Contract is terminated under clause 35.6(a) neither party will have any liability to each other or Claim against the other in respect of any such termination of this Contract to the extent caused by the Event of Force Majeure, provided that such termination will not affect any rights and obligations which may have accrued prior to the commencement of the Event of Force Majeure.

(c) Where this Contract is terminated by the Principal under clause 35.6(a), the Contractor's sole entitlement to payment will be (without double counting):

(i) the value of that proportion of the Maintenance Works completed but not paid for by the Principal to the Contractor when this Contract was terminated; and

(ii) the cost of any Equipment ordered for the Maintenance Works for which the Contractor has paid or is legally bound to pay provided that, on payment, title in such parts will transfer to the Principal and the Contractor will deliver such parts to the Principal,

subject to the Contractor's duty to mitigate its Loss.

35.7 Procedure on termination for the Contractor's default

(a) If the Principal terminates the Contract under clauses 35.3 or 35.4, the Principal (without prejudice to any of its other rights under the Contract or any Law):

(i) may employ and pay other persons to complete the Maintenance Works (including an Alternative Contractor);

(ii) will be entitled recover from the Contractor:

(A) all payments due from the Contractor to the Principal under this Contract;

(B) any Loss incurred by the Principal as a result of, or arising out of, such termination; and

(C) all reasonable and substantiated increased costs which the Principal reasonably incurs by reason of having the Maintenance Works rendered either by another person or by the Principal itself as a result of the termination,

subject to the Principal's duty to mitigate its Loss; and

(iii) may require the Contractor to handover to the Principal or the Principal's nominee all relevant manuals and other historical documents of operations, maintenance, replacement or repair work for the Maintenance Works.

(b) The Principal will not be obliged to make any further payments to the Contractor of the Fee for the Maintenance Works provided prior to the termination date, including any money the subject of a Contractor Invoice issued in accordance with clause 11.3 unless:

(i) all documents required for performance of the Maintenance Works have been provided by the Contractor to the Principal; and

(ii) the amounts which the Principal is entitled to recover from the Contractor arising from termination are less than the amount payable to the Contractor under this Contract.

35.8 Procedure on removal of Contract Area for Contractor's Default

(a) If the Principal removes an Allocated Contract Area or Alternative Contract Area from the Contract under clauses 35.3 or 35.4:

(i) on and from the date of such removal:

(A) the Allocated Contract Area or Alternative Contract Area (as applicable) will be omitted from the Contract in its entirety and will not longer constitute an Allocated Contract Area of Alternative Contract Area under this Contract;

(B) the Contractor will not perform any Maintenance Works in the Allocated Contract Area or Alternative Contract Area (as applicable); and

(C) the Contractor will not be entitled to payment of any Fee (or any other payment or compensation whatsoever) in relation to the Allocated Contract Area or Alternative Contract Area (as applicable);

(ii) the Principal (without prejudice to any of its other rights under the Contract or any Law):

(A) may employ and pay other persons (including an Alternative Contractor) to complete the Maintenance Works in the Allocated Contract Area or Alternative Contract Area (as applicable);

(B) will be entitled recover from the Contractor:

(1) all payments due from the Contractor to the Principal under this Contract;

(2) any Loss incurred by the Principal as a result of, or arising out of, such removal; and

(3) all reasonable and substantiated increased costs which the Principal reasonably incurs by reason of having the Maintenance Works carried out in the Allocated Contract Area or Alternative Contract Area (as applicable) by another person as a result of the removal of Allocated Contract Area or Alternative Contract Area,

subject to the Principal's duty to mitigate its Loss; and

(C) may require the Contractor to handover to the Principal or the Principal's nominee all relevant manuals and other reasonably required historical documents or data of operations, maintenance, replacement or repair work for the Maintenance Works.

35.9 Procedure on termination for convenience

(a) If the Contract is terminated by the Contractor under clause 35.5 or 35.6, or by the Principal under clause 35.1:

(i) the Contractor must comply with clause 35.13;

(ii) the Contractor must, from the relevant date of termination, cease all Maintenance Works and handover any documents reasonably required by the Principal; and

(iii) subject to the Contractor first complying with its obligaton under clause 35.9(a)(ii) above, the Principal will pay (without double counting and subject to the Principal's right to withhold or set-off any amounts in accordance with the Contract) payment of the Fee that is properly payable to the Contractor up to the date of termination, calculated strictly in accordance with this Contract.

35.10 Procedure on removal of Contract Area for convenience

(a) If the Principal removes an Allocated Contract Area or Alternative Contract Area from the Contract under clause 35.2:

(i) the Contractor must comply with clause 35.13 in respect of the Allocated Contract Area or Alternative Contract Area (as appropriate);

(ii) the Contractor must, from the relevant date of termination, cease all Maintenance Works in the Allocated Contract Area or Alternative Contract Area (as appropriate) and handover any documents reasonably required by the Principal;

(iii) the Contractor's sole entitlement to compensation for termination will be (without double counting and subject to the Principal's right to withhold or set-off any amounts in accordance with the Contract); and

(iv) payment of the Fee that is properly payable to the Contractor up to the date of termination in relation to the Allocated Contract Area or Alternative Contract Area (as appropriate), calculated strictly in accordance with this Contract.

(b) The Contractor will only be entitled to recover the amount of any Fee (or any payments) where:

(i) all documents required to be provided by the Contractor as specified under this Contract have been provided by the Contractor to the Principal; and

(ii) the amounts which the Principal is entitled to recover from the Contractor arising from termination is less than the amount payable to the Contractor.

35.11 Return of Property

On termination of this Contract for any reason, the Contractor must return as soon as reasonably practicable to the Principal any property of the Principal in the possession of the Contractor or its Personnel.

35.12 Termination general

Termination of this Contract by the Principal under this clause 35 is without prejudice to any other rights or remedies which may be exercised by the Principal under or in connection with this Contract.

35.13 Transition Out

(a) The Principal may, at any time, direct the Contractor to prepare a transition out plan. The Contractor must prepare and provide a draft of the transition out plan to the Principal within 20 Business Days of a direction by the Principal to do so.

(b) The Principal may prescribe the maters or actions which the transition out plan is to address. In any event, the transition out plan must describe the steps to be taken by the Contractor to ensure that:

(i) the Principal obtains all of the information which the Contractor is required to provide under this Contract;

(ii) the incoming contractor is capable of taking over the performance of the maintenance Activities; and

(iii) the Principal receives each of the benefits to which it is entitled under this Contract, including with respect to Warranties.

(c) Without limiting the generality of clause 35.13(b), the Contractor must:

(i) provide updates to the Principal of the progress of its transition out activities;

(ii) attend meetings with the Principal and any incoming contractor, during or following which the Contractor shall diligently answer any questions;

(iii) provide appropriate training to the staff of any incoming contractor;

(iv) provide the Principal and the incoming contractor with any records, documents or information in connection with the delivery of the Maintenance Works;

(v) upon request and in a navigable format, provide all documentation under the Contract, including (without limitation) maintenance manuals, schedules, Equipment logbooks and the names of recommended suppliers of spare parts and other relevant Equipment;

(vi) manage changeover with the incoming contractor of the Allocated Contract Area(s) to ensure that:

(A) there is no disruption to the Maintenance Works in the Allocated Contract Area(s);

(B) the Maintenance Works in the Allocated Contract Area(s) continues to fully comply with all applicable Law (including the Contract);

(vii) allow staff availability to meet with the incoming contractor; and

(viii) provide all assistance as reasonably required by the incoming contractor to ensure there is continuity with the Maintenance Works in the Allocated Contract Area(s).

(d) The Contractor must ensure that in the 6 months prior to the Expiry Date or, where directed by the Principal, as soon as is reasonably practicable after termination of this Contract, it implements a transition out process that:

(i) minimises any adverse impact on the Portfolio; and

(ii) allows for the continuous provision of the Maintenance Works until the Expiry Date or effective date of termination.

(e) The Contractor acknowledges that it is critical to the Principal that the Maintenance Works continue to be delivered to the requirements of this Contract during the transition out period and agrees to use all reasonable endeavours to ensure that the Maintenance Works are delivered accordingly.

(f) The Contractor must, at no additional cost, provide the Principal and any incoming Contractor with such cooperation and assistance during the transition out process up to the Expiry Date or the effective date of termination as is reasonably required to ensure the smooth and efficient transition in the provision of Maintenance Works after such date.

35.14 No limitation

Nothing in clause 35 in any way limits any other provision of this Contract or any of the Principal's rights under or in connection with this Contract.

36 Dispute Resolution

36.1 Application of procedure

Any Dispute that arises must be dealt with under this clause 36. The parties must use their best efforts in good faith to co-operatively resolve a Dispute.

36.2 Referral to Representatives

(a) Either party may give written notice of a Dispute to the other party. Any such notice will include detailed particulars of the matters the subject of the Dispute.

(b) Within 10 Business Days after a notice is issued under clause 36.2(a), representatives of each party will meet to discuss and attempt to resolve the Dispute.

36.3 Referral to Dispute Panel

If the Dispute has not been resolved within 20 Business Days after a notice is issued under clause 36.2(a), either party may by written notice to the other refer the Dispute to the Dispute Panel for resolution.

36.4 Procedure for resolution

If the Dispute is not resolved by the Dispute Panel within 20 Business Days after the referral, either party may by written notice to the other refer to the Dispute to arbitration, following which the Dispute will be dealt with under clauses 36.5 to 36.8.

36.5 Arbitration

(a) Where the Dispute is referred to arbitration in accordance with clause 36.4 the arbitration will be conducted under the then current Resolution Institute Arbitration Rules (**Rules**).

(b) The parties agree that:

(i) they have entered into the arbitration agreement under this clause 36.5 for the purposes of achieving a just, quick and cost-effective resolution of any Dispute;

(ii) the parties and the arbitrator(s) will keep confidential and not use for any collateral or other purpose not related to the resolution of the Dispute the subject matter of the arbitration and all information (whether given orally, in writing or otherwise) produced for, or arising in relation to, the arbitration, including any award arising out of it, except insofar as is necessary to implement and enforce any award or otherwise as required by Law;

(iii) all evidence in chief must be in writing unless otherwise ordered by the arbitrator(s); and

(iv) in conducting the arbitration, the arbitrator(s) must take into account the matters set out in clause 36.5(b)(i).

(c) To the extent permitted by Law, the arbitrator(s) will have no power to apply or to have regard to the provisions of any proportional liability legislation which might, in the absence of this clause 36.5(c), have applied to any Dispute referred to arbitration in accordance with this clause 36.

(d) The Law governing this arbitration agreement is the same law governing this Contract.

36.6 Seat of arbitration

The seat of arbitration will be Sydney, Australia and the language of the arbitration will be English.

36.7 Arbitrator

(a) The arbitration will take place before a single arbitrator.

(b) If the parties fail to appoint an arbitrator within 15 Business Days of the referral of the Dispute to arbitration under clause 36.4, either party may apply to the Chair of the New South Wales Chapter of the Resolution Institute to have an arbitrator appointed in accordance with the Rules.

(c) The arbitrator must:

(i) be legally qualified and have appropriate skills and qualifications to determine the Dispute;

(ii) be impartial;

(iii) not be an employee or ex-employee of a party or of an entity related to a party; and

(iv) not be connected with the performance of this Contract.

36.8 Arbitration award final and binding

The parties agree that any arbitration award awarded by the arbitrator(s) appointed under clause 36.7 during an arbitration conducted in accordance with the Rules will be final and binding upon the parties (except for manifest error on the face of the award), and to the fullest extent permitted by applicable Law, the parties waive their right to any form of appeal or other similar recourse to a court of law (except for manifest error on the face of the award).

36.9 Exceptions

Nothing in this clause 36 will prevent a party from:

(a) applying to a court of competent jurisdiction to seek urgent relief; or

(b) initiating any legal process immediately prior to the end of any period specified by a relevant Law during which legal process or the bringing of an action must be initiated.

36.10 Performance of obligations pending resolution of Dispute

Despite the existence of a Dispute, the parties must continue to perform their respective obligations under or in connection with this Contract.

36.11 Survival

This clause 36 survives the completion, expiry or termination of this Contract.

37 General Representations and Warranties

Without prejudice to any other warranties expressed elsewhere in this Contract, at law or otherwise, the Contractor makes the following representations and warranties to the Principal each of which is true and correct on the Date of Contract:

(a) it has been incorporated as a company under the Laws of Australia, is validly existing under those Laws and has the power and authority to carry on its business in Australia;

(b) it has power to enter into this Contract and comply with its obligations under it and is not doing so as agent or trustee for any other party;

(c) this Contract and the transactions under it do not contravene its constituent documents or any Law or obligation by which it is bound or to which any of its assets are subject or cause a limitation of powers or the powers of its directors to be exceeded;

(d) it has in full force and effect the authorisations necessary for it to enter into this Contract and the transactions under it;

(e) its obligations under or in connection with this Contract are valid and binding and are enforceable against it under the terms of this Contract;

(f) it is not in breach of any Law or obligation affecting it or its assets in a way which may result in a material adverse effect on the business or financial condition of the Contractor;

(g) there is no pending or threatened proceeding affecting the Contractor or any of its assets that would affect:

  (i) the validity or enforceability of this Contract;

  (ii) the ability of the Contractor to fulfil its commitments under or in connection with this Contract in any material respect; or

  (iii) that could result in any material adverse change in the business or financial condition of the Contractor;

(h) there are no reasonable grounds to suspect that it is unable to pay its debts as and when they become due and payable;

(i) it has the necessary skills and experience to perform the Maintenance Works under or in connection with this Contract;

(j) no conflict of interest exists or is likely to arise in the performance of its obligations under or in connection with this Contract, by it or its Personnel;

(k) it does not have immunity from the jurisdiction of a court or from legal process (whether through service of notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise);

(l) all Permits required for the conduct of the Maintenance Works under this Contract which are the responsibility of the Contractor and which are required to be in place by the Date of Contract are in full force and effect as at the Date of Contract. The Contractor warrants that it knows of no reason (having made all reasonable enquiries in this regard)

why any other Permits for which it is responsible will not be granted on reasonable terms by the time it is required to obtain such Permits;

(m) no proceedings or any other steps have been taken or, to the best of the knowledge of the Contractor (having made all reasonable enquiries), threatened for the winding-up or liquidation (whether voluntary or involuntary, provisional or final), judicial management (whether provisional or final), business rescue or deregistration of the Contractor or for the appointment of a liquidator, judicial manager or similar officer over it or over any of its assets; and

(n) the Contractor is not aware of any material facts or circumstances not disclosed to the Principal which would, if disclosed, be likely to have an adverse effect on the Principal's decision (acting reasonably) to enter into this Contract with the Contractor.

38 Assignment and Change in Control

38.1 No assignment by Contractor

Except as approved in writing by the Principal (not to be unreasonably withheld or delayed), neither this Contract nor any obligations, rights, benefits or interests nor any Claim under or in connection with this Contract nor any sum or sums which may become due or owing to the Contractor as a result of the Contractor's performance of the Maintenance Works, may be assigned, novated, transferred, pledged, charged or mortgaged by the Contractor.

38.2 No Change in Control without approval

The Contractor must not effect a Change in Control without the prior written approval of the Principal (not to be unreasonably withheld or delayed).

38.3 Assignment by Principal

(a) The Principal may assign its rights, or novate its rights and obligations, under this Contract:

(i) without the consent of the Contractor, to any Responsible Authority or its nominee; or

(ii) with the consent of the Contractor (not to be unreasonably withheld or delayed), to any other person.

(b) The Contractor must execute any document reasonably required by the Principal to affect its rights under this clause 38.3.

39 Personal Property Securities Act

(a) If the Principal determines that this Contract (or a transaction in connection with it) is or contains a Security Interest, the Contractor agrees to do anything (including obtaining consents, signing and producing documents, getting documents completed and signed and supplying information) as the Principal may reasonably require for the purposes of:

(i) ensuring that the Security Interest is enforceable, perfected and otherwise effective and ranks ahead of other Security Interests;

(ii) enabling the Principal to apply for, and obtain, any registration or providing any notification in accordance with the PPSA; and

(iii) enabling the Principal to exercise any right in connection with the Security Interest or the property the subject of the Security Interest.

(b) The Contractor waives each right to receive any notice from the Principal under the PPSA (including notice of a verification statement) that can be waived.

(c) Except as expressly agreed in writing to the contrary, the Contractor:

(i) acknowledges that neither this Contract nor a transaction in connection with it is intended to provide for a Security Interest in favour of the Contractor; and

(ii) agrees that it will not register or otherwise perfect or seek to perfect any Security Interest, and will remove any registration, in respect of this Contract or a transaction in connection with it.

(d) The Contractor must:

(i) promptly notify the Principal if it knows or becomes aware (whether by receipt of a notice under the PPSA or otherwise) that a third party has or claims a Security Interest in any goods or materials:

(A) owned by the Principal;

(B) supplied or to be supplied by the Contractor to the Principal; or

(C) in which the Principal has an interest;

(ii) give the Principal any information reasonably required by the Principal in relation to any such Security Interest or Claim; and

(iii) on request by the Principal, use best endeavours to ensure that the third party:

(A) discharges any such Security Interest, and does not register or otherwise perfect or seek to perfect, and removes any registration, in respect of any such Security Interest; or

(B) subordinates any such Security Interest to the interest of the Principal, by an agreement in form and substance satisfactory to the Principal.

(e) Without limiting clauses 39(c) and 39(d) above, at any time when title to or ownership of any plant, goods or materials is passed to the Principal, the Contractor must ensure that title or ownership is passed free of any Security Interest of the Contractor or any other person.

(f) The Contractor must ensure that each subcontract has, for the benefit of the Principal, a clause that reflects this clause 39.

(g) Without limiting clause 28, neither the Principal nor the Contractor will disclose information of the kind mentioned in section 275(1) of the PPSA and the Contractor will not authorize, and will ensure that no other party authorises, the disclosure of such information. However this does not prevent disclosure where required under section 275 of the PPSA because of the operation of section 275(7) of the PPSA.

40 Proportionate Liability

40.1 Proportionate liability

(a) To the extent permitted by law, the operation of Part 4 of the Civil Liability Act (and any equivalent statutory provision in any other state or territory) is excluded in relation to all and any rights of the Principal and all and any obligations or liabilities of the Contractor

under this Contract whether such rights, obligations or liabilities are sought to be enforced in contract, tort or otherwise.

(b) The Contractor must indemnify the Principal for the difference (if any) between:

(i) the amount of any liability or claim suffered or incurred by the Principal for which, but for the Civil Liability Act, the Principal would have been entitled to recover from the Contractor arising out of or in connection with an act or omission of the Contractor under this Contract; and

(ii) the liability of the Contractor to the Principal as determined by the Court pursuant to the Civil Liability Act arising out of or in connection with an act or omission of the Contractor,

subject to the Principal using reasonable endeavours to mitigate the amount of any such loss or damage to the extent not prejudicial to the interests of the Principal.

(c) If, despite the previous clauses 40.1(a) and 40.1(b), the Civil Liability Act does apply, then:

(i) the Contractor acknowledges and agrees that, for the purposes of the Civil Liability Act, the Contractor is entirely and solely responsible for any failure to take reasonable care on the part of any of its Personnel; and

(ii) the Contractor undertakes to the Principal, as a separate and independent obligation, to:

(A) rectify or complete any Maintenance Works:

(1) which are Defective or incomplete or which are not in conformance with the requirements of this Contract; and

(2) which would otherwise be a breach of the Contractor's obligations under this Contract; or

(3) compensate the Principal for any Loss incurred by the Principal as a result of having such work rectified or completed.

(d) The Contractor must ensure that all policies of insurance covering third party liability which the Contractor is required by this Contract to effect and maintain:

(i) cover the Contractor for potential liability to the Principal assumed by reason of the exclusion of the apportionment of liability provisions in the Civil Liability Act; and

(ii) do not exclude any potential liability the Contractor may have to the Principal under or by reason of this Contract.

(e) To the extent that any provisions of the Civil Liability Act (and any equivalent statutory provision in any other state or territory relating to proportionate liability) apply or would apply, but for clause 40.1(a) and 40.1(b) apply, to any claim between the Principal and the Contractor whether in contract, tort or otherwise, or the Principal seeks to enforce the indemnity in 40.1(b), it is acknowledged that the parties do not intend to modify the Contractor's rights against any third party (including the right to bring a subrogated claim against the concurrent wrongdoer).

41 General

41.1 Ministerial control

The Contractor acknowledges that the Principal is subject to the control and direction of the Minister pursuant to the Housing Act.

41.2 No fetter

Nothing in this Contract in any way restricts of otherwise affects the Principal's unfettered discretion to exercise its statutory powers as a public authority.

41.3 Independent legal advice

The Contractor acknowledges that it has obtained independent legal advice in relation to the terms and conditions of this Contract and understands and acknowledges its rights and obligations herein.

41.4 Amendment

No amendment or other variation of this Contract is effective unless it is in writing, dated, expressly refers to this Contract, and signed by a duly authorised representative of each party.

41.5 Independent contractor

The Contractor is an independent contractor performing this Contract. This Contract does not create any agency, partnership, joint venture, consortium or other joint relationship between the parties.

41.6 Non-waiver

(a) Subject to clause 41.6(b), no relaxation, forbearance, delay or indulgence by either party in enforcing any of the terms and conditions of this Contract or the granting of time by either party to the other prejudices, affects or restricts the rights of that party under or in connection with this Contract, nor does any waiver by either party of any breach of this Contract operate as a waiver of any subsequent or continuing breach of this Contract.

(b) Any waiver of a party's rights, powers or remedies under or in connection with this Contract must be in writing, dated and signed by an authorised representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

41.7 Severability

If the whole or any part of a clause of this Contract is held to be void, unenforceable or illegal by any court of competent jurisdiction:

(a) it must be read down to such extent as may be necessary to ensure that it is not illegal, invalid or unenforceable and as may be reasonable in all the circumstances so as to give it a valid operation; and

(b) if the provision or part thereof cannot be so read down, it must be severed without affecting the validity and enforceability of the remaining provisions of this Contract.

41.8 Comments, review, representation or approval by the Principal

The Contractor agrees that any advice, directions, approvals, review, comment on (or absence of comment) by the Principal or the Principal's Personnel in connection with the Maintenance Works

or this Contract do not detract from or otherwise affect the Contractor's warranties, obligations and liabilities under or in connection with this Contract.

41.9 Entire agreement

(a) This Contract is the entire agreement between the parties and sets out a full statement of the contractual rights and liabilities of the Principal and the Contractor regarding the Maintenance Works and replaces all previous contracts, undertakings, agreements, understandings, representations, communications, whether written or oral, and no warranties given prior to the Date of Contract regarding the Maintenance Works is of any contractual effect.

(b) Each party warrants that any pre-contractual representations and warranties, whether made orally or in writing, are of no legal effect whatsoever, with the result that neither party is entitled to make a Claim for damages or specific performance in reliance on them.

41.10 Counterparts

This Contract may be executed in any number of counterparts. Those counterparts together make one instrument.

41.11 Amounts due and payable

Any amount which the Contractor is expressly liable to pay or reimburse to the Principal under the Contract will be a debt due and payable to the Principal in the time expressly provided or otherwise on demand.

41.12 Further assurances

Except as expressly provided in this Contract, each party must, at its own expense, do all things reasonably necessary (including executing documents) to give full effect to this Contract and the matters contemplated by it in a timely manner.

Schedule 1 (Contract Details)

Item	Description	Detail	
Item 1	Principal (clause 1.1)	Name: ABN: Address:	New South Wales Land and Housing Corporation 24 960 729 253 4 Parramatta Square, 12 Darcy Street, Parramatta, New South Wales 2150
Item 2	Contractor (clause 1.1)	Name: ABN: Address:	Infinity Fire Protection Pty Ltd 57 067 135 246 22 Beresford Street, Mascot, New South Wales 2020
Item 3	Contractor's Representative (clause 1.1)	Name: Email:	Marcus Muccino, General Manager marcus.muccino@infinityfire.com.au
Item 4	Guarantor (clause 1.1)	Name: ABN: Address:	Infrastructure Maintenance & Engineering Australia Pty Ltd 89 002 357 600 Australia Square, Level 33, 264 George Street, Sydney, New South Wales 2000
Item 5	Allocated Contract Area(s) (clause 1.1)	Contract Area 3 Contract Area 10	
Item 6	Alternative Contract Area(s) (clause 1.1)	Contract Area 1 Contract Area 2 Contract Area 4 Contract Area 9A Contract Area 9B Contract Area 11 Contract Area 12	
Item 7	Key Personnel (clause 1.1)	Name: Role:	Ricci Holterman Contract Manager
		Name: Role:	Moises Luque **Accredited Practitioner (Fire Safety)**
		Name: Role:	Llion Evans **Accredited Practitioner (Fire Safety)**
		Name: Role:	Mo Baburi **Accredited Practitioner (Fire Safety)**
		Name: Role:	Craig Mooy **Accredited Practitioner (Fire Safety)**
		Name: Role:	Reza Jamshidi **Accredited Practitioner (Fire Safety)**
		Name:	Paul Gerges

		Role: **Accredited Practitioner (Fire Safety)**	
Item 8	Maintenance Works Commencement Date (clause 1.1)	1 July 2024	
Item 9	Invoicing Methodology (clause 11.2)	Option 1 – Contractor Invoice	☒
		Option 2 – RCTI	☐
Item 10	Inspection liquidated damages (per inspection) (clause 8.5(a)(i))	[redacted]	
Item 11	Rate of liquidated damages (per day) (clause 8.5(a)(iv)) (applicable from commencement of Contract Year 1 through to end of Contract Year 10)	[redacted]	
Item 12	Principal Plans, Policies and Procedures (clause 1.1)	The Principal's plans, policies and procedures include: (a) Fire Safety Manual; and (b) New South Wales Land and Housing Corporation Contractor's Code of Conduct, and as otherwise set out in the Schedules.	
Item 13	IT Requirements and SUI Options (clause 9.1)	Option 1	☒
		Option 2	☐

Item 14	Home Building Licence Number (clause 31.9(b))	127827C	
Item 15	Amount of Security (clause 12.1)	Amount of security required to be provided by the Contractor:	[redacted]
Item 16	Time for submission of an organisation chart (clause 19.2)	The Contractor will initially provide a proposed organisation within 28 days after the Date of Contract and will provide a revised and updated organisation chart no later than 30 days before the Maintenance Works Commencement Date.	
Item 17	Dispute Panel (clause 36.3)	Principal – Head of Housing Portfolio, LAHC Contractor – Marcus Muccino, General Manager	
Item 18	Notice details of the Principal (clause 9)	Attention: Address: Email:	Head of Portfolio Management, LAHC 4 Parramatta Square, 12 Darcy Street, Parramatta New South Wales 2150 HomesNSW-HP-PortfolioManagementExecUnit@homes.nsw.gov.au
Item 19	Notice details of the Contractor (clause 9)	Attention: Address: Phone: Email:	Marcus Muccino, General Manager 22 Beresford Street, Mascot, New South Wales 2020 0400 503 313 marcus.muccino@infinityfire.com.au

Schedule 2 (Maintenance Works)

1 Purpose and Application

This Schedule sets out a high-level description of the types of Maintenance Works which the Contractor may be required to perform in response to a Work Order. The detailed requirements and specifications for the Maintenance Works are set out in other Contract Documents.

2 Assignment of Maintenance Works

2.1 Responsive Maintenance

Responsive Maintenance Works are those Maintenance Works which the Principal includes in a Work Order designated as "Responsive Maintenance Works" (**Responsive Maintenance Works**).

Responsive Work Orders will typically be issued by the Principal in response to a request for Maintenance from or on behalf of a Tenant, Tenant advocate or from other stakeholders.

2.2 Programmed Maintenance

Programmed Maintenance Works are those Maintenance Works which the Principal includes in a Work Order designated as "Programmed Maintenance Works" (**Programmed Maintenance Works**).

Programmed Works are typically those Maintenance Works which are contemplated by the relevant Programmed Works Plan for the relevant Property.

2.3 Work Classifications

The Principal may issue a Work Order with any Work Priority Code (and with any Work Classification). A non-exhaustive list of Work Classifications is set out in the table below. The Principal amend Work Classifications or add new Work Classifications at any time and from time to time.

Work Classification	Description
AFSS	Typically used in Work Orders which relate to the production of a Fire Safety Statement for a Property.
Scope & Quote	Typically used to designate Work Orders which require the Contractor to investigate a Property and provide guidance to the Principal on the nature of any Maintenance Work required

2.4 Scope and Specifications

The specifications in relation to the Responsive Maintenance Works are set out in:

(a) Maintenance Work Specification;

(b) the Principal Plans, Policies and Procedures; and

(c) the Contractor Plans, Policies and Procedures.

3 Work Priority Codes

3.1 General

The Principal may issue a Work Order with any Work Priority Code. The table below sets out a non exhaustive list of Work Priority Codes and an indication of how different faults could be allocated to a Work Priority Code by the Principal.

Work Priority Code	General Description of Works
4H	A Work Order may be issued with a Work Priority Code of '4H' in the following circumstances: (a) all alarms or detectors within an entire floor are isolated, missing, off or broken; (b) hydrant: (i) outlets are discharging into any area of the Property; or (ii) systems are disabled in any area of the Property; (c) a sprinkler or drencher head has been activated; (d) no available water supply to the Property or in any area of the fire system; or (e) the 'fire indicator panel' is off or damaged such that its not operational.
24H	A Work Order may be issued with a Work Priority Code of '24H' in the following circumstances: (a) missing or broken alarm in an SOU; (b) missing or broken 'visual alarm device'; (c) damaged fire doors; (d) broken or missing emergency lights; (e) issues relating to 'fire hose reels'; (f) the fire indicator panel has an associated fault with an interconnected system or detector; or (g) leaking sprinkler or drencher heads.
5D	A Work Order may be issued with a Work Priority Code of '5D' in the following circumstances: (a) missing or broken fire extinguishers or fire extinguisher cabinets; (b) missing or damaged signage fire doors, fire shutters in common areas; (c) missing or broken fire blankets; or (d) a 'door hold open device' will not hold open the door.
10D	A Work Order may be issued with a Work Priority Code of '10D' in the following circumstances:

Work Priority Code	General Description of Works
	(a) graffiti; (b) delamination of door skin in the entryway to an SOU; (c) partially discharged extinguisher; (d) obstructed access to an extinguisher; or (e) missing block plans (e.g. for sprinkler systems).
18D	A Work Order may be issued with a Work Priority Code of '18D' for missing maintenance tags or signage.

Schedule 3 (Operational Requirements)

1 Work Order Procedure

1.1 Performance and Specified Steps

In respect of each Work Order, the Contractor must:

(a) for any Work Order which includes a Date for Work Order Commencement, not commence the performance of the Maintenance Works the subject of that Work Order prior to the Date for Work Order Commencement;

(b) for any Work Order, if the Maintenance Works are likely to result in a loss of power, gas, sewerage or water in any SOU, comply with section 1.16;

(c) for Work Orders which require Maintenance Works to performed at a Non-Residential Property, arrange an appointment with the relevant contact (as advised by the Principal) for that Property;

(d) for Responsive Work Orders which require Maintenance Works to be performed in one or more Occupied SOUs:

(i) make all reasonable attempts (and at least two separate attempts, appropriately spaced apart) to contact the relevant Tenants within the time period in column 2 of Attachment A which corresponds to the Work Priority Code for that Work Order (including by physically attending the relevant SOUs);

(ii) where it is able to make contact with the relevant Tenants (including where any Tenant responds to any prior attempt):

(A) arrange an appointment with the Tenant for the Contractor to attend the Property (which must be within the time period in column 3 of Attachment A which corresponds to the Work Priority Code for that Work Order); and

(B) immediately (and in any event on the same day the appointment is arranged):

(I) provide to the Principal all of the information required to be included in the relevant Confirmation Notification; and

(II) prepare and issue a Confirmation Notification to the relevant Tenant; or

(iii) where the Contractor is unable to make contact with or otherwise arrange an appointment with one or more of the Tenants within the time period in column 2 of Attachment A which corresponds to the Work Priority Code for that Work Order (if any) the Contractor must:

(A) record and evidence each of its attempts in accordance with section 5.1;

(B) notify the Principal; and

(C) comply with any directions from the Principal regarding the relevant Work Order in such circumstances, which may include:

(I) ceasing to attempt to contact the Tenants;

(II) contacting the Tenants by another means; or

(III) attending the Site during an appointment time scheduled by the Principal with the relevant Tenants;

(e) for Programmed Work Orders which require Maintenance Works to be performed in one or more Occupied SOUs:

(i) issue a Notice of Work to each Occupied SOU not less than 21 days prior to the earlier of:

(A) the date upon which the Contractor plans to attend those SOUs to perform the Maintenance Works; and

(B) the Date for Works Completion; and

(ii) make reasonable attempts to confirm an appointment time with the Tenants of each Occupied SOU; and

(iii) physically attend the relevant SOUs on the date contemplated in the Notice of Work, and where it is unable to gain access to the SOU, on one further occasion not less than 48 hours after that date; and

(f) where the Contractor is unable to:

(i) make contact with a Tenant;

(ii) arrange an appointment with a Tenant; or

(iii) is otherwise unable to gain access to the relevant SOU,

each in accordance with the steps in section 1.1(e), the Contractor must:

(iv) record and evidence each of its attempts in accordance with section 5.1;

(v) notify the Principal; and

(vi) comply with any directions from the Principal regarding the relevant Programmed Work Orders in circumstances where the appointment date cannot be arranged prior to the relevant Date for Works Completion, which may include:

(A) ceasing to attempt to contact the Tenants;

(B) contacting the Tenants by another means; or

(C) attending the Site during an appointment time scheduled by the Principal with the relevant Tenants; or

(g) attend the relevant Property and commence performance of the relevant Maintenance Works:

(i) during the date and time or (time period) either as agreed with the relevant Tenants or as reasonably directed by the Principal; or

(ii) for Work Orders which require Maintenance Works to be performed in Vacant SOUs, Common Areas or Non-residential Properties, attend the Site and commence performance of the relevant Maintenance Works within the time period:

(A) in column 3 of Attachment A which corresponds to the Work Priority Code for that Work Order (if any); or

(B) which an experienced and competent contractor, acting in accordance with Good Industry Practices and the intent to complete the Work Order within the time period in column 4 of Attachment A which corresponds to the Work Priority Code for that Work Order, would have attended the Site and commenced the performance of the SoR Items in the relevant Work Order; and

(h) for any Work Order:

(i) while attending the Property, comply with its obligations under section 3;

(ii) where it identifies the need for:

(A) Type 1 Supplementary Works, comply with section 1.10; or

(B) Type 2 Supplementary Works, comply with section 1.11; and

(iii) promptly notify the Principal once it has satisfied paragraphs (a) – (e) (inclusive) in the definition of "Works Completion" in the General Terms;

(iv) achieve Works Completion on or before the Date for Works Completion;

(v) provide to the Principal (unless otherwise directed, via the SUI) the evidence required by section 5.2 within:

(A) the time period in column 5 of Attachment A which corresponds to the Work Priority Code for that Work Order; or

(B) if no Work Priority Code is included on the Work Order, within 9 days of the date upon which Works Completion is achieved; and

(vi) (except where the Principal will issue an RCTI) submit a Contractor Invoice for the Work Order in accordance with clause 11.3 of the General Terms within:

(A) the time period in column 6 of Attachment A which corresponds to the Work Priority Code for that Work Order; or

(B) if no Work Priority Code is included on the Work Order, within 10 days of the date upon which Works Completion is achieved,

and otherwise comply with its obligations in clause 11 of the General Terms.

1.2 Proactive Approach

(a) The steps set out in section 1.1 are not an exhaustive list of steps that the Contractor is or may be required to take to carry out and complete a Work Order.

(b) Without in any way limiting the Contractor's obligations under the Contract, including each of the Specified Steps required to be taken under section 1.1, the Contractor must at all times:

(i) take a pragmatic, flexible, adaptable, conscientious and common sense approach to the performance of Works Orders and the delivery of the Maintenance Works; and

(ii) take proactive steps to ensure that Work Orders are carried out as efficiently as possible.

1.3 Expertise

(a) The Contractor must consider the SoR Items included in any Work Order and, using its expertise, advise the Principal if it considers that the Maintenance Works or any part thereof could contravene any applicable regulation, code, or Good Industry Practise.

(b) Where the Contractor considers that additional or alternative Maintenance Works would have a 'better off overall' impact on the functionality and/or life of an asset within a Property, the Contractor may notify the Principal, identifying the specific Maintenance Works which the Contractor considers would have such an impact.

1.4 SoR Item Quantities

If at any time during the performance of a Work Order the Contractor becomes aware that the quantities of one or more SoR Items in that Work Order are greater than the quantities required to perform the Maintenance Works, the Contractor must promptly notify the Principal.

For example, where the Principal issues a Work Order to the Contractor which contains an SoR Item for the replacement of 3 Exit Lights but upon attendance at the Property, it becomes apparent to the Contractor that only 2 Exit Lights need to be replaced, the Contractor is to identify this discrepancy to the Principal prior to the achievement of Works Completion and in any event before the Contractor submits a Contractor Invoice (or the Principal issues a RCTI) for the Work Order.

1.5 Attendance

The Contractor must not attend an Occupied SOU unless an appointment has been made with the relevant Tenant in accordance with section 1.1, except where:

(a) the relevant Work Order has a Work Priority Code for which 'NA' is stated in column 2 of Attachment A; or

(b) the Contractor is attempting to make an appointment with a Tenant in accordance with its obligations under this Schedule.

1.6 Residential Tenancies Act

The Contractor must ensure that it, at all times, complies with the requirements of the RTA, as if the Contractor was a 'landlord' for the purposes of the RTA.

1.7 Issuance Time

(a) The time of issue of a Work Order is taken to be:

(i) where the Work Order is issued on the SUI, the time that the Work Order is issued to the Contractor on the SUI, as recorded in the SUI; or

(ii) where the Work Order is issued via email pursuant to clause 8.2(b) of the General Terms, the time that the email was sent to the Contractor, as recorded in the Principal's email server.

(b) Where a Work Order does not include a Date for Work Order Commencement, the Date for Work Order Commencement is the time of issue as determined under section 1.7(a).

1.8 Work Order Modification

The Principal may, at any time prior to Works Completion of the Work Order:

(a) vary, amend or cancel a Work Order; and

(b) vary, amend or cancel any one or more of the SoR Items in a Work Order.

1.9 Work Priority Code Modification

The Principal may, at any time and from time to time by notice in writing to the Contractor, vary, amend, omit or add to the list of Work Priority Codes set out in Attachment A.

These changes will apply for Work Orders issued anytime after 11.59pm on the day which is 2 Business Days after the date of the Principal's notice.

1.10 Type 1 Supplementary Works Procedure

Where, in respect of a Work Order, the Contractor identifies that Type 1 Supplementary Works are required, it must:

(a) document and evidence the need for Type 1 Supplementary Works;

(b) perform the relevant SoR Items to satisfy the need for the Type 1 Supplementary Works;

(c) document and evidence the performance of the additional SoR Items (which constituted Type 1 Supplementary Works); and

(d) include such evidence in its documentation submitted to the Principal under section 1.1(h)(v).

The Contractor will not be entitled to claim for any SoR Items it purports to perform as Type 1 Supplementary Works, if:

(e) the total amount payable for those SoR Items is greater than the Type 1 Supplementary Works Threshold; and/or

(f) it does not comply with its obligations under this section 1.10.

1.11 Type 2 Supplementary Works Procedure

Where the Contractor identifies that Type 2 Supplementary Works are required, it must:

(a) document and evidence the need for Type 2 Supplementary Works and send such evidence to the Principal on the SUI;

(b) contact the Principal (via telephone or such other means as directed by the Principal from time to time) to:

(i) identify the Work Order and the need for Type 2 Supplementary Works; and

(ii) confirm receipt of the evidence uploaded under section 1.11(a) and provide any further evidence which may be requested;

(c) perform additional SoR Items to satisfy the requirement for Type 2 Supplementary Works included in any revised Work Order issued by the Principal;

(d) comply with any directions given by the Principal to:

(i) perform only some or all of the SoR Items included in the Work Order and to make safe the Site and demobilise; or

(ii) not perform or complete the SoR Items allocated to the Work Order and to make safe the Site and demobilise;

(e) document and evidence the performance of the additional SoR Items (if any) which were included in a revised Work Order as Type 2 Supplementary Works; and

(f) include evidence of such performance in its documentation submitted to the Principal under section 1.1(h)(v).

1.12 Type 2 Supplementary Works Outcomes

Where the Principal issues a direction:

(a) under section 1.11(d)(i), the Contractor must not perform any SoR Items in addition to those in the Work Order issued by the Principal; or

(b) under section 1.11(d)(ii), the Principal may amend or cancel the Work Order.

1.13 Type 2 Supplementary Works Claims

The Contractor will not be entitled to claim for any SoR Items it performs as Type 2 Supplementary Works, unless:

(a) it complies with its obligations under section 1.11; and

(b) the Principal has included those SoR Items it performs as Type 2 Supplementary Works in a revised Work Order.

1.14 Identifying other Maintenance Works (other than Supplementary Works)

(a) The Contractor must take a “multi-trade” approach to the performance of the Maintenance Works and its obligations under the Contract.

(b) If, while on Site, the Contractor identifies any aspect of the Site or any other part of a Property which may require Maintenance Works, the Contractor must:

(i) where practicable document such aspects, including (if appropriate) through photographs; and

(ii) as soon as reasonably practicable, inform the Principal and provide relevant evidence and documentation.

(c) A practical example is set out in section 1.15 for guidance.

(d) The Contractor must ensure that, in any interactions with Tenants relating to any potential Maintenance Works not included in a Work Order, it:

(i) subject to clause 8.10 of the General Terms, complies with the Principal's Plans, Policies and Procedures;

(ii) does not make any comments or representations to the Tenant regarding the need or time frame for any potential Maintenance Works; and

(iii) otherwise directs the Tenant to contact the Principal.

1.15 Practical Example of Supplementary Works and 'other' Maintenance Works

While attending the Property to fix a smoke alarm, the Contractor notices mould on the ceiling.

The Contractor captures an image of the mould and uploads it to the SUI, so that the Principal may take appropriate action.

The rectification of the mould is not Supplementary Works, however, the Contractor still has an obligation to notify the Principal of the issue in accordance with section 1.14 (and comply with its other obligations in section 1.14).

1.16 Utility Outages

(a) Upon receipt of a Work Order which will or may require the disconnection of any power, gas, sewerage or water at a Property, the Contractor must:

(i) take all reasonable steps to inform the Tenants in each SOU in the relevant Property of the expected outage, the date of the outage, its duration and the reason for the outage (including by physically attending each SOU);

(ii) perform a risk assessment, which must consider any Tenants (of which the Contractor is aware) who may have requirements for uninterrupted power, gas, sewerage or water;

(iii) inform the Principal prior to commencing the performance of the Maintenance Works and in any event, prior to disconnecting any power, gas, sewerage or water including confirmation of whether the Contractor has the agreement of each affected Tenant or not and comply with any reasonable direction from the Principal (except where the Maintenance Works or the disconnection is required to manage a threat to life or potential threat to life, in which case the Contractor must inform the Principal as soon as possible after the relevant Maintenance Works or disconnection is performed); and

(iv) in accordance with section 5.1, immediately report any objection to the disconnection received from a Tenant to the Principal and comply with the Principal's directions regarding the same.

(b) Where a Work Order will result in outages to any power, gas, sewerage or water over multiple days, the Contractor must:

(i) ensure that the power, gas, sewerage or water (as applicable) are reinstated;

(ii) if the relevant Maintenance Work was performed in an SOU, ensure that bathrooms, toilets, kitchens, laundries, bedrooms and any appliances, lights, power, water or drainage (as applicable for the Site) are safe and otherwise returned to a state consistent with its state prior to the performance of the Maintenance Works; and

(iii) ensure that all security measures (including access doors, windows, fences and gates) are closed or secured (as applicable to the Maintenance Works),

prior to departing Site each day.

(c) The Contractor must not disable or disconnect a Property's fire system (including fire alarm monitoring, fire alarm circuits, sound systems, suppressions systems and ancillary equipment) for more than four hours without the express consent of the Principal. The Contractor must coordinate each disablement or disconnection occurrence with the Principal and the relevant fire authorities.

(d) Where one or more Tenants will require temporary facilities (e.g. power produced by a generator or portable toilet facilities), the Principal may direct the Contractor to provide such facilities.

(e) Notwithstanding any other section of this Schedule, where one or more Tenants requires temporary accommodation:

(i) the Principal may organise (either directly or through a third party) the provision of such accommodation and advise the Contractor of the dates for which accommodation has been organised;

(ii) the Contractor must complete the relevant Maintenance Works which require the disconnection of any power, gas, sewerage or water during the period for which alternative accommodation has been organised; and

(iii) where the Contractor fails to complete such Maintenance Works within the period of which alternative accommodation was organised and such failure was not caused or contributed to by a Relief Event, the Principal may recover as a debt due and payable from the Contractor any additional cost it incurs for the provision accommodation beyond the original period.

1.17 Custom or Specialised components

Where an SoR Item in a Work Order specifies the components, parts, equipment, appliances, plant or materials (together for the purposes of this section 1.17, the **Components**) which are to be used, and it is not possible to procure those named Components within the time period for the completion of the Work Order because:

(a) those Components are custom or specialised in nature; and

(b) the Components are not available for purchase (from any vendor) at the time the Work Order is received; or

(c) the Components have prolonged manufacture or delivery timeframes (which make it impossible for the Contractor to perform the SoR Item within the time period allowed),

then the Contractor must:

(d) provide details to the Principal of the relevant issues;

(e) as soon as practicable, contact the Principal to confirm:

(i) the steps it has taken to procure the relevant Components;

(ii) whether alternative components may be suitable for the performance of the SoR Items; and

(iii) the earliest date (if any) which the Contractor could receive the Components; and

(f) comply with any reasonable directions of the Principal.

1.18 Contractor's Equipment

(a) The Contractor must ensure all Contractor's Equipment:

(i) is fit for purpose;

(ii) is in a safe and operational condition; and

(iii) where required, has passed its periodic inspections, or compliance or maintenance checks including any NATA certification.

(b) If the Maintenance Works requires the use of specialised equipment (for example elevated work platforms, scaffolding or scissor lifts), the Contractor must before commencing the relevant Maintenance Works provide to the Principal:

(i) a work methodology describing how the specialised equipment will be used, how it will be installed, and how long it will be at the Property;

(ii) a completed risk assessment (which will include how the safety and convenience of the Tenants and the general public will be maintained);

(iii) any 'safe work method statements' and 'safe work instructions';

(iv) where applicable, copies of operator licenses and associated qualifications for the use of or installation of the equipment; and

(v) any other specific requirements to ensure compliance with current Safe Work NSW requirements (i.e., working at heights, confined space, etc.).

1.19 Replacement

(a) If the Contractor considers that a component or system in a Property is beyond economical repair, the Contractor must prepare and issue a report (in the Approved Form) to the Principal detailing the condition of the faulty component / system.

(b) Any product or work must be of at least the same standard as the product or work which it replaces or interfaces with, and in any event, must comply with the Maintenance Works Specification.

1.20 Work by other contractors

The Contractor acknowledges and agrees that:

(a) other contractors (including those not engaged by the Principal) may perform works within each Property throughout the Term and that such works may include modification of fire systems; and

(b) the performance of any works by such contractors does not affect the obligations of the Contractor under this Contract.

2 Additional Information

2.1 Work Order Information

In accordance with the General Terms, each Work Order will include:

(a) the address of the Property (as applicable) where the Maintenance Works are to be carried out;

(b) (if applicable) the identity and contact details of the relevant Tenants;

(c) (if applicable) a Date for Work Order Commencement;

(d) (if applicable) the Date for Works Completion;

(e) (if applicable) the specific SoR Items comprising the scope of the Maintenance Works covered by the Work Order;

(f) (if applicable) a description of the Additional Maintenance Works comprising the scope of the Maintenance Works covered by the Work Order; and

(g) a designation as to whether the Work Order is a Responsive Work Order or a Programmed Work Order.

2.2 Additional Work Order Information

The Principal may, either within a Work Order or following the issuance of a Work Order, provide to the Contractor additional information in relation to that Work Order. Such information may include:

(a) a reference to whether the Work Order relates to an Escalated Matter;

(b) a Work Priority Code;

(c) specific contact name(s) and/or telephone number(s) for the Principal that will be used for that particular Work Order;

(d) person alerts as detailed in section 2.4;

(e) property alerts as detailed in section 2.5;

(f) tenant information as detailed in section 2.6;

(g) the maintenance request relevant to the Work Order as detailed in section 2.7;

(h) access information as detailed in section 2.8;

(i) specific Portfolio requirements, including the requirements of other entities which may be involved in the ownership, management or maintenance of a Property; and

(j) any other information which the Principal considers may be relevant to the Work Order, its contextual background or the Contractor's performance of its obligations in relation to that Work Order.

2.3 Work Order Contact Details

Where a Work Order:

(a) does not include specific contact name(s) and/or telephone number(s) for the Principal that will be used for that particular Work Order, the Contractor is to contact the Principal in accordance with the General Terms; or

(b) includes specific contact name(s) and/or telephone number(s) for the Principal that will be used for that particular Work Order, the Contractor must use that number for all telephone correspondence in connection with that Work Order (unless directed otherwise by the Principal).

2.4 Person Alerts

(a) The Principal may include an alert with a Work Order in relation to person(s) who may be in attendance or in the vicinity of the relevant Property.

(b) The Contractor is to take all appropriate steps to ensure that it undertakes the Maintenance Works in a way that effectively manages and caters for the subject matter of the person alert.

2.5 Property Alerts

(a) Where appropriate, the Principal may include an alert with a Work Order in relation to any aspect, characteristic or condition of a Property or its surrounds.

(b) The Contractor is to take all appropriate steps to ensure that it undertakes the Maintenance Works in a way that effectively manages and caters for the contents of the property alert.

2.6 Tenant Information

(a) The Principal may provide to the Contractor information in relation to any Property that may be relevant to engagement with the Tenant.

(b) The Contractor is to take all appropriate steps to ensure that it undertakes the Maintenance Works in a way that effectively manages and caters for that information.

(c) The Contractor must provide information to the Principal if it considers that any Tenant profile should be updated to enable the Principal to retain complete, accurate and useful records.

2.7 Maintenance Requests

(a) The Principal may provide to the Contractor the maintenance request relevant to the Work Order (or any part of such maintenance request).

(b) The Contractor is to take all appropriate steps to ensure that it undertakes the Maintenance Works in a way that effectively manages and caters for the contents of such information.

2.8 Access Information

(a) The Principal may provide to the Contractor information in relation to the means of access to the specific Property or part of a Property.

(b) The Contractor is to take all appropriate steps to ensure that it undertakes the Maintenance Works in a way that effectively manages and caters for the contents of such information.

3 Obligations during Site Attendance

3.1 Message Cards

Where the Contractor either:

(a) attends an SOU to discuss actual or potential Maintenance Works with the Tenant (including attempting to make an appointment for the performance of such); or

(b) attempts to attend an Occupied SOU at the relevant appointment time for the performance of Maintenance Work,

but the Tenant is not available, the Contractor must:

(c) leave a Message Card;

(d) record the Contractor's attempted visit in the SUI; and

(e) retain a record of the Message Card left at the SOU (including an image of the Message Card at the SOU).

3.2 Unattended SOU

(a) The Contractor must not commence or continue work in an Occupied SOU where the Tenant (who must be over the age of 18) is not present in the SOU.

(b) If the Tenant departs the SOU while the Contractor is on Site, the Contractor must depart from the SOU, inform the Principal, and arrange another appointment with the Tenant.

3.3 Supervision

The Contractor must:

(a) assess and provide the level of supervision appropriate to the scope of the Work Order;

(b) provide (as appropriate) Tenants with contact details of relevant supervisory personnel; and

(c) ensure that any apprentices, trainees and all other personnel deployed on the Work Order receive the appropriate level of supervision at each Property in accordance with Good Industry Practices.

3.4 Identification

(a) The Contractor must ensure that any Personnel attending a Property are readily identifiable while on site including by ensuring that person attending carries an identification card issued by the Contractor.

(b) Any identification card issued by the Contractor must:

(i) comply with AS 4718 for card type ID-1 save that no card is required to be machine-readable;

(ii) clearly display the:

(A) Contractor's ABN, registered business name and contact number;

(B) the name of the person to whom the card is issued and the business entity that person works for (where that entity is not the Contractor);

(C) a colour photograph and copy of the signature of the person to whom the card is issued;

(D) an expiry date for the card;

(E) a card registration number; and

(F) indicate that the holder is engaged on behalf of the NSW Land and Housing Corporation.

(c) The Contractor must record and track the issuance, use and return of all identification cards.

3.5 Due Diligence

(a) Where an SoR Item involves work which may require the Contractor to perform due diligence prior to commencing Maintenance Works on Site, the Contractor is required to perform that due diligence prior to commencing the Maintenance Works.

(b) The time and cost associated with such investigations is included in the relevant SoR Price.

3.6 Site Layout

The Contractor must ensure appropriate site demarcation, barricades, and WHS and/or environmental protocols are used.

3.7 Utilities and Facilities

(a) The Contractor must provide the equipment, consumables and plant to generate power on site, where power is required for the performance of the Maintenance Works.

(b) The Contractor must not:

(i) use, or seek to use, any property of any Tenant (for example, the Contractor must, where appropriate, provide its own vacuum cleaner and power to operate a vacuum cleaner, and must not seek to use a vacuum cleaner belonging to the relevant Tenant); and

(ii) use the washroom facilities of a Tenant.

3.8 Furniture & Tenant Property

The Contractor must carefully move (and reinstate following completion of the Maintenance Works) furniture or other items (e.g. whitegoods) which may hinder the performance of the Maintenance Works or which may become soiled or damaged as a result of the performance of the Maintenance Works. The Contractor must, when making an appointment to the Tenant, to the extent it is possible to do so, identify the locations in which the Contractor expects to work such that the Tenant is prompted to move personal property out of the vicinity.

3.9 No Obstruction

The Contractor must take all measures necessary to:

(a) avoid unnecessary interference with the passage of people and/or vehicles;

(b) keep all relevant Tenants informed of the status of power, gas, water and sewerage utilities in the Property;

(c) prevent nuisance, unreasonable noise and disturbance;

(d) minimise inconvenience to Tenants; and

(e) (as appropriate to the Work Order) keep the Site safe, clean and tidy (including by regularly removing used packaging, rubbish and keeping tools and materials together).

Where it is not possible to perform the Maintenance Works the subject of a Work Order without blocking property access for Tenants or vehicles, the Contractor must inform the Principal and comply with any reasonable direction of the Principal in relation to that Work Order.

3.10 Cause of Maintenance Works

If, while on Site, the Contractor identifies or has reason to suspect that the need for the performance Maintenance Works was caused by:

(a) work performed by any third party; or

(b) vandalism, sabotage or tampering by any person,

the Contractor must notify the Principal, including by providing any relevant evidence or details.

3.11 Identification of other issues

(a) If, while on Site, the Contractor identifies or has reason to suspect anything which should be brought to the attention of the Principal, the Contractor must:

(i) where practicable document such aspects, including (if appropriate) through photographs; and

(ii) as soon as reasonably practicable, inform the Principal and provide relevant evidence and documentation.

(b) The types of issues which are to be brought to the Principal's attention include:

(i) illegal additions, structures or activities;

(ii) health and safety issues;

(iii) threat to life or person;

(iv) hazards;

(v) significant asset damage; and

(vi) any deleterious or poor conditions.

Worked Example

While attending the Property to perform a fire door assessment, the Contractor becomes aware of the fact that a Tenant is hoarding excessive amounts of material or rubbish to the point where it is reasonably considered to be a hazard to health and safety.

The Contractor contacts the Principal to communicate the nature of the hoarding/excessive rubbish.

The Principal enquires whether the Contractor considers it is appropriate to take a photo of the property, the Contractor indicates that it does not, and instead describes the location and extent of the hoarding/excessive rubbish.

The Contractor proceeds to perform the SoR Items contained in the Work Order and no further action is required from the Contractor in respect of that Work Order.

4 Incidents

4.1 Notification

(a) The Contractor must promptly, and in any event within 1 hour of its Personnel becoming aware, notify the Principal of any:

(i) circumstance, occurrence, event, incident or altercation which may:

(A) lead to a complaint from a Tenant;

(B) require reporting to or investigation by any Responsible Authority, industry body or law enforcement agency; or

(C) otherwise require investigation by the Contractor or the Principal; or

(ii) complaint (of any kind) which it or its Personnel receive from a Tenant.

(b) The Contractor must, in response to an incident complete any forms or documents (as reasonably directed by the Principal) in the Approved Form. The Principal may require the use of online reporting tools or portals for the submission of reports and notifications which relate to the Work Health and Safety Requirements.

4.2 Investigation

The Contractor must:

(a) investigate, in accordance with Good Industry Practices, any circumstance, occurrence, event, incident or altercation which would have required a notification to the Principal under section 4.1(a)(i);

(b) cooperate with any law enforcement agency;

(c) allow the Principal:

(i) access to any Personnel; and

(ii) the opportunity to participate in any investigation; and

(d) provide the Principal with a copy of any document or report produced as a result of any investigation (which should include, where appropriate, the steps which the Contractor will take to avoid another similar circumstance, occurrence, event, incident or altercation).

4.3 Imminent Threat to Life

Where the Contractor considers that there may be an imminent threat to the life of any person, it must take all appropriate steps including immediately contacting emergency services and informing the Principal including via telephone.

5 Records and Reports

5.1 Record of Interactions

The Contractor must:

(a) notify the Principal each time it attempts to contact a Tenant without success and for any reason, including providing contemporaneous evidence of each attempt (where appropriate or requested); and

(b) notify the Principal each time it successfully contacts (or receives contact from) a Tenant, recording all relevant information including:

(i) the name of the Contractor's Personnel who makes contact;

(ii) the name of the Tenant;

(iii) the reason for the contact;

(iv) the outcome of the contact; and

(v) any other information which may be specified by the Principal (acting reasonably) as being required from time to time.

5.2 Documentation

The Contractor is to fully document its performance of the SoR Items in the relevant Work Order, including by:

(a) recording photographic evidence (date and time stamped) including:

(i) the condition of the Site prior to performing the Work Order;

(ii) the completed SoR Items;

(iii) any matters or issues identified in section 3.11; and

(b) recording and retaining the details of any equipment used to test systems (including any NATA certifications or calibration reports);

(c) providing technical specifications, datasheets, test results and certificates for all materials used in the Maintenance Works, and where reasonably requested by the Principal, operational manuals and drawings; and

(d) providing system or component test records, installation certificates and any other relevant information that substantiates the performance of the SoR Items.

5.3 Retention

The Contractor must produce and maintain accurate records, logs, statements, and reports in accordance with Standards of Routine Service for fire safety systems outlined in the Australian Standards AS1851-2012 and Schedule 4 (Servicing Requirements).

5.4 SUI

All information recorded by the Contractor must be:

(a) provided to the Principal in accordance with clause 9 of the General Terms;

(b) with respect to photographs:

(i) taken digitally and have file names that reference the relevant Property and Work Order;

(ii) taken using a camera which is capable of recording the GPS coordinates at the time the image was captured, such that the location data is recorded and stored as part of the metadata for the image;

(iii) dated and time-stamped when the photograph is taken, in a form that is not capable of being altered; and

(iv) taken at a minimum 5MP resolution.

6 Inspections

6.1 Contractor's Inspection and Audit

The Contractor must ensure that a qualified supervisor (employed by the Contractor) carries out a physical quality inspection of the Maintenance Works in each month, for at least 10% of all Work Orders for which Works Completion is achieved in the relevant month, prior to submitting a Contractor Invoice (or the Principal issuing a RCTI) for those Work Orders.

6.2 Property Inspection

The Contractor must ensure that it plans and programs its inspections of each Property in a manner which causes the least impact to Tenants, including by scheduling inspections outside of ordinary working hours.

6.3 Observation Notices

(a) Without limiting the Principal's rights under this Contract or otherwise at law (including the right to issue a Defects Notice), where the Principal attends a Site (including during the course of the Contractor carrying out Maintenance Works) and considers that an aspect of the Maintenance Works may not comply with the requirements of the Contract, the Principal may issue an observation notice to the Contractor (**Observation Notice**).

(b) The Contractor must consider the content of any Observation Notice and take any steps required to ensure that the Maintenance Works are completed in accordance with the requirements of the Contract.

6.4 Participation during Principal's Inspections

(a) Where reasonably directed by the Principal, the Contractor must:

(i) attend and participate in; and

(ii) procure that any of its Personnel nominated by the Principal attend and participate in,

any Pre-Completion Inspection or Post Work Inspection, at the date and time nominated by the Principal. For the purposes of this section, participation includes the submission of documents or responses to questions.

(b) The Principal is not required to involve the Contractor in any Pre-Completion Inspection or Post Work Inspection.

(c) The Contractor acknowledges and agrees that it will, and will procure that its Personnel will, participate in any inspection by the Principal in an open, honest and transparent manner.

7 Defects Procedure

7.1 Performance

Upon receipt of either a Defect Notice under clause 21 of the General Terms or a notice from the Principal that the Contractor has failed to rectify a Defect the subject of a Defect Notice (a **Follow Up Notice**) the Contractor must:

(a) for Occupied SOUs:

(i) contact the Tenant to:

(A) arrange an appointment with the Tenant for the Contractor to attend the SOU; and

(B) immediately (and in any event on the same day the appointment is arranged):

(I) notify the Principal of the date and time or (time period) agreed with the Tenant; and

(II) prepare and issue a Confirmation Notification to the Tenant; and

(ii) attend the Site and commence performance of the Maintenance Works during the date and time agreed with the Tenant;

(b) for Vacant SOUs or Common Areas, attend the Site and commence performance of the relevant Maintenance Work within the time period which an experienced and competent contractor, acting in accordance with Good Industry Practices and the intent to complete the Maintenance Works by the time stated in the Defect Notice, would have attended the Site and commenced the Maintenance Work; and

(c) for any Property (whether Occupied or Vacant):

(i) while attending the Property, comply with its obligations under section 3; and

(ii) complete the performance of the Maintenance Work required by the Defect Notice or the Follow Up Notice:

(A) by the time stated in the Defect Notice or the Follow Up Notice; or

(B) where no time is stated in either the Defect Notice or the Follow Up Notice, within a reasonable period having regard to the nature of the Defect or the contents of the Follow Up Notice; and

(iii) immediately notify the Principal upon completion of the Maintenance Work the subject of the Defect Notice or Follow Up Notice:

(iv) provide to the Principal the evidence required by section 5.2 on the SUI promptly upon completion of the Maintenance Work the subject of the Defect Notice or Follow Up Notice.

7.2 No modification

This section 7 does not limit or otherwise affect the Contractor's other obligations regarding any Defects or a Defect Notice.

Attachment A

1 Work Priority Codes

Column 1	*Column 2*	*Column 3*	*Column 4*	*Column 5*	*Column 6*
Work Priority Code	**Period for making Appointment with Tenant**	**Period for commencing work on Site**	**Period for Works Completion**	**Period for submission of documentation following Works Completion**	**Period for submission of Contractor Invoice following Works Completion**
4H	NA	2 hours	4 hours	4 days	5 days
24H	NA	10 hours	24 hours	4 days	5 days
5D	24 hours	2 days	5 days	4 days	5 days
10D	3 days	5 days	10 days	4 days	5 days
18D	5 days	10 days	18 days	4 days	5 days

2 Interpretation

In this Attachment A:

(a) a reference to a day is a reference to a calendar day and a reference to an hour is a period of 60 minutes;

(b) a period of time in:

(i) column 2, column 3 and column 4 is a period commencing on the later of the time the relevant Work Order is issued and the Date for Work Order Commencement (if any); and

(A) if that period is expressed as hours, the period commences at the time the Work Order is issued rounded to the nearest minute; or

(B) if that period is expressed as days, the date that the Work Order is issued is day 0 and the following day is ‘day 1’; and

(ii) column 5 and column 6 is a period commencing at the achievement of Works Completion for the relevant Work Order where the date that Works Completion is achieved is day 0 and the following day is 'day 1';

(c) the relevant period determined in column 5:

(i) is the final time by which the Contractor must have submitted all of its documentation and records, as required by the Contract; and

(ii) does not limit or otherwise affect the Contractor's obligations to submit contemporaneous updates throughout the performance of the Maintenance Works under any Work Order;

(d) a time period of 'NA' in column 2 means that the Principal has informed the Tenant that the Contractor will attend within the time in Column 3.

3 Work Programs

A summary of the types of Maintenance Works which may be issued under each Work Priority Code is set out in Schedule 2 (Maintenance Works).

4 Advanced Notice

The Principal may, from time to time, discuss potential Maintenance Works which it may issue to the Contractor as Programmed Maintenance Works in a future Quarter. Any such discussions, including the provision of information as part of such discussions, does not in any way affect the operation of this Schedule or any other provision of this Contract.

5 'Working' hours

The Contractor is responsible for managing, planning and programming the performance of the Maintenance Works to ensure that the Maintenance Works can be completed within required time periods and at all times in accordance with all applicable Laws, including those Laws relating to the use of power tools and other plant and equipment during certain hours, or the performance of construction work on certain days or during certain hours.

6 Modification

If the Principal varies, amends, omits or adds a Work Priority Code, and that requires a consequential amendment to this Attachment A, the Principal will provide to the Contractor a revised Attachment A, following which that revised Attachment A will form part of these Operational Requirements (and will replace any previous iteration of Attachment A).

Schedule 4 (Servicing Requirements)

Contents

1.1 CONTRACTOR SERVICING REQUIREMENTS 131
1.2 ROUTINE SERVICING – ACTIVITES 140
1.3 REPAIR OR REPLACEMENT ACTIVITIES 142
1.4 SERVING RECORDS AND DELIVERABLES 142
1.5 CONTRACTOR REQUIREMENTS 145
1.6 NOMENCLATURE 146
1.7 REFERENCES 147
APPENDIX A - ROUTINE SERVICING ACTIVITIES 148

1.1 CONTRACTOR SERVICING REQUIREMENTS

1.1.1 Routine Servicing

References in this Schedule to 'routine servicing' or 'servicing' activities are references to the requirements of AS:1851 and Appendix A. Any 'routine servicing' or 'servicing' forms part of Programmed Maintenance Works, accordingly the Contractor must include such activities in the Programmed Works Plan and must otherwise comply with this Schedule when carrying out any routine servicing or servicing (or any other Programmed Maintenance Works).

1.1.2 Australian Standard Servicing

AS1851:2012 incorporating Amendment No.1 is the primary basis for ongoing routine servicing (inspection, testing, preventive maintenance and survey) of fire protection systems and equipment, except where varied by this document. In addition, AS2293.2:2019 requirements shall also apply to emergency lighting and exit signs. If during the Term these Australian Standard are further amended or superseded, the revised standard shall take precedence including any additional commentary or specific variations imposed by the Principal from time to time.

It shall be noted that these standards provide the minimum basis of Programmed Maintenance Works, and where additional or superseding requirements are present in or by legislation, specific site conditions, or manufacturer's documentation, these shall take precedence. Any contradictions which require greater frequency or cost to the Principal must be referred by the Contractor to the Principal for review and determination.

Frequency of routine servicing shall be at minimum in accordance with Table 0-1 and Table 0-2.

Table 0-1 – ROUTINE SERVICE FREQUENCIES FOR ESSENTIAL FIRE SAFETY MEASURES

AS1851 Section reference		Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
2	Automatic fire sprinkler systems	✓	-	✓	✓	✓	✓	✓	✓
3	Fire pumpsets	✓	-	✓	✓	✓	-	-	-
4	Fire hydrant systems	✓Note1	-		✓	✓	-	-	-
	Hydrant valves	-	-	✓	✓	-	-	-	-
5	Water storage tanks for fire protection systems	✓	-	✓	✓	-	✓	-	-
6a	Fire detection and alarm systems (including Smoke and heat alarms – excluding alarms inside SOU) Note2	✓	-	✓	✓	✓	-	-	-
6b	Fire detection and alarm systems (Smoke and heat alarms – inside SOU only) Note2	-	-	-	✓	-	-	-	-
9	Fire hose reels	-	-	✓	✓	-	-	-	-
10	Portable and wheeled fire extinguishers	-	-	✓	✓	✓	-	-	-

11	**Fire blankets**	-	-	✓	-	-	-	-	-
12a	**Passive fire and smoke systems (other than doors)**	-	-	✓	✓	-	-	-	-
12b	**SOU entry doors – (including fire, smoke, solid-core)** Note4	-	-	-	✓ Note3	-	-	-	-
12c	**All other FSM doors – (including fire, smoke, solid-core, and fire safety doors)** Note4	-	✓ Note5	✓	✓	-	-	-	-
13	**Fire and smoke control features of mechanical services**	✓	✓	✓	✓	✓	-	-	-

Note:

- The above section references are groups of similar essential fire safety systems in accordance with AS1851. For servicing frequencies of specific systems or component types within these groups, the contractor shall refer to AS1851 unless varied as detailed below.
- Section 7 (Special hazards), Section 8 (Delivery lay fat fire hose), and Section 14 (Emergency planning in facilities) have been removed from the table as they are not applicable to the Portfolio
- Note 1: Where pumpsets are fitted.
- Note 2: Smoke and heat alarms within SOU only are permitted to be served at the reduced frequency of 12-month intervals, in lieu of 6-month internals.
- Note 3: As permitted by under AS1851 – Section 12.2.1, Hinged and pivoted door sets (fire, smoke or solid core) serving as entry doors to private residential apartments, are to be serviced yearly in lieu of 6-montly.
- Note 4: Refer to Section 1.1.7 for routine servicing requirements for solid-core and fire life safety doors
- Note 5: Where horizontal sliding doors are fitted.

Table 0-2 – ROUTINE SERVICE FREQUENCIES – Emergency lighting and exit signs for buildings (Table A1 – AS2293.2:2019)

	System	Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
1	**Emergency lighting and exit signs for buildings**	-	-	✓	✓	-	✓	-	-

Table 0-3 – FREQUENCY TOLERANCES (Table 1.11 (B) – AS1851)

Frequency	Tolerance
Monthly	5 working days
Three-monthly	10 working days
Six-monthly	1 month
Yearly	2 months
Five-yearly	3 months
Ten-yearly	6 months

Twenty-five-yearly	6 months
Thirty-yearly	6 months

Note:

- The table is the maximum tolerance allowed before or after the required service date which the Principal will accept.
- The tolerance schedule is not intended to require additional routine service activities to be carried out (e.g. six monthly routines carried out at five or seven monthly intervals).

1.1.3 Systems interface test (AFSS Witness testing)

As per guidance in AS1851 – Section 1.12, where fire protection systems are interfaced to other systems, 'end-to-end' tests shall be conducted to confirm that each interface operates in accordance with the approved design. Tests shall take into account all fire protection systems that interface with other systems to ensure that all systems function in accordance with the approved design. This test shall be the responsibility of the Contractor to coordinate and conduct, including the attendance of the required APFS to witness the required testing such that the APFS is able to assess all required FSM for the Property.

Where the fire safety systems within the Property are required to interface with other systems which are not fire safety systems but are required to operate (or cease operation) on fire alarm, such as air handling systems or audio systems, it is the responsibility of the Contractor to witness that these systems operate correctly during the system interface test. Where such systems exist, these systems shall also form part of the SFSS contract, and the routine servicing of these system shall also be the responsible of the SFSS contractor. Examples of these systems are as follows:

- Carpark mechanical ventilation systems, which contains a supply air smoke detection system.
- Centralised air conditioning system spanning multiple fire compartments which must stop on fire alarm
- Automatic gas shutoff for centralised boilers or cooking equipment which must shutoff on fire alarm
- Centralised audio-visual systems which must auto shut off on fire alarm to permit correct operation of BOWs or EWIS

1.1.4 Monthly common area inspections

This inspection as required by Section 1.5.1.1 is in addition to any standard monthly servicing activities of required fire safety systems and consists of a visual inspection only of all common areas as detailed in Table 0-4, and as applicable to the subject Property type. Any damage or impairment of a fire safety system identified during the inspection shall be noted on the form and entered into the SUI. The inspection also includes housekeeping issues, such as illegal storage of goods where they may impact life systems in a fire scenario. In addition, any safety concerns regarding items outside of the SFSS contract shall also be recorded by Contractor. Examples of such issues include:

- Building structural issues (i.e., cracked slabs or walls)
- Health and amenity issues (i.e., damaged or impaired common area toilets, or drug paraphernalia)
- Security issues (i.e., damaged card readers, locksets, windows, etc)

Where repairs or replacement of SFSS systems are required as a result of damage being identified, the details of the location, quantity and any required parts or labour shall be detailed such that the repair or replacement can be undertaken under an SOR without an additional inspection being required.

Table 0-4 – Monthly – Common Area inspections

Item No.	Item [Note 2]	Action required and pass/fail requirement	Records	
			Pass/Fail	Comment [Note 1]
Monthly – General inspection				
1.1	Entry lobby	VISUALLY inspect entry lobby for damage or impairment to fire safety systems		
1.2	Stairs (Internal, external, Fire isolated & Non-fire isolated)	VISUALLY inspect all required stairs and associated systems for damage or impairment to fire safety systems		
1.3	Carpark	VISUALLY inspect carpark area for damage or impairment to fire safety systems		
1.4	Garbage room	VISUALLY inspect garbage room for damage or impairment to fire safety systems including garbage chute system		
1.5	Auxiliary use area (use as required)	VISUALLY inspect auxiliary use areas for damage or impairment to fire safety systems. Detail inspected areas below:		
		a)		
		b)		
		c)		
1.6	General – "housekeeping"	During the visual inspection (item 1.1 to 1.5), is there any items that have been identified, related to "housekeeping" which pose a threat to fire safety of the Property or occupants.		
1.7	General – Other safety concerns	During the visual inspection (item 1.1 to 1.5), is there any items that have been identified, related to general safety concerns which pose a threat to life safety of the Property or occupants. [Note 3 Note 4]		

Note:

- Note 1: Where repairs or replacement are required as a result of damage being identified, the details of the required parts or labour shall be detailed in the comments.
- Note 2: Where a Property or Properties is served by an automatic sprinkler, hydrant, smoke detection system or mechanical systems, the inspection and check of these systems shall be conducted as part of the standard AS1851 methodology.
- Note 3: Should an issue be identified which poses an immediate threat it shall be reported directly to the relevant emergency service and the Principal.
- Note 4: Where 'means of egress or escape' from a Property is compromised, the Contractor shall complete a Means of Egress report (refer Schedule 10 (Reporting Templates)) and submit to the Principal as soon as possible.

1.1.5 Nominated fire safety systems

1.1.5.1 Garbage room chute closure systems

Whilst not a EFSM as defined by the relevant NSW Legislation there are a number of Properties which contain a garbage room chute "closure" system which serve a fire protection purpose and require routine servicing and annual assessment. These systems typically consist of a metal panel system which when initiated by a fusible link or manual activation, is moved by counterweights across the base of the chute opening to provide fire separation between the garbage room and chute. Some system also include a sprinkler or drencher head within the unit. A typical example of these systems can be seen in Figure 0-1 & Figure 0-2.

Where installed these systems shall have routine servicing conducted on the metal panel system including the fusible link in line with AS1851 recommended intervals for sliding fire doors. This is summarised in Table 0-5. The required servicing activities shall be conducted in accordance with Table 0-6.

Where a sprinkler or drencher head is installed in conjunction with the chute system, this shall be routinely serviced in accordance with relevant section of AS1851 – Section 2.

Annual assessment of this measure on the Fire Safety Statement as capable of performing its intended design functionality shall be conducted by the Contractor. The documented design functionality being:

- When activated, the sliding panel prevents the passage of garbage from the shaft into the garbage room compartment.
- The drencher system and associated head meets design standard as documented on the building block plan.

Noting that as the measure is not a EFSM under the relevant legislation, accreditation for this measure by the APFS is not available. As such the minimum qualification shall be that the person holds an accreditation for fire doors. Assessment of the associated drencher or sprinkler shall be covered under the applicable Automatic Fire Suppression Measure as detailed on the Property Fire Safety Schedule.

The following tables provide the required service internals for this system and the service activities required:

Table 0-5 – Garbage room chute closure system – Service intervals

	System	Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
-	**Garbage room chute closure systems (excluding associated sprinkler or drencher)**		✓	✓	✓				

Table 0-6 – Three monthly and Six monthly service schedule – Garbage room chute closure systems

Item No.	Item	Action required and pass/fail requirement	Records		
			Result	Pass/Fail	Comments
THREE-MONTHLY					
1.1	Frictional forces, operation and self-closing ability	SIMULATE a full operational test (mechanically and electronically) as appropriate to ensure correct automatic closing of the panel is achieved. CHECK operation to ensure the panel fully closes from the fully open position and from one intermediary position.			
SIX-MONTHLY					
1.2	Location	INSPECT against schedules to ensure that chute system has been added, removed or modified.			
1.3	Clearances and overlaps in the closed position	INSPECT clearances and overlaps of metal panel remains consistent			
1.4	Restraint brackets and interlocking steel sections	INSPECT restraint brackets and/or interlocking steel sections are fixed adequately and functional.			
1.5	Hardware	INSPECT hardware is securely attached with steel fitting appropriate to the mounting substrate			
1.6	Automatic operations	**(2)** CHECK fusible links, where fitted, are intact and unpainted.			
		(b) CHECK pulley cables are free from fraying, kinks, excessive stretching and corrosion.			
		€ CHECK pulleys are free to rotate.			
		(d) REPLACE all fusible links every 5 years from the date of manufacture. NOTE: In lieu of replacing all fusible links, a representative sample may be tested as per Section 2.			
		(e) PERFORM a full operational test (mechanically and electrically) as appropriate to ensure correct automatic closing of the door is achieved.			
		(f) CHECK operation to ensure the door fully closes from one intermediary position.			

1.7	Panel guides, stops and restraints	INSPECT slab-mounted guides and stops and all travel-limiting devices at panel open and close locations are adequate and soundly mounted.			
1.8	Panel	(a) INSPECT panel is free from any delamination, any other damage and all perimeter edge capping is complete and sound.			
		(b) CHECK panel is clear from non-approved fittings, fixings and attachments and not impeded by grime or rubbish build up.			



Figure 0-1 – Garbage room chute systems



Figure 0-2 - Garbage room chute syst–m - Sprinkler or drencher system.

1.1.5.2 Life Safety Signs

Where currently installed in a Property, the Contractor is required to maintain the Life Safety Signs installed within the Property. These signs are generally located on the internal side of all SOU entry doors, but common area signs may also be installed in some Properties. These signs shall provide occupants with key information regarding exit paths and fire safety measures within the Property to assist the occupants in the event of an evacuation. Life Safety Signs require routine servicing and annual assessment.

The following tables provide the required service internals for this system and the service activities required:

Table 0-7 – Life Safety Signs – Service intervals

System		Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
-	**Life Safety Signs**			-	✓				

Table 0-8 - Six monthly service schedule – Life Safety Signs

Item No.	Item	Action required and pass/fail requirement	Records		
			Result	Pass/Fail	Comments
SIX-MONTHLY					
1.1	Sign	INSPECT rear of SOU door to ensure sign is still installed and is legible			
1.2	Continuity	INSPECT sign is still applicable to the Property layout and location of relevant fire safety features.			
1.3	Fixings	CHECK sign is still adequately fixed to the door. If sign has become detach it shall be refixed using an appropriate adhesive or fixing type.			

1.1.5.3 Radiant heat attenuation screens

As permitted by the Principal FSM radiant heat attenuation screens are permitted to be utilised where windows are located within 3 m of a boundary, in lieu of either a fire rated, or drencher protected, window. Design and compliance of these units are in accordance with the FSM guidance.



Figure 0-3 - Radiant heat attenuation screen

The following tables provide the required service internals for this system and the service activities required:

Table 0-9 – Radiant heat attenuation screens – Service intervals

System		Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
-	**Radiant heat attenuation screens**			✓	✓				

Table 0-10 - Six monthly service schedule – Radiant heat attenuation screens

Item No.	Item	Action required and pass/fail requirement	Records		
			Result	Pass/Fail	Comments
SIX-MONTHLY					
1.1	Location	INSPECT heat attenuation screen location against drawings or asset register. Ensure no screens have been added, removed or relocated.			
1.2	Integrity	INSPECT screen to ensure frame and mesh is intact with no damage to the mesh wires.			
1.3	Fixings	CHECK screen is still adequately fixed to the wall using the required fixing type. If screen has become detached it shall be refixed using an appropriate fixing type.			

1.1.6 Fire Engineered Solutions

Other than the fire engineering solutions documented above, due to the nature of Performance Solutions (fire engineered solutions), being tailored for individual Properties, there is no way uniformly to categorise them by extent or complexity. Unless detailed otherwise in the Performance Solution, the contractor shall make an assessment to determine the primary EFSM measures to which the Performance Solution applies or which

form a requirement of the Performance Solution and routinely service those measures in line with the procedures detailed above and in accordance with the relevant Work Order. If any anomalies are identified these shall be referred to the Principal for review and determination. Where a specific report is not available, the contractor shall refer to Fire Safety Compliance Certificate (FSCC) or Statement Of Adequacy (SOA) document issued by the Principal, as a baseline for the upgrade work conducted and in conjunction with the Principal determine a suitable routine servicing frequency and activity program, and to be included in the Programmed Works Plan. Where the Contractor believes that an undocumented Performance Solution may apply to a Property, they shall refer this to the Principal, including any required supporting evidence or documentation for determination.

1.1.7 Solid-core and fire life safety doors

Any solid-core doors or doors in the path of travel to an exit (excludes door internal to an SOU), shall be routinely serviced and inspected in accordance with the requirements of AS1851 – Table 12.4.4 (hinged and pivoted smoke doors) and in accordance with the relevant Work Order. Servicing frequency shall be in accordance with Table 0-1.

1.1.8 Additional servicing requirements where past records are not available

Where servicing records are not available for routine service activities encompassing monthly to yearly frequency activities, the Contractor shall conduct these activities prior to the relevant AFSS Due Date. This shall ensure these records are available for the consideration of the APFS when endorsing the relevant EFSM.

Where servicing records are not available for routine service activities encompassing the 5-to-30-year activities, these shall be conducted in a staged manner to ensure that the servicing baseline can be re-established. The required periods based on activity frequency are as follows:

- Five (5) year service activity, these shall be conducted on or before the end of Contract Year 2.
- Ten to thirty (10-30) year service activity these shall be conducted on or before the end of Contract Year 5.

Should the Contractor identify that these additional services are required in order to re-establish this baseline, the Contractor shall provide this advice including supporting evidence (photos, service records, etc) to the Principal for review and consideration. If it is determined that this additional servicing activity is necessary, the Principal will subsequently engage the contractor for these works under the relevant SoR Item.

Note: Where wet sprinkler or drencher heads are exposed to harsh conditions (close to ocean, pools, garbage rooms, etc) additional visual inspection may determine if the formal testing normally required at twenty-five (25) year periods under AS1851 – Table 2.4.2.4 – Item 4.18 may be required to be conducted earlier than the allotted first five (5) year period of the contract.

1.2 ROUTINE SERVICING – ACTIVITES

The following detailed the activities required as part of the routine servicing and inspection under the Contract for the EFSM and other associated systems. This includes activities unique to the Principal's requirements in addition to activities required under AS1851:2012.

1.2.1 Australian standard inspection activities

AS1851 and AS2293.2 includes a broad range of potential check, inspection and other activities depending on the outcome and findings of the routine service schedule. Whilst all check and inspect activities are included with in the base SOR, these additional activities can be divided into two categories:

1. Activities (basic parts & labour) that are **included** within the routine inspection SoR Item (Marked in GREEN)
2. Activities **not included** in the routine service and requiring Supplementary Works request (Marked in RED)

A summary of all AS1851 servicing activities and the associated categories (GREEN/RED) as included in Appendix B.

Worked Example

The following worked example is provided for guidance only on the application of activities marked as GREEN or RED while performing routine service. They are not intended to cover all possible work included in the routine service activity, but rather illustrate what will be considered as reasonable.

"Activities deemed included in routine servicing SOR" - GREEN.

SFSS08050 (or SOR as applicable to building type) includes routine monthly inspection of the Sprinkler System of the Building.

One of the associated activities, as detailed in Table 0-11, the item (No.1.1) involves an inspection of the control valve assembly area for a sprinkler system to make sure it is unobstructed and free from any condition impacting its operation.

If the valve is obstructed by rubbish or requires lubrication for free operation, it is deemed that the removal and clearing of this rubbish or the lubrication of the valve is included within the SOR item for the monthly service SFSS08050 (or SOR as applicable to building type) includes.

While performing the above routine service, damage to the valve is noted which needs repair or replacement, then this will be recorded as a defect, and request for the Supplementary Work Order to perform necessary repair or replacement using the applicable separate SOR.

"additional activity to be performed using separate SOR" - RED

As detailed in Table 0-11, the item (No.1.2) while checking the sprinkler spare cabinet (through routine servicing SOR SFSS08050 (or SOR as applicable to building type)) if replenishing of spare sprinklers (RED) is necessary then the separate SOR can be used for restocking, through requesting Supplementary Works i.e. replenishing of sprinkler spare is **not** deemed included in SOR SFSS08050 (or SOR as applicable to building type) marked RED.

Table 0-11 - WORKED EXAMPLE

TABLE 2.4.2.1
MONTHLY ROUTINE SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS WET PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Control valve assembly	CHECK that control valve assembly area is unobstructed and free of any condition that may adversely affect the operation or access.	Any activity deemed included
1.2	Sprinkler spares, sprinklers and sprinkler spanner	CHECK that there are spare sprinklers of appropriate quantity and type including a matching sprinkler spanner for each type of sprinkler fitted, available.	
1.3	Signage	CHECK for damage, legibility and appropriate location of required signage.	
1.4	Fire brigade booster connection	CHECK that the booster connection or enclosure is unobstructed and for any condition that may adversely affect the operation or access. CHECK that the booster connection coupling type is as per the local fire brigade requirements.	Any activity deemed included

1.2.2 Other servicing activities

1.2.2.1 Cleaning

The Contractor is responsible for general cleaning of the areas directly associated with EFSM, such that the EFSM remain suitable for brigade or occupant usage and can perform as required in the event of a fire scenario. This includes, where applicable to removal and appropriate disposal of waste generated by the public, Property occupants or the Contractor as a result of Maintenance Works. Contractor shall ensure that all cleaning activities are conducted in accordance with any relevant Contract requirements and associated legislative or WHS requirements. Where occupant waste or items impede path of travel compliance, this is not deemed to be the responsibility of the SFSS Contractor and shall be referred to the Principal.

1.2.3 Other fire safety systems

1.2.3.1 Garbage room chute systems

All activities detailed within Table 0-6 are deemed to be included within the applicable routine inspection SoR Item for this system.

1.2.3.2 Life Safety Signs

All activities detailed within Table 0-7 are deemed to be included within the applicable routine inspection SoR Item for this system.

1.2.3.3 Heat attenuation screens

All activities detailed within section 1.1.5.3 are deemed to be included within the applicable routine inspection SoR Item for this system.

1.2.3.4 Building specific fire engineered solutions

As detailed in Section 1.1.6, where Property specific fire engineered solutions apply the EFSM component forming part of the fire engineered solution shall be maintained in accordance with the relevant AS1851 activities.

1.3 REPAIR OR REPLACEMENT ACTIVITIES

Where repair or replacement is required, the Principal from time to time may issue an instruction for repair or replacement works to be conducted in accordance with the FSM manual [5,6] or any other documented fire engineered solutions.

1.4 SERVING RECORDS AND DELIVERABLES

The documentary evidence produced through the routine servicing and inspection activities conducted under this Contract is intended to support the responsible entity to satisfy both the Contractors and the Principal's regulatory obligations under the relevant NSW Legislation. Should the Accredited Practitioner (Fire Safety) engaged by the Contractor require additional supporting evidence, in order appropriately assess a relevant FSM on the Fire Safety Statement it is the responsibility of the Contractor to ensure this additional documentation or records are obtained at each service.

As detailed in Section 1.1.8, the Contractor is responsible for ensuring sufficient routine service records are available for all systems, within the periods stated. The Principal will not accept a lack of servicing records after the Maintenance Works Commencement Date as a reason for refusing to endorse a fire safety measure within a Property.

1.4.1 Bar Coding

The Contractor must install a bar code reference number tag on each Component nominated in Table 0_11. The Contractor must maintain the bar code references and provide details in the SUI.

Bar code labels on operable items must be located in a position where they are easily visible. For example, if located on a door, they must not require the door to be opened to gain access to the bar code. Bar codes must not be located in positions where they affect the operation or maintenance of Components. For example a bar code for an exit light should not be placed on the ceiling where it could potentially interfere with painting work.

The bar codes must be maintained throughout the Term and must be protected where exposed to weather.

The Contractor must replace any missing or damaged barcodes with another barcode of the same number as the one it replaces. This may be done at the next scheduled service after the missing bar code is identified.

Where new components are installed the Contractor must install a new barcode number and provide details in the SUI. The old barcode identifying the replaced Component must not be used again.

1.4.2 Bar Code System

The Contractor must have the ability to scan all items into a format that is suitable to the SUI. This bar code system and all associated data shall become the property of the Principal at expiry or termination of the Contract. The bar code system must be referenced within the log book system and Service reports as required.

1.4.3 Recommended Bar Code Format

The Principal prefers the Bar Code 39 symbology but would also accept the Contractor proposing an alternative coding symbology, if the Contractor can justify the change.

Each data character encoded in a Code 39 symbol is made up of 5 bars and 4 spaces for a total of 9 elements.

The symbol includes:

- beginning quiet zone;
- start character;
- encoded data;
- stop character;
- end quiet zone; and
- code 39 does not normally include a check character.

Example: H-SFSS XXXX 000001 (Housing SFSS contract – post code – plant item number 000001)

The bar codes must be capable of being re-printed for that plant item if the original bar code gets removed.

Label Specification:

- size: Min 40mm x 15mm;
- printing: lamination to prevent ageing;
- facestock: durable photographic paper or equivalent robust material;
- adhesive: high strength acrylic;
- symbology: code 39; and
- barcode density 9.4cpi.

1.4.4 Minimum required records for Fire Safety Measures

AS1851 provides the minimum requirements for records, logs and deliverables associated with routine servicing of fire safety systems. The following section details any additional requirements beyond this minimum. It should be noted that the Contractor and their associated APFS shall in addition to the below, also retain any required records to satisfy their own Quality Assurance system and any legislative or professional requirements.

As part of the SFSS Contract the AS1851 required "summary of records" prescriptively required to be kept as a physical copy onsite shall be replaced with a digital copy through the SUI. For all other types of record systems including logbook, tags and labels, the physical record must still be utilised and maintained onsite with a digital copy also entered into the SUI.

The required routine service records under the Contractor are detailed in Table 0-12. All other requirements for routine service records shall be in accordance with AS1851 – Section 1.16.

Table 0-12 - ROUTINE SERVICING RECORDS

Section No. (AS1851)	Systems or equipment	Service Records			
		Logbooks	Tags	Labels [Note5]	Summary Records
2	Automatic fire sprinkler systems	✓ + IT	-	Barcode	-
3	Fire pumpsets	✓ + IT	-	Barcode	-
4	Fire hydrant systems	✓ + IT	-	Barcode	-
4	Fire hydrant valves		✓	✓+ Barcode	IT
5	Water storage tanks for fire protection systems	✓ + IT	-	Barcode	-
6	Fire detection and alarm systems	✓ + IT	-	Barcode	-
9	Fire hose reels	-	✓	✓+ Barcode	IT

10	Portable and wheeled fire extinguishers	-	✓	✓ + Barcode	IT
11	Fire blankets	-	✓ + IT	✓ + Barcode	IT
12	Passive fire and smoke systems	✓ + IT	-Note1	✓ + Barcode	IT
13	Smoke and heat control features of mechanical services	✓ + IT	-	IT	-
14Note2	Emergency lighting and exits signs	✓ + IT	-	IT + Barcode	-
15 Note3	Garbage room chute systems	✓ + IT	-	✓ + IT	-
16 Note3	Life safety signs	-	-	IT	IT
17 Note3	Radiant heat attenuation screens	*	-	✓ + IT	IT

Note:

- Note1: There is no requirement for servicing tags for fire door leaves or frames under the Contract or AS1851. Where it is identified that a fire door leaf or frame is missing the statutory compliance tag (AS1905.1), the contractor shall conduct the fire door auditing procedure as detailed in the FSM. This shall be conducted under relevant SoR Items and a compliance tag installed where deemed appropriate.
- Note2: AS2293.2 – Standard requirement
- Note3: 1.1.5 - Nominated fire safety systems
- Note4: IT refers to the SUI
- Note5: Refer to Section 1.4.1 for detail regarding labels and barcoding.

1.4.5 Location of onsite records

All logbooks required to be kept on a Property shall be kept at a minimum in a secure location which is not accessible to the Property occupants or other members of the general public but is available for access through means of a 003 (Fire brigade key). Location shall be shielded from moisture or contamination. The following locations are recommended in order of preference:

1. Fire Control Room (FCR)
2. Pumpset room
3. FIP/FDCIP cupboard
4. Main switch board room
5. Security office
6. Metal lockable (003 key) cabinet in common area

Logbooks kept onsite shall be maintained for a period not less than seven (7) years onsite in accordance with AS1851 requirements.

1.4.6 Templates

The following templates are directly applicable to SFSS and are a minimum requirement for Contractors to complete as part of their fulfilment of the Contract activities. Where requested, these templates may require the additional input of onsite photos or videos as applicable to the system or works:

- Service Report – As documented in AS1851, AS2293.2 and Section 1.1.5 as applicable.
- Monthly Report – Table 0-4
- Annual Fire Safety Statement (AFSS) – Current - Version 4 – Effective 1 September 2022
- LAHC Internal Annual Fire Safety Statement (LIAFS–) – Schedule 10 (Reporting Templates)
- Yearly Condition Report – Schedule 10 (Reporting Templates)
- Means of Egress – Schedule 10 (Reporting Templates)

Note: The above listed templates and as detailed in Appendix A and/or Schedule 10 (Reporting Templates), are currently in force at time of tender. Should a subsequent revision be issued by the Principal or mandated by NSW Fair Trading, this shall take precedence.

1.4.7 Photographic and Video evidence

As detailed in Section 1.4.6 and Appendix A, there is a requirement for the Contractor to record and submit photographic or video evidence as part of the required routine servicing deliverables. This requirement does not replace any additional requirements the Contractor may have to capture or retain media, to satisfy any statutory or regulator obligations whilst conducting routine servicing or Fire Safety Schedule inspection.

The Contractor is responsible for ensure that any photographs or video are in the correct format and quality, as required by the SUI. In addition, the Contractor shall retain any media captured or produced during the execution of the Contractor for the period of the Contract, including after submission through the SUI.

1.5 CONTRACTOR REQUIREMENTS

1.5.1.1 Monthly common area inspections

The requirements and activities associated with monthly inspections required under clause 6 of the General Terms are detailed in Section 1.1.4.

1.5.1.2 Expectation for Quality Management

In addition to any industry, company or other accreditation body requirements for documentation and site inspections for which an APFS must have access to or conduct in order to satisfy their requirements to assess measures on a Fire Safety Statement, there is an expectation for active involvement of the Accredited Practitioner (Fire Safety). Regardless of whether the APFS is an employee of the SFSS Contractor or a subcontracted APFS, the accredited individual shall maintain on going communication with the team conducting the routine servicing to ensure the following:

- The appropriate level of service and baseline documentation is maintained throughout the life of the Contract, sufficient to satisfy the APFS requirements to assess the measures.

The APFS shall keep the team abreast of any industry changes regarding Fire Safety Statement or associated regulation and legislative changes which may impact on going assessment of fire safety systems.

1.5.2 Documentation from other contractors as part of separate works

Where separate contractors are engaged by the Principal to complete other works within a Property and are likely to modify or impact existing fire safety systems within the building, these contractors shall be responsible for the compliance of these works such the fire safety system shall meet or exceed the established standard of performance. These contactors are also responsible for ensuring the appropriate compliance documents for the work and updated baseline data (where applicable) are lodged within the SUI when the works are completed. This information shall be automatically disseminated through the SUI to the incumbent SFSS contractor review and acceptance. The SFSS contractor shall be responsible for informing the relevant APFS of this updated work and documentation and if required flagging any issues or concerns with the Principal prior to the AFSS Due Date.

1.6 NOMENCLATURE

Table 0-13 - Acronyms

ACRONYM	EXPANSION
ABCB	Australian Building Codes Board
AFSS	Annual Fire Safety Statement
AHJ	Authority Having Jurisdiction
APFS	Accredited Practitioner Fire Safety
AS	Australian Standard
ASE	Alarm Signalling Equipment
BCA	Building Code of Australia
BOWS	Building Occupant Warning System
DtS	Deemed-to-Satisfy
EFSM	Essential Fire Safety Measure
ELV	Extra Low Voltage
EPA	Environmental Protection Authority
EWIS (EWS)	Emergency Warning & Intercom System
FDCIE	Fire Detection Control and Indicating Equipment
FCC	Fire Control Centre
FCR	Fire Control Room
FER	Fire Engineering Report
FFCP	Fire Fan Control Panel
FHR	Fire Hose Reel
FIP	Fire Indicator Panel
FPAA	Fire Protection Association Australia
FPAS	Fire Protection Accreditation Scheme
FRL	Fire Resistance Level
FRNSW	Fire Rescue NSW
FSA	Fire Safety Assessment
FSM	Fire Safety Manual (LAHC)
FSS	Fire Safety Schedule
FSCC	Fire Safety Compliance Certificate
HVAC	Heat Ventilation and Air Conditioning
LIAFSS	Land (and Housing Corporation) Internal Fire Safety Statement
NCC	National Construction Code
SOR	Schedule Of Rate
SOA	Statement of Adequacy
SOU	Single Occupancy Unit

RIS	Rise In Storey
WHS	Workplace Health and Safety
WIP	Warden Intercom Point

Table 0-14 - Definitions

TERM	Explanation
003 key	Key type used to provide access to fire safety systems for attending NSW Fire and Rescue. Also known as a Fire Brigade Key.

1.7 REFERENCES

1. ABCB, "Building Code of Australia, Volume One", CanPrint Communications, Canberra 2016 .
2. ABCB, "Guide to the BCA 2019", CanPrint Communications, Canberra 2016 .
3. Ahmed, R., Quagila, C., "LAHC – Fire Doorsets Audit Criteria", 2020/179 R2.1, Stephen Grubits & Associates, 24th September 2020.
4. Fire Protection Association Australia, "Fire Protection Accreditation Scheme (FPAS)", Version 4, 1st July 2020
5. Ginstrup, I, Salmonsson, T., "NSW Land & Housing Corporation – Fire Safety Manual – Volumes 1", RED Fire Engineers Pty Ltd, Rev 1, 27th September 2017.
6. Ginstrup, I, Salmonsson, T., "NSW Land & Housing Corporation – Fire Safety Manual – Volumes 14 – Performance Solutions", RED Fire Engineers Pty Ltd, Rev 1, 27th September 2017.
7. Grubits, S., Quaglia, C., Vistnes, J., "Alternative Solutions Report – Reduction of Fire Resistance Levels", Report 2005/394.4 R2.0, Stephen Grubits & Associates, 23rd March 2007.
8. Quaglia, C., Viktor, Y., "LAHC Fire Doors to Residential Units – Fire Engineering Opinion Report", Report 2020/179 R1.1, Stephen Grubits & Associates, 7th May 2020.
9. Standards Australia, "AS1851.1:2012 (+A1) – Routine service of fire protection systems and equipment", Homebush 2016

APPENDIX A - ROUTINE SERVICING ACTIVITIES

Note:

- This table contains only the routine service items applicable to fire safety systems contained within the types of buildings applicable to the portfolio. It is not an exhaustive copy of AS1851:2012 (+A1) or AS2293.2:2019.
- GREEN means routine inspection and any other activities which are deemed included within the relevant routine servicing SOR i.e., "activities deemed included in routine servicing SOR". In other words, where an inspection activity is likely to consist of replacing basic parts or provision of labour, this has been marked in GREEN with "activity deemed included in routine servicing SOR", in the table below. It is deemed that the relevant SOR item pertaining to the specific routine servicing allows for all associated labour or material to complete this activity.
- RED means any activity other than 'Check' (part of routine servicing SOR item) that can be performed (if required) using separate relevant SOR i.e. "additional activity to be performed using separate SOR". Such activity (marked in RED) can be conducted, as deemed necessary, requesting Supplementary Works.

SECTION 2 AUTOMATIC FIRE SPRINKLER SYSTEMS

TABLE 2.4.2.1

MONTHLY ROUTINE SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS WET PIPE SYSTEMS

tem No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Control valve assembly	CHECK that control valve assembly area is unobstructed and free of any condition that may adversely affect the operation or access.	Any activity deemed included
1.2	Sprinkler spares, sprinklers and sprinkler spanner	CHECK that there are spare sprinklers of appropriate quantity and type including a matching sprinkler spanner for each type of sprinkler fitted, available.	
1.3	Signage	CHECK for damage, legibility and appropriate location of required signage.	
1.4	Fire brigade booster connection	CHECK that the booster connection or enclosure is unobstructed and for any condition that may adversely affect the operation or access. CHECK that the booster connection coupling type is as per the local fire brigade requirements.	
1.5	Main stop valves and alarm cocks	INSPECT each main stop valve and alarm cock for each control assembly is secured in the open position and the main stop valve is correctly labelled. NOTES: **'Text deleted'**	Any activity deemed included
1.6	Pump starting devices isolating valve	CHECK that each isolating valve to each automatic pump start device is locked in the open position.	
1.7	Pressure switches	CHECK each pressure switch and ensure that the cover is in place, correctly labelled, securely mounted and free from any condition likely to adversely affect its function.	
1.8	Alarm signalling equipment (ASE) (stand-alone)	CHECK the alarm signalling equipment to ensure that it is securely mounted, free from any condition likely to adversely affect its function and is not indicating alarm, fault, loss of connection, or isolated.	Any activity deemed included
1.9	Sprinkler system interface to other systems	CHECK the sprinkler system alarm interface with other systems is not isolated, inhibited or disabled.	
1.10	Water supply stop valves	(a) OPERATE (two full turns) all water supply stop valves (including backflow prevention stop valves but excluding underground key- operated valves) and verify they are fully open, secure in the open position (relaxed ¼ turn if appropriate) and are correctly labelled. NOTES: 1 Where more than 12 water supply stop valves are distributed throughout a high-rise building, forming part of a combined sprinkler/hydrant system, the actions under actions (a) and (b) may be conducted on a rotating basis. 2 The period between testing of all water supply stop valves should not exceed 3 months.	Any activity deemed included
		(b) VERIFY that the valve position indicators are securely mounted and indicate correctly.	
		(c) **'Text deleted'**	
1.11	System pressure gauge readings before alarm function test	(a) RECORD reading from each pressure gauge.	
		(b) VERIFY pressure gauge readings are within the ranges required.	

1.12	Control assembly, alarm gong, alarm-initiating device, fire brigade alarm test and DSEP/DBEP strobes (Alarm function test)	(a) OPERATE each alarm valve by opening each 15 mm test valve or 10 mm for residential sprinkler systems serving buildings up to 4 storeys in height. Where more than 12 control assemblies are distributed throughout a high-rise building forming part of a combined sprinkler/hydrant system, and initiate the fire brigade alarm, testing may be conducted on a rotating basis. The period between testing of all control assemblies shall not exceed 3 months.	
		(b) RECORD time(s) to operation of alarm gong(s) and verify that time does not exceed 180 s for general systems or 90 s for residential sprinkler systems.	
		(c) RESET the alarm test valve on completion of each test.	
		(d) Where multiple control valve assemblies are separately identified at an FIP, only one transmission from the FIP to the monitoring station is required.	
1.13	Alarm signal	VERIFY the correct operation of each alarm signal. Where the system is monitored ensure the alarm has activated the alarm signalling equipment.	
1.14	DSEP/DBEP strobe indicator	INSPECT for the correct operation of each DSEP/DBEP strobe indicator, where fitted.	
1.15	System pressure gauge readings after alarm valve test	(a) RECORD reading from each pressure gauge.	
		(b) VERIFY pressure gauge readings are within the ranges required.	
1.16	Pump starting devices function test— Compression ignition drivers (diesel) and electric motor drivers	(a) TEST each automatic pump starting device and pump operation by reducing the applied water pressure to the starting device and run pump, in accordance with Section 3. Where more than one starting device is installed, including the manual starting device, the test may be carried out on a rotating basis. The period between the exercising of each starting device is not to exceed 3 months. Where this would require the pump to start more than 5 times in succession, the period may be extended to 6 months.	
		(b) RECORD the pump cut-in pressures and verify that they are within the ranges required.	Any activity deemed included
1.17	Manual pump start device, function test	TEST each manual pump starting device and pump operation in accordance with Section 3.	
1.18	Water supply tanks— Atmospheric or pressure	Perform routine service in accordance with Section 5.	
1.19	Foam water sprinkler systems—foam concentrate	CHECK that the concentrate level is correct and level indicator reads correctly.	

2.4.2.2 *Six-monthly service schedule*

Routine service of wet pipe systems on a six-monthly basis shall be carried out in accordance with Table 2.4.2.2.

TABLE 2.4.2.2
SIX-MONTHLY ROUTINE SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS WET PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service	COMPLETE all monthly service activities, as listed in Table 2.4.2.1.	
2.2	Floor/zone indication test (where fitted)	(a) OPERATE each flow switch test arrangement (automatic or manual).	
		(b) VERIFY correct flow switch indication at the CIE.	
2.3	Underground key- operated and subsidiary valves	(a) Except where owned by the water supply authority, OPERATE (two full turns) all underground key-operated valves and verify they are fully open, secure in the open position (relaxed ¼ turn if appropriate) and are correctly labelled. NOTE: Where underground key-operated valves are owned by the water supply authority, the owner should arrange for the water supply authority to test the valve(s) to confirm the valve(s) is operational and in the correct position.	
		(b) OPERATE all subsidiary stop valves (floor isolation valves, tail-end valves).Ensure that they are fully open and, where applicable, secured in the open position and are correctly labelled. NOTE: **'Text deleted'**.	
2.4	Valve-monitoring device test	Test each valve monitor by operating the valve and VERIFY the correct indication at the CIE.	
2.5	Pressure gauge readings before main drain test	RECORD reading from each pressure gauge. VERIFY pressure gauge readings are within the ranges required.	
2.6	Main drain valve water supply test—Town main supply only	(a) OPEN the sprinkler control assembly main drain valve without pump(s) running. In the case of grouped valve sets, open one only.	

		(b) VERIFY that residual water supply pressure, with drain valve open, is within 10% of the original value recorded.	
		(c) CLOSE main drain valve and record time for pressure recovery.	
		(d) VERIFY that the time for pressure recovery aligns with previously recorded value. NOTE: Where the building exceeds four storeys in height, care should be taken to ensure that the static head of the installation does not excessively elevate the residual pressure reading.	
2.7	Water supply (river, lake, etc.) strainers/screens	CHECK suction inlet strainer(s) or screen(s) for any condition likely to affect its function. Where blocked, CLEAN the suction inlet strainers or screens.	Any activity deemed included

2.4.2.3 *Yearly service schedule*

Routine service of wet pipe systems on a yearly basis shall be carried out in accordance with Table 2.4.2.3.

TABLE 2.4.2.3
YEARLY ROUTINE SERVICE SCHEDULE AUTOMATIC FIRE SPRINKER SYSTEMS WET PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities, as listed in Tables 2.4.2.1 and 2.4.2.2.	
3.2	Pressure- reducing valve test	(a) OPERATE all pressure-reducing valves and verify correct operation under flow conditions.	
		(b) VERIFY that pressure readings on the low pressure side of the valves are within the range stated at the pressure-reducing valve station.	
3.3	Pressure-relief valve test	OPERATE pressure-relief valve and note operating pressure is within the range stated on the nameplate provided at the reducing valve station. NOTES: 1 This test of the pressure-relief valve may be carried out using a portable test apparatus. 2 Inappropriate settings for pressure-relief valves can result in very large quantities of water flowing to waste. Ensure settings are maintained to have pressures as identified and not higher than allowed by system component rated working pressures.	
3.4	Water supply tanks— Atmospheric or pressure	Perform routine service in accordance with Section 5.	
3.5	Water supply proving test	(a) CONDUCT a water supply test, subject to limitations imposed by the water agency controlling the supply source. The test may be a combination of physical testing and calculation as necessary.	
		(i) Discharge water through the flow- measuring device at the flow corresponding to the hydraulically most favourable duty flow. Record the flowing pressure.	
		(ii) Reduce the water flow through the flow measuring device to that corresponding to the most unfavourable duty point. Record the flowing pressure.	
		(iii) Shut off water flow to flow-measuring device. Record static pressure.	
		(b) VERIFY that the system flow and pressure requirements are satisfied.	
		(c) COMPLETE a water supply test report in accordance with AS 2118.1. NOTE: This test should be conducted by substituting the installation and below stop valve pressure gauges with calibrated gauges of known accuracy. Where pumpsets are fitted, the water supply flow test should be performed combined with the pumpset load test requirements in Section 3.	
3.6	Alarm valve— Remote test valve	(a) OPERATE the alarm valve by opening each remote test valve.	
		(b) RECORD time(s) to operation of alarm gong(s) and verify that time does not exceed 360 s for AS 2118.1 and 180 s for AS 2118.4 systems.	
		(c) CLOSE remote test valve(s) and verify that alarm valve has reseated.	
3.7	Anti-freeze solution test (where applicable)	(a) DRAW a sample of anti-freeze solution.	
		(b) VERIFY correct specific gravity and top up to correct solution level.	Any activity deemed included
3.8	Sprinkler system interface control test (fire trips)	(a) CONDUCT a functional system test via the pressure switch or flow switch with each interfaced system.	
		(b) VERIFY that the interface functions as required.	

3.9	Water motor alarm gong	CLEAN the strainer and lubricate the external gong mechanism.	Any activity deemed included
3.10	Water motor direct brigade alarm	CLEAN the strainer.	Any activity deemed included
3.11	Alarm signalling equipment (ASE) (Standalone)	Where an ASE is standalone and is connected to a power supply unit and batteries: (a) CHECK the batteries for any condition likely to adversely affects its function *and* (b) Where the battery has not been replaced in the previous two years, VERIFY the battery condition by carrying out a battery discharge test in accordance with Appendix F.	
3.12	Tank quick fill (reduced capacity or break tank)	CONDUCT a water supply test through a flow- measuring device or other appropriate methods that the flow corresponds to the required quick fill-rate.	
3.13	Spray booths and ducts	INSPECT accumulated spray residue on sprinklers and reapply protective medium (petroleum jelly/paper bags). NOTE: The required frequency of inspection depends upon the amount of spraying being done and could be accomplished at the same time as the cleaning of booth.	Any activity deemed included
3.14	Kitchen hoods and ducts	INSPECT all sprinklers inside kitchen hoods and ducts and CLEAN if necessary to remove accumulated grease and any other foreign matter and verify that the sprinkler head is appropriate for this application.	Any activity deemed included
3.15	Foam water sprinkler systems—Foam concentrate	DRAW a sample and verify condition in accordance with NFPA 11 (pH, specific gravity, sediment, expansion ratio, 25% drain time).	
3.16	Foam concentrate strainer (where fitted)	CHECK and clean foam concentrate strainer (fitted upstream of proportioning device).	Any activity deemed included
3.17	Survey—Pipes and hangers	CHECK that exposed water distribution system, including pipework, pipe supports and valves, appear free from corrosion and damage, not subject to external loads and pipework is properly supported.	
3.18	Survey— Sprinkler condition	CHECK sprinklers for any condition, including physical damage, contamination, and paint on operating elements or cover plates, likely to adversely affect their function. NOTE: Sprinkler frames may be painted as part of the manufacturing process; however, the heat response elements should not be painted as this will delay or prevent operation and paint accumulated at the seat of the sprinkler may affect operation. Minor spatter on the fusible elements may be acceptable but operation should be checked if doubt exists.	Any activity deemed included
3.19	Survey— Escutcheons, cover plates or guards	CHECK for poorly fitting or missing escutcheons or cover plates, damaged guards, and attachment of foreign material.	Any activity deemed included
3.20	Survey— Sprinkler obstructions	CHECK for obstructions likely to impede sprinkler discharge and for adequate clear space below sprinklers.	
3.21	Survey— Unprotected areas	(a) CHECK for presence of unprotected areas such as mezzanines, platforms and building extensions.	
		(b) CHECK for sprinkler spacing and location relative to wall, bulkhead and partition alterations and the introduction of fixtures and fittings shielding sprinkler discharge.	
		(c) CHECK for the need to install sprinkler guards.	
3.22	Survey— Sprinkler compatibility	CHECK that sprinklers within a compartment are of similar operating characteristics (e.g. area coverage, RTI and temperature rating).	
3.23	Survey— Sprinkler ambient conditions	CHECK for localized changes in ambient temperatures, which may require different sprinkler temperature ratings (e.g. exposure to freezing or high temperature conditions).	
3.24	Survey— External sprinklers	CHECK for new building structures, yard storage or the like, exposing unprotected openings, non-fire resistant walls that may require the provision for external sprinklers.	
3.25	Survey— Occupancy	CHECK that sprinkler design remains applicable for the occupancy hazard classification and the category of storage involved.	
3.26	Survey—Storage heights, encapsulation	(a) CHECK that sprinkler design remains applicable for storage heights. If height limits are exceeded, check for in-rack (intermediate) sprinklers.	
		(b) CHECK for shrink wrapping (encapsulation) where not employed previously.	
3.27	Survey—Site documentation (where required)	(a) CHECK that block plans and emergency instructions contain the required details.	
		(b) CHECK that up-to-date sprinkler plans are available on site.	

2.4.2.4 *Five-yearly, ten-yearly, twenty-five yearly and thirty-yearly service schedule*

Routine service of wet pipe systems on a five-yearly, ten-yearly, twenty-five year and thirty year basis shall be carried out in accordance with Table 2.4.2.4.

TABLE 2.4.2.4

FIVE-YEARLY, TEN-YEARLY, TWENTY-FIVE-YEARLY AND THIRTY-YEARLY ROUTINE SERVICE SCHEDULE AUTOMATIC FIRE SPRINKER SYSTEMS WET PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
FIVE-YEARLY			
4.1	Monthly, six- monthly and yearly service	COMPLETE all monthly, six-monthly and yearly service activities, as listed in Tables 2.4.2.1, 2.4.2.2 and 2.4.2.3.	
4.2	Alarm valve (wet)	FIT new alarm valve seating or port seating (perishable items), check and clean annular groove and outlet ports, polish and lubricate seating spindle/shaft, and check operation of compensator valve if fitted. Fit a new alarm valve faceplate gasket.	
4.3	Main drain and test valve	(a) For screw-down style valves, EXAMINE seating and fit new washers.	Any activity deemed included
		(b) For packed gland variants, FIT new gland packing.	Any activity deemed included
		(c) For ball valves, CHECK for leakage and replace if leaking.	
4.4	Alarm cock plug type	REMOVE alarm cock barrels, clean, lap in, grease and reinstall. For packed gland variants, fit new gland packing.	
~~4.5~~	~~Jacking pump (where fitted)~~	~~INSPECT hand pump seatings and FIT new pump washers and path cock washers. FIT new gland packing. For electric jacking pumps, maintain as per manufacturer's instructions.~~	-
4.6	Retard chambers (where fitted)	CLEAN orifice, check seals and overhaul, where indicated, by a functional test.	Any activity deemed included
4.7	Stop valves	(a) FIT new gland packing and lubricate spindle.	Any activity deemed included
		(b) For ball and butterfly valves, CHECK for leakage and replace if necessary.	
4.8	Water supply non-return valves	RENEW water supply non-return valve seatings and gaskets.	
4.9	Water motor alarm gong	CLEAN strainer on inlet line, clear water jet, flush drain, renew gasket, check operation of main spindle and striker, remove excess grease and then lubricate.	Any activity deemed included
4.10	Water motor direct brigade alarm (where fitted)	CLEAN out well of direct brigade alarm, clear water jet, renew gasket, flush drain pipe, remove gear train, check operation of main spindle, remove excess grease and then lubricate.	Any activity deemed included
4.11	Gauges	CHECK all pressure gauges against a master gauge of known accuracy. Verify that the reading of the gauge under test is within ☐30 kPa of the reading of the master gauge at the nominal pressure.	
4.12	Special valves (other than alarm valves)	OVERHAUL all pressure-reducing valves, pressure- relief valves, tail-end system valves, and any other special valves that are installed in accordance with suppliers' specifications.	
4.14	Water supply tanks— Atmospheric	Perform routine service in accordance with Section 5.	
4.17	Water supply tanks—Pressure	Perform routine service in accordance with Section 5.	
TEN-YEARLY, TWENTY-FIVE YEAR AND THIRTY-YEAR			
4.18	Sprinklers	Subject the sample sprinklers to the following tests conducted by a registered testing authority: (a) Release temperature.	
		(b) Functional test.	
		(c) Leak resistance test—Maximum system design pressure test. REMOVE and TEST a representative sample of sprinklers at the following intervals: (i) Dry pendent sprinklers (representative sample), every 10 years. (ii) All other sprinklers (not less than 14 samples), at 25 years, then every 10 years. NOTE: For all the above sprinklers, using ISO 6182-6, ISO 6182-7 and ISO 6182-12 component Standards, sample sprinklers should be selected from the range of site environmental conditions to which the system(s) is subjected (i.e. office, factory, boiler house environments, etc.). Should one or more sprinklers fail any of the above tests, further sampling and testing should be conducted until the results can be considered truly representative. The extent of sprinkler replacement, if any, will be dependent on the results of testing.	

4.19	Multiple jet controller (MJC)	At 30 years and every 10 years thereafter: (a) Single MJC installed for alarm purposes only or to control a group of distributors, CHECK in situ for evidence of paint loading, corrosion, etc. Replace if necessary.	
		(b) Multiple MJC installed for alarm purposes only or to control groups of distributors, REPLACE a representative sample. Subject the sample to the following tests conducted by a registered testing laboratory: (i) Leak resistance test. (ii) Maximum system design pressure test (nominally 1200 kPa or 2000 kPa). (iii) Functional test. Use ISO 6182-1. NOTE: Should the sample MJC fail any of the above tests, further sampling and testing should be conducted until the results can be considered truly representative.	

2.4.3 Dry pipe system service schedules

2.4.3.1 *Monthly service schedule*

Routine service of dry pipe systems on a monthly basis shall be carried out in accordance with Table 2.4.3.1.

TABLE 2.4.3.1
MONTHLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS DRY PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Monthly service	COMPLETE all monthly wet pipe service activities listed in Table 2.4.2.1 that are applicable to a dry pipe system.	
1.2	System air pressure	CHECK system air pressure is reading within the range required.	
1.3	System air desiccator or dryer	CHECK desiccant condition and replace if necessary.	
1.4	Air compressor oil level	CHECK oil level and visually assess condition of oil.	Any activity deemed included
1.5	Air compressor	VERIFY that air compressor operates at specified cut-in and cut-out pressures.	
1.6	Low air pressure alarms(s)	VERIFY: (a) Low air pressure alarm operates at predetermined levels.	
		(b) Low air pressure alarm(s) visual indicator and sounders are operational.	
1.7	Local alarm and fire brigade test simulation (in lieu of Item 1.12, Table 2.4.1.1)	SIMULATE operation of dry pipe alarm valve and OPERATE local and fire brigade alarms through the bypass valve(s). Where the system is monitored, ensure the alarm has activated the alarm signalling equipment. (Refer to manufacturer's operating manual.) NOTE: Where multiple control valve assemblies are separately identified at an FIP, only one transmission from the FIP to the monitoring station is required.	
1.8	Air receiver condensate	DRAIN condensate from condensate trap.	

2.4.3.2 *Six-monthly service schedule*

Routine service of dry pipe systems on a six-monthly basis shall be carried out in accordance with Table 2.4.3.2.

TABLE 2.4.3.2
SIX-MONTHLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS DRY PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly and six- monthly service	COMPLETE all monthly service activities listed in Table 2.4.3.1 and all six-monthly wet pipe service activities listed in Table 2.4.2.2 that are applicable to a dry pipe system.	
2.2	Alarm valve and auxiliaries, local alarm and fire brigade alarm test (in lieu of Item 1.12 in Table 2.4.2.1)	(a) Where fitted, CLOSE isolation valve located above alarm valve (to prevent entry of water into system piping).	
		(b) OPERATE each alarm valve by releasing air from system.	
		(c) CHECK for correct operation of alarms and accelerator or exhauster.	
		(d) RECORD time(s) to operation of alarms gong(s) and verify that these do not exceed 180 s.	

		(e) VERIFY correct operation of the fire brigade alarms from each control assembly or group of control assemblies. Where the system is monitored, ensure the alarm has activated the alarm signalling equipment. NOTE: Where multiple control valve assemblies are separately identified at an FIP, only one transmission from the FIP to the monitoring station is required.	
		(f) Where an isolation valve has not been fitted above the alarm valve, the main stop valve should be mostly closed, enabling a partial test of the alarm valve. NOTE: Consider full testing at the first opportunity (at which time the isolation test valve should be installed).	
2.3	Installation pressure	RESTORE system air pressure and verify the alarm has reseated.	
2.4	FIP/ASE	RESTORE FIP/ASE to operational status.	
2.5	Pressure gauge readings	(a) RECORD reading from each pressure gauge. (b) VERIFY pressure gauge readings are within the ranges required.	
2.6	Control assemblies resetting	RESET and SECURE all valve and alarms cocks in the open position or the closed position, as labelled.	

2.4.3.3 *Yearly service schedule*

Routine service of dry pipe systems on a five-yearly basis shall be carried out in accordance with Table 2.4.3.3.

TABLE 2.4.3.3
YEARLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS DRY PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities listed in Tables 2.4.3.1 and 2.4.3.2 and all yearly wet pipe service activities listed in Table 2.4.2.3 that are applicable to a dry pipe system.	
3.2	System air desiccators or dryer	REPLACE the desiccators.	
3.3	Survey—Pipes and hangers	CHECK that the water distribution pipe work is correctly pitched to drain.	Any activity deemed included

2.4.3.4 *Five-yearly service schedule*

Routine service of dry pipe systems on a five-yearly basis shall be carried out in accordance with Table 2.4.3.4.

TABLE 2.4.3.4
FIVE-YEARLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS DRY PIPE SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Monthly, six-monthly and yearly service	COMPLETE all monthly, six-monthly and yearly service activities, listed in Tables 2.4.3.1, 2.4.3.2 and 2.4.3.3.	
4.2	Wet pipe systems five yearly service	COMPLETE all five-yearly wet pipe service activities listed in Table 2.4.2.4 that are applicable to a dry pipe system.	
4.3	Valve overhaul	FIT new dry pipe valve seats and seals. FIT new faceplate gasket (perishable items).	
4.4	Accelerator/exhauster	FIT new seals as appropriate. CHECK and CLEAN operating mechanism. FIT a new faceplate.	

2.4.5 Pre-action system

2.4.5.1 *Monthly service schedule*

Routine service of pre-action systems on a monthly basis shall be carried out in accordance with Table 2.4.5.1.

TABLE 2.4.5.1 MONTHLY SERVICE SCHEDULE
AUTOMATIC FIRE SPRINKLER SYSTEMS PRE-ACTION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	

			Inspection only (green), activity required (red)
1.1	Monthly service activities	COMPLETE all monthly wet pipe service activities listed in Table 2.4.2.1 that are applicable to a pre-action system.	
1.2	Pressure gauge readings	CHECK that all pressure gauge readings are within the ranges required and RECORD readings from each pressure gauge.	
1.3	Air compressor oil level (where fitted)	(a) CHECK oil level is correct and visually assess condition of oil.	
		(b) CHECK regulator is locked and set in the correct position.	
1.4	Electrical detection	INSPECT and TEST in accordance with Section 6.	
1.5	Air compressor (where fitted)	VERIFY that air compressor operates at specified cut-in and cut-out pressures.	
1.6	Nitrogen supply (where fitted)	(a) CHECK cylinder contents per pressure gauge.	
		(b) CHECK regulator is locked and set in correct position.	
1.7	Solenoid valve(s)	TEST solenoid valves for correct operations.	
1.8	Low air pressure alarms(s)	VERIFY: (a) Low air pressure alarm operates at predetermined levels.	
		(b) Low air pressure alarm(s) visual indicator and sounders are optional.	
1.9	Local alarm and fire brigade test simulation in lieu of Item 1.12 in Table 2.4.2.1	(a) GENERATE a test of the alarm signalling equipment and local alarm in accordance with the manufacturer's operating manual. NOTE: Where fitted, bypass valve may be used for this test.	
		(b) VERIFY correct operation of the fire brigade alarm from each pre-action valve or group of pre-action valves. Where the system is monitored, ensure the alarm has activated the alarm signalling equipment. NOTE: Where multiple pre-action valve assemblies are separately identified at the FIP, only one transmission from the FIP to the monitoring station is required.	

2.4.5.2 *Six-monthly service schedule*

Routine service of pre-action systems on a six-monthly basis shall be carried out in accordance with Table 2.4.5.2.

TABLE 2.4.5.2

SIX-MONTHLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS PRE ACTION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service activities	COMPLETE all monthly service activities listed in Table 2.4.5.1 and all six-monthly wet pipe service activities listed in Table 2.4.2.2 that are applicable to a pre-action system.	
2.2	Pre-action valve and auxiliaries, local alarm and fire brigade alarm test (in lieu of Item 1.12 in Table 2.4.2.1)	(a) Where fitted, CLOSE isolation valve located above pre-action valve (prevents entry of water into system piping).	
		(b) OPERATE each pre-action valve by releasing the system via electrical detection subsystem.	
		(c) CHECK for correct operation of alarm.	
		(d) RECORD time(s) to operation of alarms and verify that these do not exceed 180 s.	
		(e) OBSERVE correct operation of the fire brigade alarms from each pre-action valve or group of pre-action assemblies. Where the system is monitored, ensure the alarm has activated the alarm signalling equipment. NOTE: Where multiple pre-action valve assemblies are separately identified at an FIP, only one transmission from the FIP to the monitoring station is required.	
		(f) Where an isolation valve has not been fitted above the alarm valve, the main stop valve should be closed, enabling a partial test of the alarm valve. NOTE: Consider full testing at the first opportunity (at which time the isolation test valve should be installed).	
2.3	Installation supervisory air pressure	RESET pre-action valve and restore supervisory air pressure.	

2.4	Electrical control unit (and FIP/ASE)	RESTORE units to operational status.	
2.5	Pressure gauge readings	(a) RECORD readings from each pressure gauge.	
		(b) VERIFY pressure gauge readings are within the ranges required.	
2.6	Valve and cocks	SECURE all valves and alarm cocks in the open position or the closed position as labelled.	

2.4.5.3 *Yearly service schedule*

Routine service of pre-action systems on a yearly basis shall be carried out in accordance with Table 2.4.5.3.

TABLE 2.4.5.3
YEARLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS PRE-ACTION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities, listed in Tables 2.4.5.1 and 2.4.5.2.	
3.2	Yearly service activities	COMPLETE all yearly wet pipe service activities listed in Table 2.4.2.3 that are applicable to a pre-action system.	
3.3	Air receiver condensate	DRAIN condensate from: (a) Condensate trap.	
		(b) Air compressor receiver.	
3.4	Survey—Installation	CHECK that sprinkler piping and detection installations are properly secured throughout the protection area.	
3.5	Survey—Design	CHECK that pre-action sprinkler protection covers full extend of special hazard area.	

2.4.5.4 *Five yearly service schedule*

Routine service of pre-action systems on a five-yearly basis shall be carried out in accordance with Table 2.4.4.4.

TABLE 2.4.5.4
FIVE-YEARLY SERVICE SCHEDULE AUTOMATIC FIRE SPRINKLER SYSTEMS PRE-ACTION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Monthly, six-monthly and yearly service	COMPLETE all monthly, six-monthly and yearly service activities, listed in Tables 2.4.5.1, 2.4.5.2 and 2.4.5.3.	
4.2	Five yearly service	COMPLETE all five-yearly wet pipe service activities listed in Table 2.4.2.4 that are applicable to a pre-action system.	
4.3	Valve overhaul	FIT new pre-action valve seats and seals. CHECK and CLEAN operating mechanism. FIT new cover plate gasket.	Any activity deemed included

SECTION 3 FIRE PUMPSETS

3.4 ROUTINE SERVICE SCHEDULES

3.4.1 Fire pumpsets—Monthly service schedule

TABLE 3.4.1
MONTHLY SERVICE SCHEDULE FIRE PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Pump areas	(a) CHECK that pump areas are unobstructed, not used for storage and lighting is adequate.	Any activity deemed included

		(b) Where pump pressure-relief valves are fitted, CHECK that discharge will not cause flooding or water damage.	
1.2	Signage and ID plates per AS 2941 (where applicable)	(a) CHECK that each pumpset has a clearly visible warning sign stating, 'Danger this Pump Starts Automatically'.	
		(b) CHECK that there are readily seen and clearly legible ID plates on each controller, driver (diesel and electric), pumpset (on base plate) and pump (on the pump).	Any activity deemed included
		(c) CHECK each pump controller is labelled 'Fire Pump Controller', has clear operating instructions posted, has all operating components clearly identified, and has all indicating lights clearly labelled.	
1.3	Pump water supply valves	CHECK that all valves are in the open position or the closed position, is labelled, and secured, where applicable. NOTES: **'Text deleted'**	
1.4	Pressure gauges	CHECK that all pressure gauges are reading within the ranges required and record pressure.	
1.5	Water supply tank (if installed)	Perform routine service in accordance with Section 5.	
1.6	General inspection	CHECK for any obvious signs of physical damage or deterioration.	
1.7	Compression ignition (diesel) driven pumpset(s)	Monitor and engine start batteries. (a) CHECK monitor and engine start batteries and enclosures for corrosion, physical damage and secure mounting.	
		(b) REMOVE any corrosion from battery terminals as required.	Any activity deemed included
		(c) TEST the float charge voltage of both the monitor and engine start batteries and record result.	
		(d) CHECK electrolyte levels and top up with distilled water as necessary.	Any activity deemed included
		(e) CHECK warning signage and rating (battery capacity) signage (where required).	
		(f) CHECK battery capacity or cold cranking amperage is appropriate.	
1.8	Engine warming devices	Where fitted, check engine warming device is working appropriately.	
1.9	Fuel tank(s)	CHECK that the fuel tank is full.	Any activity deemed included
1.10	Pump controller	(a) CHECK enclosure for corrosion and ingress of water, dust or insects.	Any activity deemed included
		(b) CHECK operation of all visual indicators, switches and sounders.	
1.11	Pump controller status	(a) CHECK the main isolating switch is in the 'ON' position and secured in position where facilities are provided and, where fitted, the green power supply indicators are illuminated and that no red warning lamps are on.	
		(b) CHECK all lights are functional by pressing the indicator test button, where fitted.	Any activity deemed included
1.12	Pre-test checks	Prior to commencing any test function: (a) CHECK all safety guards are in place and secure.	
		(b) CHECK the water supply availability—town main pressure adequate or suction tank is full.	
		(c) Where compression ignition engine driven pumpsets are installed, CHECK that water, oil, belt drives and exhaust condensate drains and cooling water valves are in the correct position. Check fuel water-trap/filter for water contamination. Rectify where required.	Any activity deemed included
1.13	Pump starting devices— Compression ignition engine	(a) START each pumpset by reducing the applied water pressure to the starting device and for compression ignition engines run engine continuously for not less than 10 min on the first automatic start and check that the driver achieves full speed within 15 s of starting.	
		(b) RESTART the pumpset using the manual starting device.	
		(c) RECORD the starting pressures, test run time and the hour meter reading at completion of the test.	
1.14	Run test checks	During and after the running period CHECK: (a) Pump operates at the correct discharge pressure. Record suction and discharge pressure. NOTE: The discharge pressures may vary with varied suction static pressure. An excessive negative suction pressure may indicate a suction partial blockage or partially closed valve.	

		(b) Pump gland and drain (where applicable) operates efficiently.	Any activity deemed included
		(c) Out-of-balance condition or abnormal noises are not evident.	
		(d) All local and remote 'pump running' alarms operate.	
		(e) Running speed is correct, and record the result.	
		(f) Water, oil and fuel leaks are not evident and fittings on ancillary equipment are secure.	
		(g) Battery charger or alternator/generator is operating at required value within tolerances.	
		(h) Engine stop mechanism returns to start position automatically.	
		(i) Belt drives are in good condition.	
		(j) Battery charger power failure alarm operates correctly.	
		(k) Engine instrumentation is operating. Record the results.	
		(l) Flow is evident from the circulation relief valve when the pump is operating at shut-off head and ceases at the appropriate pressure.	
		(m) Exhaust system is leak free.	Any activity deemed included
		(n) Cooling water (heat exchanger cooled engines only) is discharging.	
1.15	Electric motor driven pumpset— Precautions	Prior to commencing any test function: (a) CHECK all safety guards are in place and secure.	
		(b) CHECK enclosure for corrosion and ingress of water, dust or insects.	Any activity deemed included
1.16	Pump controller status	CHECK that the main isolating switch is in the ON position and secured in position where facilities are provided and, where fitted, the green power supply lamps are illuminated and that no red warning lamps are on. Ensure all lights are functional by pressing the lamp test button, where fitted.	Any activity deemed included
1.17	Pump starting devices	(a) START each pumpset by reducing the applied water pressure to the starting device and run motor continuously for at least 3 minutes.	
		(b) RESTART each pumpset using the manual starting device and run motor continuously for at least 3 minutes.	
		(c) RECORD the starting pressures and the run time at the completion of the test.	
1.18	Run test checks	During and after the running period CHECK: (a) Pump operates at the correct discharge pressures allowing for varying suction conditions. Record suction and discharge pressure.	
		(b) Pump glands and drain or mechanical seal(s) operate efficiently.	Any activity deemed included
		(c) Out-of-balance condition or abnormal noises are not evident.	
		(d) Both local and remote 'pump running' alarms and lights operate.	
1.19	Controller batteries	(a) CHECK battery complies with details on identification plate fitted to the enclosure.	
		(b) CHECK battery for corrosion, physical damage and security.	Any activity deemed included
		(c) CHECK battery enclosure for corrosion, and the ingress of water, dust and insects.	Any activity deemed included
		(d) CHECK float voltage of the battery and record.	

1.20	Restoration to operational condition all pumpsets	After completion of testing procedures, RETURN all equipment to the operational condition.	

3.4.2 Six-monthly service schedule

Routine service of fire pumpsets on a six-monthly basis shall be carried out in accordance with Table 3.4.2.

Routine service of fire hose reel and automatic pressure maintenance pumps shall be carried out in accordance with Clause 3.4.5.2.

TABLE 3.4.2
SIX-MONTHLY SERVICE SCHEDULE FIRE PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service	Complete all monthly service activities, as listed in Table 3.4.1.	
2.2	Alternative power-supplies— Electric motor- driven pumpset	In addition to the requirement of Item 1.17 of Table 3.4.1, where alternative power supplies are provided, RUN the pump(s) continuously for not less than 3 minutes off the alternative supply.	
2.3	Hydro-pneumatic accumulator (where fitted)	CHECK accumulator air pressure.	

3.4.3 Yearly service schedule

Routine service of fire pumpsets on a yearly basis shall be carried out in accordance with Table 3.4.3. Fire hose reel pumpsets are excluded from yearly activities.

TABLE 3.4.3
YEARLY SERVICE SCHEDULE FIRE PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six-monthly service	Complete all monthly and six-monthly service activities as listed in Tables 3.4.1 and 3.4.2.	
3.2	Annual full flow test— Compression ignition (diesel) driven pumpset— Sprinklers and hydrants load test. This test may be combined with tests required by Table 2.4.2.3, Item 3.5 if applicable	(a) With the pump room door(s) closed, and the pump testing technician present: (i) RUN the pumpset at shut-off (zero flow) for 10 min to allow all equipment to attain normal operating temperature.	
		(ii) RUN the pumpset at 130% of duty flow (sprinklers, hydrants or combined as applicable) for 10 min and record the result.	
		(iii) Reduce the flow to the duty flow (sprinklers, hydrants or combined) for sufficient time to record the water supply proving test results.	
		(iv) Further reduce the flow until shut-off (zero flow) is achieved and continue to run the pumpset until total run time has reached 30 min.	
		(v) During this period RECORD the following for actions (ii), (iii) and (iv) above: (A) Suction pressures.	
		(B) Discharge pressure.	
		(C) Engine running temperature.	
		(D) Engine oil pressure.	
		(E) Air temperature at the engine intake manifold. NOTE: If the pump room temperature rises more than 10°C above ambient temperature, this could indicate inadequate ventilation and possible reduction in engine power.	
		(F) Engine RPM, using both installed tachometer and calibrated tachometer. Record variations.	
		(vi) While carrying out the above procedures, CHECK temperature of bearings and stuffing box leakage and note and report any abnormality.	
		(b) SIMULATE an engine fail to start and ensure that engine-start cycling requirements and alarm activations are satisfied.	
		(c) TEST correct operation of pump priming tanks and associated equipment, where fitted.	
3.3	Annual full flow test— Electric motor- driven pumpset— Sprinklers and hydrants load test	(a) With the pump room door(s) closed and the pump testing technician present: (i) RUN the pumpset at shut-off (zero flow) for 3 min.	
		(ii) RUN the pumpset at 130% of duty flow (sprinklers, hydrants or combined as applicable) for 4 min and record the result.	
		(iii) Reduce the flow to the duty flow (sprinklers, hydrants or combined) for sufficient time to record the water supply proving test results.	
		(iv) Further reduce the flow until shut-off (zero flow) is achieved and continue to run the pumpset until total run time has reached 10 min.	

		During this period RECORD the following for Items (ii), (iii) and (iv) above:	
		(A) Suction pressure.	
		(B) Discharge pressure.	
		(C) Air temperature at the electric motor.	
		(D) Motor RPM.	
		(E) Amps (all three phases). NOTE Ensure current does not exceed full load current of the electric motor.	
		While carrying out the above procedure, CHECK temperature of bearings and stuffing box leakage and note and report any abnormality.	
		(b) TEST correct operation of pump priming tanks and associated equipment, were fitted.	
3.4	All batteries	(a) CHECK each battery for any condition likely to indicate an adverse effect on its function.	
		(b) Where batteries are replaced they shall comply with batteries manufactured in accordance with AS 4029 (series).	
3.5	Engine start batteries	REPLACE all engine-starting batteries after a maximum of 2 years service, irrespective of condition. Record date of replacement on the new battery and the date the batteries were replaced in the service record.	
	Control batteries	When the battery has not been replaced in the previous two years, verify the battery condition by carrying out a battery discharge test in accordance with Appendix F.	
3.7	Battery charger	Test and record battery charger voltage output.	
3.8	Compression- ignition (diesel) driven pumpset	(a) REPLACE engine oil with new oil that meets the engine manufacturer's specification. More frequent oil changes shall be carried out if recommended by the engine manufacturer.	
		(b) REPLACE engine oil filter and fuel filters and, if required, air filters.	
		(c) CHECK the condition of the fuel. NOTE: Visually check a sample of the fuel for foreign particles, contamination, fungal growth, appropriate smell and colour, etc. If suspect, report, replace or send the sample to an independent testing agent.	
		(d) INSPECT engine cooling hoses and replace where necessary.	
		(e) FLUSH engine cooling system and refill using manufacturer's approved corrosion inhibitor (water-cooled engines only).	Any activity deemed included
		(f) PRESSURE TEST engine cooling system in accordance with the manufacturer's recommendations (radiator and heat exchanger cooled engines only).	Any activity deemed included
		(g) CHECK correct operation of the engine cooling system pressure-reducing valves, where fitted.	
		(h) REMOVE and CLEAN or REPLACE heat exchanger strainer(s).	Any activity deemed included
		(i) CARRY out any other routine service procedures in accordance with the engine manufacturer's requirements.	Any activity deemed included
		(j) INSPECT pump/driver coupling for wear and alignment. Replace worn or damaged components.	
		(k) GREASE jump bearings to the manufacturer's specifications where greased nipples are provided.	Any activity deemed included
		(l) Where the pump bearings are of the oil- lubricated type, REPLACE the bearing oil with new oil that meets the pump manufacturer's specification (does not apply to turbine type vertical shaft centrifugal pumps).	Any activity deemed included
		(m) REPLACE the oil in right-angle gearboxes with new oil that meets the manufacturer's specification.	
3.9	Electric motor- driven pumpset	With all electrical equipment isolated from all power supplies:	
		(a) INSPECT the condition of all exposed heavy current-carrying contacts. Report any item showing any signs of wear or corrosion.	
		(b) INSPECT pump/driver coupling for wear and alignment. Report worn or damaged components.	
		(c) Where grease nipples are provided, GREASE pump and motor bearings to the manufacturer's specifications.	Any activity deemed included
		(d) Where the pump bearings are of the oil- lubricated type, REPLACE the bearing oil with new oil that meets the pump manufacturer's specification (does not apply to turbine type vertical shaft centrifugal pumps).	Any activity deemed included

3.10	Non-return valves	ENSURE all non-return valves are operating freely and are seating correctly.	
3.11	Pipework corrosion	SURVEY the system and equipment to identify external corrosion, and detail extent and location accordingly.	
3.12	System pressure-relief valve	CHECK that the system pressure relief valve opens and closes at the pressure required. NOTE: Inappropriate settings for pressure-relief valves can result in very large quantities of water flowing to waste. Ensure settings are maintained to have pressures as identified and not higher than allowed by system component rated working pressures.	Any activity deemed included
3.13	Restoration to operational condition	After completion of testing procedures, RETURN all equipment to the operational condition.	
3.14	Overspeed shutdown device	Operate engine overspeed test switch. Ensure the engine shuts down and engine, overspeed light illuminates on the controller.	
3.15	Variable speed control	Operate the pump at 50% of duty flow and 100% of duty flow, and ensure duty head is not exceeded by more than 10%.	
3.16	Remote pump start/stop function	Operate the pump start/stop functions from the remote location, and ensure the appropriate indications are received at the FIP/remote stop/start panel.	

3.4.4 Five-yearly service schedule

Routine service of fire pumpsets on a five-yearly basis shall be carried out in accordance with Table 3.4.4.

TABLE 3.4.4
FIVE-YEARLY SERVICE SCHEDULE FIRE PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Monthly, six- monthly and yearly service	COMPLETE all monthly, six-monthly and yearly activities, as listed in Tables 3.4.1, 3.4.2 and 3.4.3.	
4.2	Pump	REPACK pump glands.	
4.3	Relief, engine cooling and pressure regulating valves	OVERHAUL the following valves in accordance with supplier's specifications:	
		(a) Circulation-relief valves.	Any activity deemed included
		(b) Pressure-relief valves.	Any activity deemed included
		(c) Engine cooling valve.	Any activity deemed included
		(d) Pressure regulating valve.	Any activity deemed included
4.4	Stop valves	(a) FIT new gland packing and lubricate spindles.	Any activity deemed included
		(b) For ball and butterfly valves, CHECK for leakage and replace if necessary.	Any activity deemed included
4.5	Compression ignition engine	Replace engine air filters. NOTE: The air filter should be marked with install date.	Any activity deemed included
4.6	Restoration to operational condition	After completion of testing procedures, RETURN all equipment to the operational condition.	

3.4.5 Hose reel and pressure maintenance/jacking pumpsets

3.4.5.1 *Monthly service schedule*

TABLE 3.4.5.1
MONTHLY SERVICE SCHEDULE
HOSE REEL AND PRESSURE MAINTENANCE/JACKING PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only

			(green), activity required (red)
5.1	Pump areas	(a) CHECK that pump areas are unobstructed, not used for storage and lighting is adequate.	Any activity deemed included
		(b) Where pump pressure-relief valves are fitted, CHECK that the discharge will not cause flooding or water damage.	
		(c) CHECK for any obvious signs of physical damage or deterioration and that all safety guards are in place and secure.	
5.2	Valves	ENSURE that all valves are in the open position or the closed position, as labelled, and secured where applicable.	
5.3	Water supply tank (where fitted)	CHECK that the water supply tank is full.	
5.4	Pump controller status	CHECK that the main isolating switch is in the on position and secured (where facilities are provided), the green power supply lamps are illuminated and that no red warning lamps are on. Ensure all lights are functional by pressing the lamp test button, where fitted.	
5.5	Pump	(a) VERIFY operation (manual and automatic).	
		(b) RECORD cut-in and cut-out pressures.	

3.4.5.2 *Six-monthly service schedule*

Routine service of hose reel and pressure maintenance/jacking on a six-monthly basis shall be carried out in accordance with Table 3.4.5.2.

TABLE 3.4.5.2
SIX-MONTHLY SERVICE SCHEDULE
HOSE REEL AND PRESSURE MAINTENANCE/JACKING PUMPSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
6.1	Monthly service	COMPLETE all monthly service activities, as listed in Table 3.4.5.1.	
6.2	Hydro- pneumatic accumulator	VERIFY that the air pressure is correct.	

SECTION 4 FIRE HYDRANT SYSTEMS

4.4 ROUTINE SERVICE SCHEDULES

4.4.1 Fire hydrant systems—Monthly service schedule

Routine service of hydrant systems on a monthly basis shall be carried out in accordance with Table 4.4.1.

TABLE 4.4.1
MONTHLY SERVICE SCHEDULE FIRE HYDRANT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Monthly service	Where pumpsets are fitted complete all pumpset monthly service activities, as listed in Table 3.4.1.	
1.2	Pump-starting devices	(a) CHECK that all isolating valves to pump- starting pressure devices are secured in the open position.	
		(b) CHECK that pressure switches are securely mounted and are protected against the ingress of water, dust and insects.	Any activity deemed included
1.3		(a) START each pumpset by reducing the applied water pressure to the pump-starting device and run engine, in accordance with Section 3.	

	Pump-starting devices function test— Compression ignition engine (diesel)	(b) RESTART the pumpset using the manual starting device and again run the compression ignition engine in accordance with Section 3. Where more than one starting device is installed, including the manual starting device, the test may be carried out on a rotating basis. The period between the exercising of each starting device is not to exceed 3 months. Where this would require the pump to start more than 5 times in succession, the period may be extended to 6 months (see also Table 3.4.3, Items 3.6 and 3.7).	
		(c) RECORD the pump cut-in pressures and verify that they are within the ranges required.	
1.4	Pump-starting devices function test— Electric motor drivers	(a) START each pumpset by reducing the applied water pressure to the starting device and run motor in accordance with Section 3.	
		(b) RESTART the pumpset using the manual starting device and again run the motor in accordance with Section 3.	
		(c) Where more than one starting device is installed, including the manual starting device, the test may be carried out on a rotating basis. The period between the exercising of each starting device is not to exceed 3 months. Where this would require the pump to start more than 5 times in succession, the period may be extended to 6 months.	

4.4.2 Six-monthly service schedule

Routine service of fire hydrant systems on a six-monthly basis shall be carried out in accordance with Table 4.4.2.

TABLE 4.4.2
SIX-MONTHLY SERVICE SCHEDULE FIRE HYDRANT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service	COMPLETE all monthly service activities, as listed in Table 4.4.1.	
2.2	Water supply stop valves and isolating valves	OPERATE (two full turns) all water supply stop valves (including backflow prevention stop valves and underground key-operated valves except where owned by the water supply authority) and verify they are fully open, secure in the open position (relaxed ¼ turn if appropriate) and are correctly labelled. NOTES: **'Text deleted'**	
2.3	Hydrant valves (above ground)	CHECK all hydrant valves: (a) Are accessible.	
		(b) Hand-wheels are securely fitted.	Any activity deemed included
		(c) Blanking caps, where fitted, are in good condition.	
2.4	Hydrant valves (below ground)	CHECK all hydrant valves: (a) Are accessible.	
		(b) Blanking caps, where fitted, are in good condition.	
		(c) Check cover plate for ease of opening.	
		(d) Not leaking.	
2.5	Booster assembly (where fitted)	CHECK all booster assemblies: (a) Are accessible.	
		(b) Hand-wheels are securely fitted.	Any activity deemed included
		(c) Pressure gauges and blanking caps, where fitted, are in good condition.	
		(d) For condition of washers on booster assembly connection inlets.	
		(e) For legible labelling indicating maximum system working pressure.	
		(f) For legibility of hydrant system block plan where fitted.	
2.6	Remote pump starting	DEPRESSURIZE the hydrant system(s) at the most hydraulically disadvantaged hydrant and CHECK that the pump starts.	
2.7	Hydrant and booster connections— Compatibility	CHECK that all hydrant and booster connection points are compatible with local brigade requirements.	
2.8	Hydrant hose (where fitted)	CHECK all branch pipes, nozzles and hose couplings are in good condition, compatible with the hydrant valves and properly stowed.	

4.4.3 Yearly service schedule

Routine service of the fire hydrant systems on a yearly basis shall be carried out in accordance with Table 4.4.3.

TABLE 4.4.3
YEARLY SERVICE SCHEDULE FIRE HYDRANT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities, as listed in Tables 4.4.1 and 4.4.2.	
3.2	Hydrant valves (above and below ground)	OPEN partially all hydrant valves in the system and prove the presence of water at each point. NOTE: To prevent water damage, it is recommended that a suitable adapter to limit water flow be used for this test on internal hydrants. Each hydrant in the system should be opened separately.	
3.3	Hydrant water supply valves	(a) OPERATE (two full turns) all water supply valves—above ground, underground key- operated valves (except where owned by the water supply authority) and subsidiary stop valves (e.g., floor isolation valves). Ensure they are fully open and, where applicable, secured in the open position (relaxed ¼ turn where applicable) and are correctly labelled. NOTE: Where underground key-operated valves are owned by the water supply authority, the owner should arrange for the water supply authority to test the valve(s) to confirm the valve(s) is operational and in the correct position.	
		(b) VERIFY that the valve position indicators are securely mounted and indicate correctly.	Any activity deemed included
		(c) TEST each valve monitor (where fitted) by closing and re-opening the valve. Verify correct indication at the CIE.	
3.4	Non-return valves	VERIFY that all non-return valves are operating freely and are seating correctly.	
3.5	Hydrant hose (where fitted)	VERIFY all branch pipe, nozzles and hose couplings waterways are unobstructed and in good condition.	
3.6	Pressure-reducing station test	(a) OPERATE all pressure-reducing valves and verify correct operation under flow conditions.	
		(b) VERIFY that pressure readings on the low pressure side of the valves are within the range stated at the pressure-reducing valve station.	
		(c) OPERATE pressure-relief valve and record operating pressure. If necessary, adjust the setting to relieve at 50 kPa above the operating pressure of the pressure-reducing valve. Replace the tamper seal if necessary. NOTE: The pressure-relief valve test may be carried out using a portable test apparatus.	Any activity deemed included
3.7	Water supply proving test	CONDUCT a water supply proving test for each water supply verifying that the system flow and pressure requirements meet the design criteria, using either— (a) a fixed flow meter test facility; or	
		(b) a portable test apparatus at the most hydraulically disadvantaged hydrant valve(s).	
		NOTES: 1 Where the water supply is the sole source of water for both sprinkler and hydrant systems, both sprinkler and hydrant demands should be available simultaneously. 2 In high-rise buildings where there are multiple pressure zones, a water supply proving test should be carried out on the most remote hydrant in each zone.	
3.8	Hydrant system interface control test (fire trips)	(a) CONDUCT a functional system test via the pressure switch or flow switch with other interfaced fire systems.	
		(b) VERIFY that the interface functions as required. NOTE: It is recommended that the responsible entity coordinate testing the interfaced fire protection systems.	
3.9	Water supply tanks— Atmospheric	Perform routine service in accordance with Section 5.	
3.10	Water supply (river, lake, etc.) Strainers/screens	(a) CHECK suction inlet strainer(s) or screen(s).	
		(b) Following water supply proving test (Table 4.4.2 Item 2.6), CLEAN suction inlet strainer(s). Lower raised screen and raise and clean 'in-use' screen.	Any activity deemed included
3.11	Survey—Installation	(a) Pipework—CHECK that exposed water distribution system, including pipework, pipe supports and valve, appears free from corrosion and damage, not subject to external loads and pipework is properly supported.	
		(b) Hydrant obstructions—CHECK for obstructions likely to impede hydrant valve access.	
3.12	Survey—Design	(a) Occupancy—CHECK that hydrant design remains applicable for current building arrangement or use.	

		(b) Site documentation—CHECK that block plans, emergency instructions and pressure schedules contain the details required in accordance with AS 2419.1.	

4.4.4 Five-yearly service schedule

Routine service of fire hydrant systems on a five-yearly basis shall be carried out in accordance with Table 4.4.4.

TABLE 4.4.4
FIVE-YEARLY SERVICE SCHEDULE FIRE HYDRANT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Monthly, six-monthly and yearly service	COMPLETE all monthly, six monthly and yearly service activities, as listed in Tables 4.4.1, 4.4.2 and 4.4.3.	
4.2	Booster connection flow test (where fitted)	CONDUCT a flow test through booster connection in accordance with AS 2419.1 or to approved design Standard. NOTE: Conduct the flow test after a satisfactory (pass) hydrostatic test.	
4.3	Hydrostatic test	Where a booster is fitted CONDUCT a hydrostatic pressure test on the entire system at 1.5 times the system working pressure of the required design Standard.	
4.4	Booster assembly	(a) CHANGE all washers on booster assembly connection inlets.	Any activity deemed included
		(b) LUBRICATE internal non-return spring check valves on a 10-yearly basis.	Any activity deemed included
4.5	Drain and test valve washers	For screw-down style valves, EXAMINE seating and fit new washers. For packed gland variants, FIT new gland packing.	Any activity deemed included
4.6	Stop valves	FIT new gland packing and lubricate spindle.	Any activity deemed included
4.7	Hydrant valves	FIT new seatings to all hydrant valves and lubricate spindles. (Perishable items only.) NOTE: This activity should be completed prior to conducting the hydrostatic pressure test.	Any activity deemed included
4.8	Water supply non- return valves	RENEW water supply non-return valve seatings and gaskets.	Any activity deemed included
4.9	Gauges	CHECK all pressure gauges against calibrated gauge.	Any activity deemed included
4.10	Water supply tanks— Atmospheric	Perform routine service in accordance with Section 5.	Any activity deemed included

SECTION 5 WATER STORAGE TANKS FOR FIRE PROTECTION SYSTEMS

5.4 ROUTINE SERVICE SCHEDULES

5.4.1 Water storage tanks—Monthly service schedule

Routine service of water storage tanks for fire protection systems on a monthly basis shall be carried out in accordance with Table 5.4.1

TABLE 5.4.1
MONTHLY SERVICE SCHEDULE WATER STORAGE TANKS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)

1.1	Water level	CHECK that the tank is full.	
1.2	Water level indicator	CHECK for correct operation and reading of water level indicator.	
1.3	Water supply pressure tank (where fitted)	VERIFY: (a) Gauge glass indicates the correct water level.	
		(b) Tank pressure gauge reads within the range nominated.	
		(c) Air pressure switch operates at specified compressor cut-in and cut-out pressures.	Any activity deemed included
		(d) Low tank pressure alarm operates at specified pressure.	Any activity deemed included
		(e) Air compressor or gas cylinder supply is operational.	

5.4.2 Six-monthly service schedule

Routine service of water storage tanks for fire protection systems on a six-monthly basis shall be carried out in accordance with Table 5.4.2.

TABLE 5.4.2
SIX-MONTHLY SERVICE SCHEDULE WATER STORAGE TANKS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service	COMPLETE all monthly service activities, as listed in Table 5.4.1.	
2.2	Float valve	VERIFY the operation of the float valve by exercising the valve.	
2.3	Level indicator	VERIFY all water level indicators (mechanical and electronic) are operating properly by exercising the indicator or mechanism.	

5.4.3 Yearly service schedule

Routine service of water storage tanks for fire protection systems on a yearly basis shall be carried out in accordance with Table 5.4.3.

TABLE 5.4.3 YEARLY SERVICE SCHEDULE
WATER STORAGE TANKS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
ALL TANKS			
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities, as listed in Tables 5.4.1 and 5.4.2.	
3.2	Leakage	CHECK for water leakage from all joints, flanges and fittings.	
3.3	Loose components	CHECK for loose bolts, anchors and fittings throughout the tank.	Any activity deemed included
3.4	Damage	CHECK for any physical damage caused by impact, including scratches and dents.	
3.5	Foundation	CHECK for earth subsidence and foundation cracks.	
3.6	Corrosion	CHECK for corrosion of all external components and surfaces, and internal components as far as is safe to do so from the top inspection/access hatch.	
3.7	Access hatch	CHECK to ensure the access hatch is secure and in satisfactory condition.	
3.8	Ladder	CHECK the ladder system is secure and free from corrosion.	
3.9	Roof	CHECK the roof structure for: (a) Stability and security roof sheets are secured.	

		(b) Adequacy of sealing of penetrations.	
3.10	Vermin	CHECK the condition of vermin proofing and adequacy of the positioning.	
3.11	Foreign objects	CHECK for internal foreign objects visually through the top inspection/access hatch.	
3.12	Algae	CHECK for internal accumulation of algae.	
3.13	Vents	CHECK the condition and satisfactory operation of vents and rotary spinners.	
3.14	Accessibility	CHECK for adequate means to access the tank.	
3.15	Signs	CHECK for satisfactory condition of all signs.	
3.16	Gaskets and seals	CHECK the condition of all gaskets and sealants.	
3.17	Vortex inhibitor	CHECK the condition of the vortex inhibitor visually from the access hatch if practicable.	
3.18	Level indicator	LUBRICATE water level indicator, pulleys and cables.	Any activity deemed included
3.19	Fire authority hard suction fittings	CHECK fittings are compatible with the local fire authority's hard suction fittings.	
3.20	Drain, clean and refill Only required after the first year of service and then every 10 years	DRAIN and CLEAN the tank completely including: (a) Removing all sludge and debris.	
		(b) Cleaning all internal surfaces, excluding the roof, with low pressure water spray.	
		(c) Refilling the tank as soon as practicable.	
		NOTES: 1 A diver or other underwater inspection and cleaning technique may be used in lieu of draining the tank in consultation with the tank manufacturer to satisfy warranty requirements. 2 For water conservation measures when tanks need to be drained, see AS 2304.	
TANKS WITH LINERS—(A) ABOVE THE WATERLINE			
3.21	Eyelets and other liner fixing systems	CHECK eyelets, attachment connectors and other mechanical fixings for wear, detachment or corrosion.	
3.22	Discolouration	CHECK to determine the extent of any discolouration to the tank liner and, if significant, contact the liner manufacturer.	
3.23	Shrinkage	CHECK for signs of shrinkage and increased liner tension.	
3.24	Liner brittleness	CHECK for signs of liner brittleness.	
3.25	Cuts and tears	CHECK for signs of cuts and tear.	
3.26	Surface deterioration	CHECK for signs of surface deterioration or chalking.	
TANKS WITH LINERS—(B) BELOW THE WATERLINE			
3.27	Flexibility	CHECK for signs of loss of flexibility.	
3.28	Discolouration	CHECK to determine the extent of any discolouration to the tank liner.	
3.29	Elongation	CHECK for signs of elongation of the liner.	
3.30	Bulging	CHECK for signs of the liner bulging out from under the base girder (external).	
3.31	Leaks, cuts and tears	CHECK for signs of leaks, cuts and tears of the liner.	
3.32	Drain, clean and refill Only required after the first year of service and then every 10 years	DRAIN and CLEAN the tank leaving a minimum of 50 mm of water to prevent liner movement, and— (a) remove all sludge and debris without using sharp tools or shovels to prevent tearing and puncturing of the liner;	
		(b) clean all internal surfaces, excluding the roof, with low pressure water spray using appropriate footwear to avoid damage to the tank liner; and	
		(c) refill the tank as soon as practicable.	
		NOTES: 1 For water conservation measures when tanks need to be drained, see AS 2304. 2 Ensure the liner is in the correct position prior to refilling; this includes the positioning of the neoprene mat (where fitted) under the vortex inhibitor bottom support and strainer. 3 A diver or other underwater inspection and cleaning technique may be used in lieu of draining the tank in consultation with the tank manufacturer to satisfy warranty requirements.	
3.33	Sludge depth	Complete a sludge depth measurement to determine the next period for draining and cleaning the tank.	
3.34	Tank base	Undertake a study of the tank base and liner for weak spots due to undermining, noting that founding material needs to be felt solid at all areas. Minor hollow areas are to be underpinned and major hollowing requires a geotechnical investigation and reassessment of the sealing system.	
RECTANGULAR PANEL TANKS			
3.35	Stay support systems	Complete a visual inspection of the internal stay support system comprising stay bars, bolts and brackets for the following:	
		(a) Corrosion at connection points.	
		(b) Tightness of bolts.	

		(c) Elongation of bolt holes.	
		(d) Distortion of panels and connection points.	
PRESSURE TANKS			
3.36	Pressure tanks	(a) INSPECT externally for structural integrity, freedom from corrosion, and acceptable condition in accordance with AS/NZS 3788.	
		(b) VERIFY low water level alarm switch operates at predetermined level	

5.4.4 Ten-yearly service schedule

Routine service of pressure tanks on a ten-yearly basis and a six-yearly pressure vessel inspection (internal) shall be carried out in accordance with Table 5.4.4.

TABLE 5.4.4
TEN-YEARLY AND OTHER SERVICE SCHEDULE WATER STORAGE TANKS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
ALL TANKS			
4.1	Monthly, six- monthly, yearly service	VERIFY completion of all monthly, six-monthly and yearly activities as listed in Tables 5.4.1, 5.4.2 and 5.4.3.	
4.2	Drain, clean and refill	DRAIN and CLEAN the tank completely including—	
		(a) REMOVE all sludge and debris.	
		(b) CLEAN all internal surfaces, excluding the roof, with low pressure water spray.	
		(c) REFILL the tank as soon as practicable.	
		NOTES: 1 A diver or other underwater inspection and cleaning technique may be used in lieu of draining the tank. 2 For water conservation measures when tanks need to be drained see AS 2304.	
TANKS WITH LINERS			
4.3	Drain clean and refill	DRAIN and CLEAN the tank leaving a minimum of 50 mm of water to prevent liner movement, and:	
		(a) REMOVE all sludge and debris without using sharp tools or shovels to prevent tearing and puncturing of the liner.	
		(b) CLEAN all internal surfaces, excluding the roof, with low pressure spray using appropriate footwear to avoid damage to the tank liner.	
		(c) REFILL the tank as soon as practicable.	
		NOTES: 1 For water conservation measures when tanks need to be drained, see AS 2304. 2 Ensure the liner is in the correct position prior to refilling; this includes the positioning of the neoprene mat (where fitted) under the vortex inhibitor bottom support and strainer. 3 A diver or other underwater inspection technique may be used in lieu of draining the tank in consultation with the tank manufacturer (to satisfy warranty requirements).	
PRESSURE TANKS			
4.4	Water supply tanks—Pressure	Conduct a six-yearly inspection by a qualified pressure vessel inspector.	

SECTION 6 FIRE DETECTION AND ALARM SYSTEMS

TABLE 6.4.1.2
MONTHLY ROUTINE SERVICE SCHEDULE
FIRE DETECTION AND ALARM SYSTEM, SPECIAL HAZARD SYSTEMS AND SMOKE HAZARD MANAGEMENT SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	External alarm	INSPECT the external alarm (bell or strobe light) to ensure it clearly indicates the designated building entry point. Inspect to ensure the external alarm label is legible with the word 'FIRE' in characters not less than 25 mm in height.	

1.2	Control and indicating equipment (CIE)	INSPECT the following as applicable: Fire indicator panel (FIP), sub-indicator panel (SIP), repeater panel, fire brigade panel (FBP), mimic panel, fire fan control panel (FFCP) and— (a) ensure that they are clearly visible, readily accessible and free from dust and contaminants; and (b) where a panel is obscured by a door, check that the door is correctly labelled. Where manual call points use replaceable frangible elements, ENSURE that at least one replacement element and tool are available for replacing the element where required.	Any activity deemed included
1.3	Battery enclosure	Where vented batteries are used, INSPECT the battery enclosure for evidence of corrosion.	
1.4	Fire alarm	SIMULATE an alarm condition and confirm that all required common or general visual and audible indications operate and the external alarm is activated. Where the system is monitored ensure the alarm has activated the alarm signalling equipment. Where CIE is a sub- indicator panel, confirm that the alarm condition is indicated at the FIP.	
1.5	Occupant warning system	SIMULATE an alarm and confirm the alarm initiates the occupant warning system including any visual warning devices (VWD).	
1.6	Isolate/Disable	INITIATE an isolate/disable condition at the fire indicator panel and confirm that all required common or general visual and audible indications operate. Where the system is monitored, ensure the isolate is received by the monitoring service provider alarm signalling equipment. Where the panel is an SIP, confirm that the isolate/disable condition is indicated at the FIP as either a fault or isolate/disable.	
1.7	Filament visual indicators	TEST the operation of each filament type visual indicators.	
1.8	Zone block plan	INSPECT zone block plans to ensure that they are securely mounted and legible and supplementary zone drawings, where required, are available and legible.	
1.9	**'Text deleted'**		

6.4.1.4 *Yearly service*

Routine service and survey for fire detection and alarm systems, special hazard systems and smoke hazard management on a yearly basis shall be carried out in accordance with Table 6.4.1.4.

TABLE 6.4.1.4
YEARLY ROUTINE SERVICE SCHEDULE
FIRE DETECTION AND ALARM SYSTEM, SPECIAL HAZARD SYSTEMS AND SMOKE HAZARD SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and six- monthly service	COMPLETE all monthly and six-monthly service activities, as listed in Table 6.4.1.2 and 6.4.1.3.	
3.2	Manual call points	CHECK all manual call points are free of conditions likely to adversely affect their function.	
3.3	Manual call points	TEST the operation of each manual call point.	
3.4	Other warning devices	Where other warning devices are used as the alarm-indicating devices, INSPECT all devices to ensure that they are in place.	
3.5	Panel switches and keypads	TEST the operation of each control.	
3.6	Visual indicators	TEST the operation of each visual indicator and alphanumeric displays.	
3.7	Battery	MEASURE system quiescent and maximum alarm currents in accordance with Appendix F. Calculate the required battery capacity and CHECK the nominal capacity of the installed batteries is not less than the calculated capacity. **'Text deleted'**	
3.8	Fire Detectors	TEST detectors as specified in Appendix G and confirm correct alarm zone indication. Where the detectors are used as part of special hazards systems 100% of the detectors shall be functionally tested yearly.	
3.9	Audibility	TEST the occupant warning system and check the signals are distinctly audible in all areas of the building. NOTE: In order to reduce the disturbance to occupants an acceptable means of conducting this test is to provide an audio signal other than the warning signal at a reduced sound pressure level. Where the FIP is connected to a sound systems and intercom systems for emergency purposes (AS 1670.4) or EWIS (AS 2220.2) test in accordance with Table 6.4.3.2.	
3.10	Occupant warning system sound pressure level	MEASURE and record the sound pressure level from at least one reference point for each amplifier used and ensure at each reference point the measured value is consistent with the required sound pressure level at each reference point.	
3.11	Alarm acknowledgement facility	TEST not less than 20% of installed alarm acknowledgement facilities in such a manner that over a 5-year period, all facilities are tested. CHECK the alarm acknowledgement facility functions as required.	

3.12	Alarm investigation facility	TEST the alarm investigation facility if enabled and check it functions as required.	
3.13	Batteries condition	When the battery has not been replaced in the previous two years, verify the battery condition by carrying out a battery discharge test in accordance with Appendix F.	
3.14	Smoke alarms and heat alarms	Refer to Clause 6.4.2.	
3.15	Service life	Inspect detectors, equipment or other items having a defined service life and report where the service life is exceeded or will be exceeded before the next scheduled service.	
3.16	**'Text deleted'**		
3.17	Protected areas survey	SURVEY all areas of the building from floor level and check— (a) that the fire detection and alarm system has not been altered, damaged or compromised; (b) detection device and remote indicators are appropriate for the current use; (c) for any condition that may cause a nuisance alarm or the unintentional operation of a suppression system; (d) all exposed cabling, conduits, junction boxes and the like for any condition that may impact on the performance of the system and are labelled correctly; and (e) all CIE to ensure all components are appropriately mounted and secure.	Any activity deemed included
3.18	Interfaced system initiation	Simulate alarm(s) to verify that each interface transmission path initiates the corresponding interfaced system(s) as required.	
SMOKE HAZARD MANAGEMENT SYSTEMS—ADDITIONAL ACTIVITIES			
CAUTION: TAKE PRECAUTIONS TO PREVENT UNACCEPTABLE VENTILATION SYSTEM CHANGES			
3.19	FFCP latching and reset	CHECK that after initiation by a signal from the FIP, the FFCP remains operating in the fire mode until reset by the reset switch on the FFCP.	
3.20	Manual override controls	CHECK that manual override ON-AUTO-OFF control operates. NOTE: Manual override should function in normal mode and fire mode.	
3.21	Airflow fault indicator	CHECK the operation of the airflow fault indicator	
3.22	Open-circuit fault indicator	CHECK the operation of the air-handling equipment interconnecting cable open-circuit fault indicator.	
3.23	Closed-circuit fault indicator	CHECK the operation of the air-handling equipment interconnecting cable closed-circuit fault indicator.	
3.24	Electrical	CHECK the operation of the electricity phase- fail fault indicator.	
3.25	Fan-running indicator	CHECK the operation of the fan-running indicator.	
3.26	Fan-stopped indicator	CHECK the operation of the fan-stopped indicator.	
3.27	Fan fault indicator	CHECK the operation of the fan-fault indicator.	

6.4.1.5 *Five yearly service*

Routine service of fire detection and alarm systems, special hazard systems and smoke hazard management on a five-yearly basis shall be carried out in accordance with Table 6.4.1.5.

TABLE 6.4.1.5
FIVE-YEARLY ROUTINE SERVICE SCHEDULE FIRE DETECTION AND ALARM SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Monthly, six- monthly and yearly service	Complete all monthly, six-monthly and yearly service activities, as listed in Tables 6.4.1.2, 6.4.1.3 and 6.4.1.4.	
4.2	Supervised circuits	TEST each input and output supervised circuit for any condition that prevents the transmission of the required signal and ensure a fault is registered at the FIP.	
4.3	Fault	SIMULATE a circuit fault condition at the FIP and confirm that all required common or general visual and audible indications operate. Where such faults are monitored, ensure the fault has activated the alarm signalling equipment. Where the panel is an SIP confirm that the fault condition is indicated at the FIP.	
4.4	Addressable short circuit isolators	Apply short circuits as required to verify that the short circuit isolation functions as required.	
4.5	Power supply supervision	Where the system is monitored, REDUCE the CIE operating voltage to trigger a power supply supervision fault and CONFIRM that it is received by the monitoring service provider. Where the panel is an SIP or a distributed power supply, confirm that the power supply supervision fault condition is indicated at least as a fault at the FIP.	
4.6	Collective detection circuits	For each collective fire detection circuit, REMOVE the last detector or device on the circuit and confirm that a fault signal is registered at the CIE.	

4.7	Interface and control test	CONDUCT a functional test with each system's interface and VERIFY that each interfaced system responds to the signal as required (see Appendix A).	
4.8	Occupant warning system speaker circuits	MEASURE and record the impedance of each loud speaker circuit and check that it has not changed by more than 15% from the last test nor exceeded the rated output as required for the amplifier.	
4.9	Monitoring connection	Where the system is monitored, TEST that the loss of each of the monitoring links is indicated at the monitored site.	
4.10	Alarm verification facility	TEST one detector of each type per circuit with alarm verification facility enabled to check that it functions as required.	

6.4.2.2 *Six-monthly service*

Inspection, test, routine service and survey for smoke alarms and heat alarms on a six-monthly basis shall be carried out in accordance with Table 6.4.2.2.

TABLE 6.4.2.2
SIX-MONTHLY SERVICE SCHEDULE SMOKE ALARMS AND HEAT ALARMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Smoke alarms and heat alarms	INSPECT all alarms for any condition that is likely to adversely affect their operation, such as excessive deposition of dust or coating of paint.	
1.2	Battery missing indication	INSPECT all alarms to ensure that any required 'battery missing indicator' has not operated.	
1.3	Mains power on indicator	INSPECT that the mains power on indicator is illuminated.	
1.4	Alarm test	ACTIVATE the alarm test function and check correct activation of the audible indication.	
1.5	Other warning devices	Where other sensory warning devices are used as alarm-indicating devices, INSPECT all devices to ensure that they are in place.	

NOTE: Items 1.1 to 1.5 may be carried out by the occupant or owner and not be recorded.

6.4.2.3 *Yearly service*

Inspection, test, routine service and survey for smoke alarms and heat alarms on a yearly basis shall be carried out in accordance with Table 6.4.2.3.

TABLE 6.4.2.3
YEARLY SERVICE SCHEDULE SMOKE ALARMS AND HEAT ALARMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Six-monthly service	COMPLETE all six-monthly service activities, as listed in Table 6.4.2.2.	
2.2	Interconnecting alarms	Where alarms are interconnected, TEST that the activation of each alarm operates the audible alarm indication in other alarms.	
2.3	Smoke alarms	TEST 100% of smoke alarms in accordance with the manufacturer's instructions.	
2.4	Heat alarms	TEST 100% of heat alarms in accordance with the manufacturer's instructions.	
2.5	Other warning devices	Where other sensory warning devices are used as alarm-indicating devices, TEST all devices to ensure that they are functioning correctly.	
2.6	Smoke alarms and heat alarms	CLEAN each alarm in accordance with the manufacturer's instructions.	Any activity deemed included
2.7	Batteries	CHECK the manufacturer's requirements for battery replacement and replace the battery if required.	Any activity deemed included
2.8	Service life	REPLACE smoke alarms and heat alarms where the service life date is exceeded.	
2.9	Survey—Spacing and location	INSPECT each alarm to ensure spacing and location requirements are as required.	

6.4.3 Emergency warning systems

6.4.3.1 *Monthly service*

Inspection, test, routine service and survey for emergency warning systems on a monthly basis shall be carried out in accordance with Table 6.4.3.1.

TABLE 6.4.3.1
MONTHLY SERVICE SCHEDULE EMERGENCY WARNING SYSTEM

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	**'Text deleted'**		
1.2	Zone Block plan	INSPECT zone block plans to ensure that they are securely mounted and legible and supplementary zone drawings, if provided, are available and legible.	
1.3	Control and indicating equipment	INSPECT the warning system panel, and— (a) ensure that it is clearly visible, readily accessible and free from dust and contaminants; (b) where a panel is obscured by a door, CHECK that the door is correctly labelled; and (c) where manual call points use replaceable frangible elements, ENSURE that at least one replacement element and a tool is available for replacing the element where required.	Any activity deemed included
1.4	Battery enclosure	Where vented batteries are used, INSPECT the battery enclosure for evidence of corrosion.	
1.5	Emergency warning system test	SIMULATE an alarm condition and confirm that the required warning signal(s) operate. NOTE: It is recommended that the warden intercom system is used by the floor wardens to confirm the operation of the warning signals.	

6.4.3.2 *Yearly service*

Inspection, test, routine service and survey for emergency warning systems on a yearly basis shall be carried out in accordance with Table 6.4.3.2.

TABLE 6.4.3.2
YEARLY SERVICE SCHEDULE EMERGENCY WARNING SYSTEM

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Monthly service	COMPLETE all monthly service activities, as listed in Table 6.4.3.1.	
2.2	Emergency call points	INSPECT all emergency call points for any condition that is likely to adversely affect their operation.	
2.3	Emergency call points	TEST the operation of each emergency call point.	
2.4	Visual warning devices (VWDs)	Where visual warning devices (VWDs) are used as the alarm-indicating devices, INSPECT all devices for any condition or damage that is likely to adversely affect their operation and ensure that they are clearly and correctly labelled where labelling is required.	
2.5	Visual warning devices (VWDs)	TEST the operation of each visual warning device.	
2.6	Other warning devices	Where other warning devices are used as alarm- indicating devices, INSPECT all devices to ensure that they are in place and ensure that they are clearly and correctly labelled where labelling is required.	
2.7	Other warning devices	TEST for correct operation.	
2.8	As-installed drawings	INSPECT the as-installed drawings to ensure the plan is legible and current.	
2.9	Warning system initiation	SIMULATE an alarm condition via the fire system with the warning system in automatic mode.	
2.10	Fault	SIMULATE a speaker circuit fault, emergency call point circuit fault and visual warning device circuit fault for each circuit and confirm the fault condition is indicated at the emergency warning panel (EWP), FIP and any corresponding SIP.	
2.11	Aural indicators	TEST or confirm the operation of the aural indicators as required.	
2.12	Panel switches and keypads	TEST the operation of each control.	
2.13	Fault	SIMULATE a fault between the fire system and the warning system and confirm the fault condition is indicated at the EWP and the FIP.	
2.14	Visual indicators	TEST the operation of each visual indicator and alphanumeric displays.	
2.15	Nominal battery capacity	MEASURE system quiescent and alarm currents. Calculate the required battery capacity and CHECK the installed battery's nominal capacity is no less than the required capacity. See Appendix F for calculating the required battery capacity.	
2.16	Ancillary controls	TEST the operation of ancillary control functions and ensure that each controlled device can be correctly initiated.	

2.17	Audibility test	TEST the Emergency warning system and check the signals are distinctly audible in all areas of the building. NOTE: In order to reduce the disturbance to occupants an acceptable means of conducting this test is to provide an audio signal other than the warning signal at a reduced sound pressure level.	
2.18	Override test	CONFIRM that the alarm signal overrides non- emergency audible signals.	
2.19	Interface and control test	CONDUCT a functional system test with other interfaced fire systems (see Appendix A) and CHECK the interface functions as required.	
2.20	Batteries	When the battery has not been replaced in the previous two years, verify the battery condition by carrying out a battery discharge test in accordance with Appendix F.	
2.21	Survey—Change of structure	INSPECT all areas of the building to ensure that no structural changes are likely to affect evacuation zones.	
2.22	Survey—Change of occupancy or use	INSPECT all areas of the building to ensure that changes to the occupancy are not likely to affect the required performance of the system.	

6.4.3.3 *Five yearly service*

Inspection, test, routine service and survey for emergency warning systems on a five yearly basis shall be carried out in accordance with Table 6.4.3.3.

TABLE 6.4.3.3
FIVE YEARLY SERVICE SCHEDULE EMERGENCY WARNING SYSTEM

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Monthly and yearly Service	Complete all monthly and yearly service activities, as listed in Tables 6.4.3.1 and 6.4.3.2.	
3.2	Speech intelligibility	UNDERTAKE tests to ensure intelligibility in all areas of the building where required.	
3.3	Sound pressure level	MEASURE and record the sound pressure level from at least one reference point for each amplifier used and ensure at each recorded point the measured value is consistent with the reference sound pressure level.	
3.4	Emergency warning system speaker circuits	MEASURE and record the impedance of each loud speaker circuit and check that it has not changed by more than 15% from the last test nor exceeded the rated output as required for the amplifier.	

6.4.4 Emergency intercom systems

6.4.4.1 *Yearly service*

Inspection, test, routine service and survey for emergency intercom systems on a yearly basis shall be carried out in accordance with Table 6.4.4.1.

TABLE 6.4.4.1
YEARLY SERVICE SCHEDULE EMERGENCY INTERCOM SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	**'Text deleted'**		
1.2	Emergency intercom equipment	INSPECT the intercom panel to ensure that it is clearly visible, readily accessible and free from dust and contaminants. Where the panel is obscured by a door, check that the door is correctly labelled.	
1.3	Visual indicators	TEST the operation of visual indicators and alphanumeric displays.	
1.4	Aural indicators	TEST the operation of the aural indicators.	
1.5	Panel switches and keypads	TEST the operation of each required control (e.g. secondary emergency control panels).	
1.6	Fault	SIMULATE a WIP circuit fault condition and confirm the fault condition is indicated at the intercom panel.	
1.7	Reset	TEST the operation of the reset function.	
1.8	Warden indicator and controls	CHECK the operation of each warden indicator and controls.	
1.9	Warden intercom points (WIPs)	INSPECT all WIPs to ensure they are clearly visible and readily accessible. Where the WIP is obscured by a door, check that the door is correctly labelled.	
1.10	WIP	INSPECT all WIPs to ensure there is no mechanical damage.	
1.11	Stand-alone intercom system (battery enclosure)	Where vented batteries are used, INSPECT the battery enclosure for evidence of corrosion.	

1.12	Outgoing WIPs function test	INITIATE a call from each WIP and confirm that each WIP is indicating correctly and that clear communication is possible with the intercom panel operator.	
1.13	Incoming WIPs function test	INITIATE a call to each WIP and phone and confirm that each WIP is indicating correctly and that clear communication is possible with the intercom panel operator.	
1.14	WIPs all call address	Select the all-call address function and CHECK that the visual indicator for all WIP phones activate. CHECK that the address is heard at all WIP phones. NOTE: This test may be carried out in conjunction with a practice evacuation or ECO training.	
1.15	Stand-alone intercom system Battery capacity	MEASURE system quiescent and alarm currents. Calculate the required battery capacity and CHECK the installed battery's nominal capacity is no less than the required capacity. See Appendix F for calculating the required battery capacity.	
1.16	System interface	CONDUCT a functional test with any interfaced systems (see Appendix A).	
1.17	Stand-alone intercom system (battery condition)	When the battery has not been replaced in the previous two years, verify the battery condition by carrying out a battery discharge test in accordance with Appendix F.	
1.18	Survey—Change of structure	INSPECT building to ensure that no structural changes have occurred to change zones.	
1.19	Survey—Change of occupancy or use	INSPECT the building to ensure that no changes to occupancy have affected the required audibility of the warden call signal at the WIP.	
1.20	WIP locations	INSPECT all evacuation zones to ensure at least one WIP is installed where required.	

SECTION 9 FIRE HOSE REELS

9.4.1 Fire hose reels—Six-monthly service

Six-monthly routine service of fire hose reels shall be completed in accordance with Table 9.4.1.

TABLE 9.4.1
SIX-MONTHLY SERVICE SCHEDULE FIRE HOSE REELS

Item No	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Accessibility	CHECK that the hose reel is readily accessible with no obstacles restricting its access. Where a hose reel is installed in a recess or cabinet, CHECK that the clearances around the hose reel comply with the requirements of AS 2441.	
1.2	Signage	Where a location sign is required by AS 2441, CHECK that it is correctly located and visible.	Any activity deemed included
1.3	Operating instructions	CHECK that the operating instructions are legible.	
1.4	Damage	CHECK for any damage or corrosion of components that could adversely affect the operation of the hose reel.	
1.5	Cabinet	CHECK that any hose reel cabinet is accessible, clear of extraneous materials, clearly and correctly marked and in good repair.	
1.6	Nozzle interlock	CHECK that the nozzle is retained in the nozzle interlock.	Any activity deemed included
1.7*	Swing arm	Where fitted, TEST the swing arm to ensure it operates correctly and allows the hose to be run off in its intended direction.	
1.8*	Unwind	With the nozzle closed and stop valve open, TEST that the hose reel can be unwound freely in its intended direction by unwinding at least 5 m of hose.	
1.9*	Leakage	With the nozzle closed, pressurize the reel by opening the stop valve. DETERMINE if there are any leaks from the reel's waterway, including glands, nozzle, stop valve, hose or any fittings. NOTE: In order to check that there is no leakage of water from any part of the reel waterway, it is recommended that the hose be completely unwound off the reel, so that all parts of the waterway can be examined.	
1.10*	Flow	TEST water to ensure it is able to flow through the reel by opening and closing the nozzle.	
1.11	Service tag or label	CHECK that the service tag or label is firmly attached to the hose reel.	Any activity deemed included

*After completing these actions, the nozzle shall be re-installed in the nozzle interlock and the hose depressurized (see Clause 9.2.6).

9.4.2 Yearly service

Yearly routine service of fire hose reels shall be completed in accordance with Table 9.4.2.

TABLE 9.4.2
YEARLY SERVICE SCHEDULE FIRE HOSE REELS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Six monthly service	COMPLETE all six-monthly service activities, as listed in Table 9.4.1.	
2.2	Anchor points	CHECK that the hose reel is securely mounted and that the anchor points are tight.	Any activity deemed included
2.3	Hose guide	CHECK that any hose guide fixed to the hose reel supply pipe is not able to move upwards and cause the hose to jamb.	
2.4	Hose fittings	CHECK that all hose fittings and connections are tight.	Any activity deemed included
2.5	Bearings	CHECK that the hose reel bearings are not damaged or excessively worn.	
2.6	Flow rate	With the stop valve and nozzle fully opened, MEASURE the water flow rate from the most disadvantaged hose reel. Minimum acceptable flow rates: (a) 0.33 L/s for reels with 19 mm hose. (b) 0.41 L/s for reels with 25 mm hose.	
2.7	Hose	CHECK hose for kinking, excessive damage or wear, or collapse.	
2.8	Ancillary equipment	CHECK that any foam branch pipe or other equipment is in good repair and maintained in accordance with the manufacturer's instructions.	
2.9	Fire hazard	CHECK that the hose reel is appropriate protection for the fire hazard/risk.	
2.10	Obstructions	CHECK that no alterations have been made to the building, which impede access to the hose reel or restrict the running out of the hose, and that the hose can reach the fire hazard/risk in accordance with AS 2441.	

SECTION 10 PORTABLE AND WHEELED FIRE EXTINGUISHERS

10.4.1 Fire extinguishers—Six-monthly service

TABLE 10.4.1
SIX-MONTHLY SERVICE SCHEDULE FIRE EXTINGUISHERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Accessibility	CHECK the extinguisher is conspicuous, readily accessible and in its assigned location. *All extinguisher types*	
1.2	Anti-tamper device	CHECK that the anti-tamper device is intact. *All extinguisher types*	
1.3	Exterior and operating instructions	CHECK that the extinguisher is clean and the operating instructions are legible. *All extinguishers types*	
1.4	Service tag or label	CHECK that the service tag or label is firmly attached to the extinguisher. *All extinguisher types*	Any activity deemed included
1.5	External damage	CHECK that the extinguisher, including any attachments, is not damaged (see AS 2337.1). *All extinguisher types*	
1.6	External corrosion	CHECK that the exterior of the extinguisher is not pitted or otherwise damaged by corrosion (see Clause 10.2.5 and AS 2337.1). *All extinguisher types*	

1.7	Outlet hose assembly	CHECK that the hose is securely fitted, the nozzle is securely attached, the assembly is free from obstruction, and the hose shows no cracking or other signs of damage or deterioration. *All extinguisher types*	
1.8	Pressure indicator	Where fitted, CHECK that the pressure indicator is legible, and registering within the operable range. *All extinguisher types*	
1.9	Contents	WEIGH the extinguisher to determine that it is fully charged. *All extinguisher types*	
1.10	Signage	CHECK that the location sign is visible. *All extinguisher types*	
1.11	Support bracket	CHECK that the appropriate support bracket is securely attached to wall or other suitable feature. *All extinguisher types*	
1.12	Discharge nozzle	CHECK that the appropriate discharge nozzle is fitted and is not blocked or damaged. *All extinguisher types*	
1.13	Discharge nozzle and control valve	CHECK that the discharge nozzle is not blocked and that the control valve is functional. *All wheeled extinguishers*	
1.15	Powder— Portable extinguishers	INVERT the extinguisher and ensure that the powder remains free flowing. *Powder (stored pressure), powder (gas container)*	
1.16	Compressed gas container	DETERMINE that the compressed gas container is the correct size and type, in good condition, fully charged, and subjected to service as per AS 2030.5. *All gas container extinguishers*	
1.17	Actuating device	DETERMINE, where possible and without discharging any contents, that the actuating device is free of corrosion, moves freely and is undamaged. *Water (stored pressure), wet chemical, foam (stored pressure), powder (stored pressure), carbon dioxide, vaporizing liquid*	
1.18	Internal components	DETERMINE that the internal discharge tube and strainer (where fitted) provide clear passage and are securely attached. *Water (gas container), foam (gas container)*	

10.4.2 Yearly service

Yearly routine service of portable and wheeled fire extinguishers shall be completed in accordance with Table 10.4.2.

TABLE 10.4.2

YEARLY SERVICE SCHEDULE FIRE EXTINGUISHERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Six-monthly service	COMPLETE all six-monthly service activities, as listed in Table 10.4.1.	
2.2	Operating head or cap	CHECK that the threads on operating head or cap are not damaged, vent(s) is (are) not blocked, and any strainer or expansion device is unobstructed. For heads with no screw thread, determine that security locking device is undamaged and operational. *Water (gas container), foam (gas container), water with additive (stored pressure), foam (stored pressure), powder (gas container)*	
2.3	Discharge	CHECK that the extinguisher functions in accordance with the operating instructions and that the discharge is satisfactory. Recharge in accordance with Item 2.8. (a) *Water with additive (stored pressure), foam (stored pressure)* (b) *Water with corrosion inhibitors or freezing point depressants (stored pressure)** * To be discharged on a three-yearly frequency.	Any activity deemed included
2.4	Actuating device	CHECK that the actuating device is free of corrosion, moves freely, and is undamaged; any cutting edge is sharp; and all sealing gaskets are in good condition. *Water (gas container), foam (gas container), foam (stored pressure) powder (gas container)*	
2.5	Internal components	(a) CHECK that the internal discharge tube, strainer and anti-overfill tube (where fitted) provide clear passage and are securely attached, and that the anti-overfill device is undamaged. *Water with additive (stored pressure), foam (stored pressure)*	
		(b) CHECK that the internal discharge tube, or the gas inlet tube or ports, provide clear passage and are correctly installed, and that the powder is free flowing. *Powder (gas container)*	

2.6	Internal condition— Portable extinguishers	CHECK that the interior of cylinder is clean, is not pitted by corrosion (see AS 2337.1), and any internal lining is in good condition. *Water (gas container), water with additive (stored pressure), foam (gas container), foam (stored pressure), powder (gas container)*	
2.8	Extinguishing agent replacement	RECHARGE the extinguisher with fresh extinguishing agent in accordance with the manufacturer's instructions. *Water with additive (stored pressure), foam (gas container), foam (stored pressure)*	
		Upon the completion of recharging stored pressure type extinguishers, perform a leak test as per Item 2.10.	Any activity deemed included
2.9	Seals	CHECK that the operating head or cap seal is in good condition. *Water (gas container), water with additive (stored pressure), foam (gas container), foam (stored pressure), powder (gas container)*	
2.10	Leak detection	CHECK if there are any leaks at the joints and seals that were renewed or disturbed during recharging. *Water with additive (stored pressure), foam (stored pressure)*	
2.11	Fire hazard	CHECK that the fire hazard/risk to be protected has not changed. *All extinguisher types*	
2.12	Suitability	CHECK that the extinguisher is the correct type, class, size and/or rating for the hazard to be protected. *All extinguisher types*	
2.13	Obstructions	(a) CHECK that no alterations have been made to the building that may impede access to the extinguisher or increase the travel distances to more than those required. *All portable extinguishers*	

10.4.3 Five-yearly service

Five-yearly routine service of portable and wheeled fire extinguishers shall be completed in accordance with Table 10.4.3.

TABLE 10.4.3
FIVE-YEARLY SERVICE SCHEDULE FIRE EXTINGUISHERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Six-monthly and yearly service	COMPLETE all six-monthly and yearly service activities, as listed in Table 10.4.1 and 10.4.2.	
3.2	Discharge	CHECK that the extinguisher functions in accordance with the operating instructions and that the discharge is satisfactory. Recharge in accordance with Item 3.9. *Water (gas container), water (stored pressure), wet chemical, foam (gas container), powder (gas container), powder (stored pressure), carbon dioxide, vaporizing liquid*	
3.3	Actuating device	CHECK that the actuating device is free of corrosion, moves freely, and is undamaged; any cutting edge is sharp; and all sealing gaskets are in good condition. *Water (stored pressure), wet chemical, powder (stored pressure), carbon dioxide, vaporizing liquid*	
3.4	Internal components	(a) CHECK that the internal discharge tube, strainer and anti-overfill tube (where fitted) provide clear passage and are securely attached, and that the anti overfill device is undamaged. *Water (stored pressure), wet chemical*	
		(b) CHECK that the internal discharge tube provides clear passage, is securely attached, and there is no evidence of moisture or foreign matter in the cylinder. *Powder (stored pressure), carbon dioxide, vaporizing liquid*	
3.5	Internal condition— Portable extinguishers	CHECK that the interior of the cylinder is clean, is not pitted by corrosion (see AS 2337.1), and any internal lining is in good condition. Where the lining cannot be removed to inspect the interior of the cylinder, the cylinder shall be accepted or rejected as per AS 2337.1. *Water (stored pressure), wet chemical, powder (stored pressure), vaporizing liquid.*	
		For carbon dioxide extinguishers, this examination shall be in accordance with AS 2030.5, and shall be performed at a gas cylinder test station certified by a registered certifying body (see AS 2337.1).	
3.7	Seals	CHECK that the operating head or cap seal is in good condition. *Water (stored pressure), wet chemical, powder (stored pressure), carbon dioxide, vaporizing liquid*	

3.8	Pressure test: Portable extinguishers	(a) SUBJECT the extinguisher body to a hydrostatic pressure test of 1.5 times the working pressure, the marked periodic test pressure, or 2 MPa, whichever is the greatest. *Water (gas container), water (stored pressure), wet chemical, foam (gas container), foam (stored pressure), powder (gas container), powder (stored pressure), vaporizing liquid*	
		(b) SUBJECT the extinguisher body to a hydrostatic pressure test, in accordance with the requirements of AS 2030.5, at a Gas Cylinder Test Station certified by a Registered Certifying body (see AS 2337.1). *Carbon dioxide*	
3.9	Pressure test: Wheeled extinguishers	SUBJECT the extinguisher body to a hydrostatic pressure test, in accordance with the requirements of AS 2030.5, at a Gas Cylinder Test Station certified by a Registered Certifying Body (see AS 2337.1). *All wheeled extinguishers*	
3.10	Extinguishing agent replacement	At the frequency specified by the extinguishing manufacturer, RECHARGE the extinguisher with fresh extinguishing agent, as specified on the extinguisher label, in accordance with the manufacturer's instructions. *Wet chemical, foam (gas container with sealed foam liquid container), powder (gas container), powder (stored pressure), carbon dioxide, vaporizing liquid*	
		Upon the completion of recharging stored pressure type extinguishers, perform a leak test as per Item 3.12.	
3.11	Seals and gaskets	RENEW all seals and gaskets fitted to the actuating device, operating head, or cap. *All extinguisher types*	
3.12	Leak detection	CHECK if there are any leaks at the joints and seals that were renewed or disturbed during recharging. *Water (stored pressure), wet chemical, foam (stored pressure), powder (stored pressure), carbon dioxide, vaporizing liquid*	
3.13	Hose Assembly	(a) SUBJECT the hose assembly to a hydrostatic pressure test of 10 MPa. *All CO_2 type wheeled extinguishers*	
		(b) SUBJECT the hose assembly to a hydrostatic pressure test of 1.5 times the extinguisher working pressure, or 2 MPa, whichever is the greater. *All wheeled extinguishers (other than CO_2)*	

SECTION 11 FIRE BLANKETS

Routine service and survey of fire blankets on a six-monthly basis shall be carried in accordance with Table 11.4.

TABLE 11.4
SIX-MONTHLY SERVICE SCHEDULE FIRE BLANKETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Accessibility	CHECK that the fire blanket is: (a) Conspicuous. (b) In its assigned location. (c) Readily accessible. (d) Installed in accordance with AS 2444.	
1.2	Signage	CHECK that the location sign is visible and correct.	
1.3	Blanket container	CHECK that the fire blanket container: (a) Is securely and correctly supported. (b) Is clean and free from damage. (c) Has clear and legible instructions thereon. (d) Has a service record tag/label attached.	
1.4	Fire blanket	REMOVE the fire blanket from the container and check: (a) For any damage or contamination to the fire blanket (refer also Clause 11.2.4). (b) For unsecured or damaged hand-holding devices. (c) That the fire blanket is correctly folded. Where the fire blanket conforms to the above, REPACK the blanket into the container as recommended by the manufacturer. NOTE: It is important that fire blankets are always folded in the manner prescribed by the manufacturer in order that they can be removed from the container quickly (see AS/NZS 3504).	Any activity deemed included

SECTION 12 PASSIVE FIRE AND SMOKE SYSTEMS

12.4 ROUTINE SERVICE SCHEDULES

12.4.1 Fire and smoke barriers—Vertical and horizontal

12.4.1.1 *Walls, service penetrations and control joints*

Yearly service of fire and smoke walls, including service penetrations and control joints shall be completed in accordance with Table 12.4.1.1.

TABLE 12.4.1.1
YEARLY SERVICE SCHEDULE FIRE AND SMOKE BARRIERS WALLS, SERVICE PENETRATIONS AND CONTROL JOINTS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Wall types, locations	INSPECT against drawings (see Clause 12.2.5) that no fire and/or smoke walls have been added, removed or modified.	
1.2	Service penetration and control joint inspection	(a) INSPECT against drawings and associated penetration schedules that no penetrations have been added, removed or modified.	
		(b) CHECK that reference drawings and penetration schedules correctly represent the installed penetrations.	
		(c) IDENTIFY any penetration and control joints work that is unprotected, damaged or incorrectly installed.	
1.3	Walls, where accessible	(a) INSPECT that walls continue up to the next horizontal fire-resistant barrier or to the underside of the roof above.	
		(b) INSPECT for any damage that will cause loss of fire resistance.	

12.4.1.2 *Floors, service penetrations and control joints*

Yearly service of fire and smoke floors, including service penetrations and control joints shall be completed in accordance with Table 12.4.1.2.

TABLE 12.4.1.2
YEARLY SERVICE SCHEDULE
FIRE AND SMOKE BARRIERS FLOORS, SERVICE PENETRATIONS AND CONTROL JOINTS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Fire rated floors	INSPECT against drawings (see Clause 12.2.5) that no fire-rated floors, including resistance to incipient spread of fire, have been added, removed or modified.	
2.2	Service penetration and control joint inspection	(a) INSPECT against drawings and associated penetration schedules that no penetrations have been added, removed or modified.	
		(b) CHECK that reference drawings and penetration schedules correctly represent the installed penetrations.	
		(c) IDENTIFY any penetration and control joints work that is unprotected, damaged or incorrectly installed.	
2.3	Floors—General	INSPECT for any damage that will cause loss of fire resistance.	

12.4.1.3 *Ceilings, service penetrations and control joints*

Yearly service of fire and smoke ceilings, including service penetrations and control joints, shall be completed in accordance with Table 12.4.1.3.

TABLE 12.4.1.3
YEARLY SERVICE SCHEDULE
FIRE AND SMOKE BARRIERS CEILINGS, SERVICE PENETRATIONS AND CONTROL JOINTS

Item No.	Item	Action required and pass/fail requirement	

			Inspection only (green), activity required (red)
3.1	Ceiling types, locations	INSPECT against drawings (see Clause 12.2.5) that no fire-rated ceilings, including resistance to incipient spread of fire, have been added, removed or modified.	
3.2	Service penetration and control joint inspection	(a) INSPECT against drawings and associated penetration schedules that no penetrations have been added, removed or modified. NOTE: All light fittings and access panels/ceiling hatches should be inspected.	
		(b) CHECK that reference drawings and penetration schedules represent as-installed penetrations.	
		(c) IDENTIFY any penetration and control joints work that is unprotected, damaged or incorrectly installed.	

12.4.1.4 *Fire and smoke rated access panels and hatches*

Yearly service of fire and smoke access panels and hatches shall be completed in accordance with Table 12.4.1.4.

TABLE 12.4.1.4
YEARLY SERVICE SCHEDULE FIRE AND SMOKE BARRIERS FIRE AND SMOKE RATED ACCESS PANELS AND HATCHES

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Access panel	INSPECT against drawings (see Clause 12.2.5) that access panels or hatches, including resistance to incipient spread of fire, have been added, removed or modified.	
4.2	Access panel or leaf	(a) INSPECT panel to ensure it is free of any visible delamination, and other damage.	
		(b) INSPECT that the any perimeter seal is in good condition and not damaged.	
4.3	Frame	(a) INSPECT access panel frame is adequately anchored to surrounding structure.	Any activity deemed included
		(b) VERIFY that doorframe is free from excessive distortion at any point along frame sections.	
4.4	Screw-fixed panels (where applicable)	INSPECT to ensure screw fixings are all present and engaged in the frame securely.	Any activity deemed included
4.5	Hinged and/or latched panels (where applicable)	(a) INSPECT to ensure hinges are in good working order and any latches are operational.	
		(b) INSPECT no visible through-gap is created around lock/latch, and that the correct number of hinges and locks are present.	
4.6	Additions	INSPECT that any added laminates and/or hardware do not interfere with the function of the access panel.	

12.4.2 Fire-protected structural members

Yearly service of fire-protected structural members shall be completed in accordance with Table 12.4.2.

TABLE 12.4.2
YEARLY SERVICE SCHEDULE
FIRE-PROTECTED STRUCTURAL MEMBERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Structural members	INSPECT against drawings (see Clause 12.2.5) that no structural steel members have been added, removed or modified.	
2.2	Inspection	(a) CHECK condition of fire protection system or coating.	

		(b) CHECK for mechanical damage.	
2.3	Fire-protection system or coating	(a) INSPECT visually for areas of deterioration against vermiculite, cement, mineral fibre and plaster (or combinations of) spray's loss of adhesion.	
		(b) CHECK for intumescent coating visual damage to the surface (e.g. bubbling, peeling, flaking and scratches).	
		(c) CHECK fire-protective boards and cladding for missing boards or loss of adhesion.	

12.4.3 Fire-resistant doorsets

12.4.3.1 *Hinged and pivoted fire-resistant doorsets*

TABLE 12.4.3.1
SIX-MONTHLY SERVICE SCHEDULE HINGED AND PIVOTED FIRE-RESISTANT DOORSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Location	INSPECT to determine if the fire-resistant doorset has been modified since the previous routine service.	
1.2	Marking—Tags and signage	(a) INSPECT door leaves and door frames are tagged in accordance with AS 1905.1.	
		(b) INSPECT to ensure relevant statutory signage has been applied and that the location of the signage is in accordance with regulatory requirements.	
1.3	Clearances in the closed position	(a) CHECK that gaps between the edge of the door leaf and the door frame are in accordance with AS 1905.1 or the relevant test report.	
		(b) CHECK that the gap between the bottom edge of the door leaf and the finished floor level is in accordance with AS 1905.1 or the relevant test report.	
1.4	Hardware general— Locksets and latches, closers and pivots, hinges and sequence selectors	(a) INSPECT all hardware required for suspension, closing and latching is fitted and is a make and model that has been fire-tested for the specific fire- resistant door.	
		(b) INSPECT all hardware is located correctly, securely attached and operational with the correct fittings in accordance with the requirements of AS 1905.1 or the relevant test report.	
		(c) INSPECT the door leaf and door frame are free from non-approved fittings, fixings or attachments and free from damage caused by relocation of hardware items.	
1.5	Frictional forces and self-closing and self-latching function	(a) VERIFY the opening and closing forces are such that the doors can be easily opened and closed in normal conditions and in fire mode, taking into account any pressurization systems within the building.	
		(b) INSPECT the doorset is self-closing and self- latching, if appropriate.	
		(c) Where passage sets or knobs are incorporated, INSPECT that the minimum clearance of 35 mm to the door stop is present.	
1.6	Door closers and pivots	(a) CHECK closers are free from oil leakages.	
		(b) INSPECT the door closer (body and arm) is free from obstruction by walls, fixtures and is operating freely throughout its swing.	
1.7	Door seals	INSPECT any installed door seals are approved for use on the proprietary door type, functioning as intended and are not damaged.	
1.8	Door leaves	(a) CHECK doors for any visible delamination, buckling, warping, bowing, twisting or significant damage.	
		(b) CHECK door edges are in good condition and free from any splitting or damage on all sides.	
1.9	Door frames	(a) CHECK door stop dimensions are approved for the proprietary door type and FRL.	
		(b) CHECK steel door frames are back-filled as required for the proprietary door type and FRL. NOTE: See AS 1905.1.	
		(c) CHECK door frame is free from excessive distortion at any point along frame sections.	
		(d) CHECK to ensure doorframe incorporates a door striker plate.	
		(e) CHECK condition of frame.	
1.10	Vision panels (where fitted)	(a) CHECK proprietary door type is approved for use of a vision panel.	
		(b) CHECK to ensure glass is approved for the proprietary door type, in a sound condition and free from cracks.	
		(c) CHECK to ensure perimeter trim and framing are secure and in sound condition, and all fixing screws are in place and consistent with the fire test approvals for the propriety door type.	

1.11	Fire-rated air transfer grilles or fire dampers (where fitted)	CHECK proprietary door type is approved for use with the fire-resistant air transfer grille or fire damper and is installed as per manufacturer's instructions. NOTE: Where a damper is incorporated in a fire door it is considered to be a fire-rated air transfer grille.	
1.12	Travel limiting device	Where required, VERIFY travel limiting device is installed in accordance with AS 1905.1.	
1.13	Other features	(a) INSPECT the threshold for the door leaf is free from the addition of any combustible covering since installation or previous inspection.	
		(b) INSPECT kickplates are securely fixed (where fitted).	
1.14	Meeting stiles for pairs of doors (where fitted)	INSPECT to ensure that meeting stile astragals are correct for the proprietary door type, installed as per manufacturer's instructions, are in good working order and incorporate seals where required.	
1.15	Doors held in the open position	TEST that doors held in the open position, which require activation of detection system to close, to ensure the door closes satisfactorily upon power failure or detector activation.	

12.4.3.2 *Horizontal sliding doors*

Horizontal sliding doors shall be inspected and subjected to a routine service test (where applicable) and survey on a three-monthly and six-monthly basis in accordance with Table 12.4.3.2.

TABLE 12.4.3.2

THREE-MONTHLY AND SIX-MONTHLY SERVICE SCHEDULE HORIZONTAL SLIDING DOORS FIRE-RESISTANT DOORSETS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
THREE-MONTHLY			
2.1	Frictional forces, operation and self-closing ability	SIMULATE a full operational test (mechanically and electronically) as appropriate to ensure correct automatic closing of the door is achieved. CHECK operation to ensure the door fully closes from the fully open position and from one intermediary position.	
SIX-MONTHLY			
2.2	Location	INSPECT against drawings and all schedules (see Clause 12.2.5) to ensure that no fire doors has been added, removed or modified.	
2.3	Marking—Tags and signage	(a) INSPECT door leaves and door frames (where applicable) are tagged in accordance with AS 1905.1.	
		(b) INSPECT to ensure relevant statutory signage has been applied and that the location of the signage is in accordance with regulatory requirements.	
2.4	Clearances and overlaps in the closed position	INSPECT clearances and overlaps of door panel(s) are in accordance with AS 1905.1.	
2.5	Frictional forces, operation and self-closing ability	CHECK forces to open and close door leaves do not exceed maximum 110 N for a door in the path of travel to an exit and 180 N from the closed position and 135 N through its full travel in other places.	
2.6	Restraint brackets and interlocking steel sections (flame guards)	INSPECT restraint brackets and/or interlocking steel sections are as per manufacturer's specifications, fixed adequately and functional.	
2.7	Hardware	(a) INSPECT hardware required for suspension and operation is fitted and is as per manufacturer's specifications.	
		(b) INSPECT hardware is securely attached with the correct fittings in accordance with the requirements of AS 1905.1.	
2.8	Automatic operations	(a) CHECK fusible links, where fitted, are intact and unpainted.	
		(b) CHECK pulley cables are free from fraying, kinks, excessive stretching and corrosion.	
		(c) CHECK pulleys are free to rotate.	
		(d) REPLACE all fusible links every 25 years from the date of manufacture. NOTE: In lieu of replacing all fusible links, a representative sample may be tested as per Section 2.	
		(e) PERFORM a full operational test (mechanically and electrically) as appropriate to ensure correct automatic closing of the door is achieved.	
		(f) CHECK operation to ensure the door fully closes from one intermediary position.	
		(g) TEST operation of illuminated sliding doors, warning signs, sounders and release delays, as appropriate.	
2.9	Door guides, stops and restraints	INSPECT floor and/or track and/or wall-mounted guides and stops and all travel-limiting devices at door open and close locations are adequate and soundly mounted.	
2.10	Other fittings and accessories	(a) CHECK arrows indicating opening direction are fixed to each side of the door leaves.	
		(b) CHECK flush pulls, handles or grips are securely fixed.	Any activity deemed included
2.11	Door leaf	(a) INSPECT door leaf or leaves are free from any delamination, any other damage and all perimeter edge capping is complete and sound.	

		(b) CHECK door leaf or leaves is/are free from any non-approved fittings, fixings and attachments.	
2.12	Door frame (where applicable)	CHECK door frame is adequately anchored to the opening.	
2.13	Other features	(a) CHECK service access panels for cavity sliders are suitable and accessible.	
		(b) CHECK the sill under the door leaf is free from the addition of any combustible covering since installation or previous inspection.	
2.14	Multiple-leaf doors	In addition to the above, INSPECT overlaps or jointing of individual door leaf panels at meeting stiles are in proper alignment and comply with manufacturer's specifications.	
2.15	Wicket doors or personnel access doors	INSPECT wicket or personnel access doors operate satisfactorily in accordance with the hinged door leaf requirements, and in accordance with the manufacturer's test approval. NOTE: These doors are usually found integrated within the sliding door leaf or leaves and are typically side-hung doors.	
2.16	Power-assisted sliding doors	Power-assisted sliding doors are to be serviced in accordance with the manufacturer's maintenance procedures.	

12.4.4 Smoke doors—Hinged and pivoted

Hinged and pivoted smoke doors shall be inspected and subjected to a routine service test (where applicable) and survey on a six-monthly basis in accordance with Table 12.4.4.

TABLE 12.4.4
SIX-MONTHLY SERVICE SCHEDULE HINGED AND PIVOTED SMOKE DOORS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Location	INSPECT against drawings and all schedules (see Clause 12.2.5) that no smoke doors have been added, removed or modified.	
4.2	Door type and signage	(a) CHECK that the smoke door complies to appropriate door design specification, is at least 35 mm thick solid core door or in accordance with the requirement of the 'building approval'.	
		(b) CHECK that doors are self closing.	
		(c) INSPECT to ensure relevant statutory signage has been applied and that the location of the signage is in accordance with regulatory requirements.	
4.3	Clearance in the closed position	(a) CHECK perimeter—gaps between the door leaf and the door frame are as per door assembly and seal manufacturers' recommendations.	
		(b) CHECK bottom—gaps between the door bottom and threshold are as per door assembly and seal manufacturers' recommendations.	
4.4	Smoke seals	(a) CHECK smoke seals are suitable for use on the door/assembly type.	
		(b) CHECK that any seal is in good condition and not damaged.	
		(c) CHECK perimeter and bottom—perimeter and door bottom seals are correctly fitted in accordance with manufacturer's recommendations and that the sealing elements are in continuous contact with the door/frame/floor.	
4.5	Meeting stiles for pairs of doors	(a) CHECK to ensure meeting stile astragals or door meeting edges incorporate smoke seals.	
		(b) CHECK seals are securely fixed.	
		(c) CHECK smoke seals do not impede the correct operation of the door.	
4.6	Doors held in the open position	TEST smoke doors held in the open position, which require activation of detection system to close, to ensure that they close satisfactorily upon power failure or detector activation.	
4.7	Hardware— General	(a) CHECK all essential hardware required for suspension, closing and latching (as appropriate) is fitted.	
		(b) CHECK all hardware is attached and is securely fixed.	
4.8	Frictional forces and self-closing and self-latching function	VERIFY the opening and closing forces are such that the doors can be easily opened and closed in normal conditions and in fire mode, taking into account any pressurization systems within the building.	
4.9	Door closers and pivots	(a) CHECK the door closer (body and arm) is free from obstructions by walls or fixtures and is operating freely throughout its swing.	
		(b) CHECK any closer free from oil leakages.	
		(c) CHECK screw fixing and mounting arrangements for door closer are secured to the door leaf and door frame.	Any activity deemed included
4.10	Hinges	(a) CHECK hinges are free from any undue wear and tear and are correctly aligned and operating smoothly and freely.	
		(b) CHECK hinges are securely fixed to the door leaf and frame.	Any activity deemed included
4.11	Door leaves	(a) INSPECT that door is free from any visible delamination, buckling, warping, bowing, twisting or significant damage.	

		(b) INSPECT that door edges are in good condition and free from any splitting or damage on all sides.	
4.12	Door frames	(a) CHECK door frames are adequately anchored to the walling and restrained against rotational movement about their longitudinal axes.	
		(b) CHECK door frame is free from excessive distortion at any point along frame sections.	
4.13	Glazing panels	(a) CHECK glass to ensure it is in sound condition, and free from cracks.	
		(b) CHECK perimeter trim and framing to ensure they are secure and in sound condition and that all fixings are in place.	
		(c) CHECK to ensure clear glass panels are appropriately identified.	
4.14	Kickplates	CHECK to ensure kickplates are securely fixed.	Any activity deemed included
4.15	Sequence selectors	CHECK for doors that require correct sequencing to self close and ensure the sequencing device operates correctly.	
4.16	Meeting stiles for pairs of doors	CHECK to ensure any essential meeting stile astragals are installed and in good working order and incorporate smoke seals where required.	

12.4.5 Fire shutters

Fire shutters shall be inspected and subjected to a routine service test (where applicable) and survey on a yearly basis in accordance with Table 12.4.5.

TABLE 12.4.5 YEARLY SERVICE SCHEDULE
FIRE SHUTTERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
5.1	Location	INSPECT against drawings and all schedules (see Clause 12.2.5) that no fire shutters have been added, removed or modified.	
5.2	Marking—Tags and signage	CHECK fire shutters and frames are tagged in accordance with AS 1905.2.	
5.3	Bracket fixings and barrel assembly	(a) CHECK brackets are securely fixed to the walls.	Any activity deemed included
		(b) CHECK barrel assembly is mounted so that the rolled-up curtain on the barrel sits higher than the top level of the guide tracks.	
5.4	Guide track fixings	(a) CHECK guide tracks are securely fixed to the walls.	Any activity deemed included
		(b) CHECK guide tracks are mounted such that the curtain overlaps equally the jamb on each side of the opening.	
		(c) CHECK the gap between the end of the slats, including end clips and the guide track, is no more that 10 mm.	
		(d) CHECK that the shutter moves freely in the guide tracks without jamming under normal operation.	
5.5	Threshold	INSPECT that the threshold is of concrete or similar approved material deemed non-combustible.	
5.6	Fusible link	(a) INSPECT that the fire shutter is fitted with a fusible link (if applicable) of not greater than 80^{o}C (57^{o}C in the case of a drenched fire shutter) and the fusible link is in good and operational condition.	
		(b) REPLACE all fusible links every 25 years from the date of manufacture. NOTE: In lieu of replacing all fusible links, a representative sample may be tested as per Section 2.	
5.7	Operation test	(a) TEST that under simulated automatic operation the fire shutter curtain descends to the threshold at an average speed of between 0.15 m/s and 0.3 m/s.	
		(b) TEST that under simulated automatic operation the curtain does not rebound creating a gap greater than 25 mm between the bottom rail and the threshold.	
		(c) CHECK shutter slats, bottom rail and brake release mechanism, illuminated warning signs, sounders and release delays (where fitted) are free from damage and the slats are not binding on each other when opening and closing.	

12.4.6 Fire-rated glazing

Fire-rated glazing shall be inspected and subjected to a routine service, test (where applicable) and survey on a yearly basis in accordance with Table 12.4.6.

TABLE 12.4.6 YEARLY SERVICE SCHEDULE
FIRE-RATED GLAZING

Item No.	Item	Action required and pass/fail requirement	

			Inspection only (green), activity required (red)
6.1	Location	INSPECT against drawings (see Clause 12.2.5) that no fire-rated glazing has been added, removed or modified.	
6.2	Glass	(a) INSPECT for any crazing or cracking around perimeter of glass.	
		(b) INSPECT for impact crazing or cracking over entire surface area of glass.	
6.3	Frame	(a) VERIFY that frame is free from distortion at any point along the frame section.	
		(b) INSPECT frame is securely anchored and free from any visible defects or corrosion.	
		(c) INSPECT perimeter to ensure no through-gaps are visible and the frame has been fire stopped where it meets bounding construction.	
6.4	Seals	INSPECT glazing seals are present and have not deteriorated.	

12.4.7 Fire-protected air ducts

Fire-protected air ducts and dampers shall be inspected and subjected to a routine service, test (where applicable) and survey on a yearly basis in accordance with Table 12.4.7.

Fire dampers are part of the smoke management system (see Section 13).

TABLE 12.4.7
YEARLY SERVICE SCHEDULE FIRE-PROTECTED AIR DUCTS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
7.1	Location	INSPECT against drawings and all schedules (see Clause 12.2.5) that no air duct has been added, removed or modified.	
7.2	Fire-protected duct	(a) INSPECT fire-resistant ducts from drawings, plans and schedule for condition of fire protection system or coating, including supports.	
		(b) CHECK for mechanical damage.	
7.3	Fire protection system or coating	(a) INSPECT visually for areas of deterioration, vermiculite, cement, mineral fibre and plaster (or combinations thereof) spray's loss of adhesion.	
		(b) CHECK fire protective boards and cladding for missing material or loss of adhesion.	
7.4	Damper	For damper operation refer to Section 13 of this Standard.	
7.5	Ducting	(a) Report to the owner or owner's representative or occupier where any deficiency is identified.	
		(b) Amend schedule as required to maintain accuracy.	

SECTION 13 FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES

13.4.1.2 *Fans and motors—Three-monthly*

TABLE 13.4.1.2
THREE-MONTHLY ROUTINE SERVICE SCHEDULE FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES—FANS AND MOTORS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Obstructions	CHECK there are no physical obstructions likely to impede performance.	
1.2	Noise, overheating and vibration	CHECK motor and all bearings for noise, overheating and excessive vibration.	
1.3	Flexible connections	CHECK flexible connections, where fitted, for leaks, tearing or fraying.	
1.4	Fan belts (wear)	CHECK fan belts for wear.	
1.5	Guards and other safety features	CHECK for satisfactory condition.	
1.6	Bearings	CHECK lubrication of bearings.	
1.7	Fan belts (tension)	CHECK for correct tension.	

NOTE: Diagnostic procedures or remote monitoring are an acceptable alternative to sensory inspection such as sight, touch, hearing or smell. This alternative is particularly applicable where sensory inspection is dangerous or not practicable.

13.4.1.3 *Fans and motors—Yearly*

TABLE 13.4.1.3
YEARLY ROUTINE SERVICE SCHEDULE FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES—FANS AND MOTORS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Three-monthly service	COMPLETE all three-monthly service activities (see Table 13.4.1.2.)	
2.2	Pulley wheels and couplings	CHECK pulley wheels for alignment and couplings for alignment and tightness.	
2.3	Casing guards and impeller	CHECK casing, guards and impeller for corrosion.	
2.4	Electrical	CHECK electrical connections, isolators and terminal box.	

13.4.1.4 *Fire dampers and smoke dampers—Yearly*

TABLE 13.4.1.4
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES FIRE DAMPERS AND SMOKE DAMPERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
MECHANICAL AND INTUMESCENT FIRE DAMPERS			
3.1	Obstruction— Mechanical dampers	CHECK and ensure that the fire damper is in place, open and free from obstruction (see Notes 1 and 2).	
3.2	Operation— Mechanical dampers	For mechanical fire dampers, remove or release the fusible link to ensure closure (and latching) (see Notes 1 and 2).	
3.3	Obstruction— Intumescent dampers	CHECK and ensure that the fire damper is in place, free from obstruction and is capable of operation (see Notes 1, 2, 3 and 4).	
3.4	Corrosion— Mechanical and intumescent dampers	CHECK fire dampers, including casing, retaining flanges and fusible links, for corrosion. The extent of corrosion shall not impede damper operation or prevent it remaining in place until the next inspection (5 years) (see Notes 1, 2, 3 and 5).	
3.5	Tampering and modifications— Mechanical and intumescent dampers	CHECK for signs of tampering or modifications. The responsible entity shall confirm that modifications comply with the manufacturer's requirements or a registered testing authority's confirmation of operation (see Notes 1 and 2).	
3.6	Fire-resisting construction— Mechanical and intumescent dampers	CHECK the integrity of the surrounding structure within the immediate proximity of the fire damper (see Notes 1 and 2).	
3.7	Fusible ink	REPLACE all fusible links throughout the building every 25 years from the date of manufacture. Commencing after 25 years, replace 20% per year over the 5 year routine service cycle.	
SMOKE DAMPERS			
3.8	Operation	CHECK the damper is free from obstruction and capable of operating from fully open to fully closed.	
3.9	Tip seals	CHECK tip seals for signs of damage that would adversely affect smoke leakage performance.	
3.10	Obstruction	CHECK and ensure that the smoke damper is in place free from obstruction and capable of operation (see Notes 1 and 2).	
3.11	Corrosion	CHECK smoke dampers and casings for corrosion, accumulation of dust, which may prevent future operation or affect the overall integrity. The extent of corrosion shall not impede damper operation or prevent it remaining in place until the next inspection (5 years) (see Notes 1, 2 and 5).	
3.12	Fail-safe operation	ENSURE damper moves to its fail-safe position on removal of power source.	
3.13	Tampering and modifications	CHECK for signs of tampering or modifications. The responsible entity shall confirm that modifications comply with the manufacturer's requirements or a registered testing authority's confirmation of operation.	

13.4.1.5 *Air control dampers—Recycle air, relief air, smoke spill and outdoor air—Six-monthly*

TABLE 13.4.1.5
SIX-MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES AIR CONTROL DAMPERS—RECYCLE AIR, RELIEF AIR, SMOKE SPILL AND OUTDOOR AIR

Item No.	Item	Action required and pass/fail requirement	

			Inspection only (green), activity required (red)
4.1	Operation	CHECK that the damper is capable of operating from fully open to fully closed, and is clear of obstructions. Where the damper is not required to fully open or close, check that it is capable of operating between maximum and minimum positions. NOTE: Increase frequency to three-monthly if dampers are dedicated to fire mode duty only and are exposed to the corrosive effects of exterior air.	

13.4.1.6 *Air control dampers—Recycle air, relief air, smoke spill and outdoor air—Yearly*

TABLE 13.4.1.6
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES AIR CONTROL DAMPERS—RECYCLE AIR, RELIEF AIR, SMOKE SPILL AND OUTDOOR AIR

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
5.1	Six-monthly service	COMPLETE all six-monthly service activities as listed in Table 13.4.1.5.	
5.2	Fire mode position	ENSURE damper(s) moves to its fire mode position upon removal of power source.	
5.3	Leakage	CHECK that there is no excessive leakage past dampers when in the closed position (only where dampers are required to close fully).	
5.4	Bearings	CHECK linkage and damper bearings.	
5.5	Corrosion	CHECK dampers for corrosion. NOTE: Corrosion may adversely affect the operation of the damper.	
5.6	Air leaks	If motors are pneumatic, CHECK for air leaks in the air lines and connections.	

13.4.1.7 *Air control dampers—Supply, return and exhaust air—Six-monthly*

TABLE 13.4.1.7
SIX-MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES AIR CONTROL DAMPERS—SUPPLY, RETURN AND EXHAUST AIR

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
6.1	Operation	CHECK that the damper is capable of operating from fully open to fully closed, and is clear of obstructions. Where the damper is not required to fully open or close, check that it is capable of operating between maximum and minimum positions. NOTE: Increase frequency to three-monthly if dampers are dedicated to fire mode duty only and are exposed to the corrosive effects of exterior air.	

13.4.1.8 *Air control dampers—Supply, return and exhaust air—Yearly*

TABLE 13.4.1.8
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES AIR CONTROL DAMPERS—SUPPLY, RETURN AND EXHAUST AIR

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)

7.1	Six-monthly service	COMPLETE all six-monthly service activities as listed in Table 13.4.1.7.	
7.2	Power failure position	ENSURE damper(s) moves to its required failure mode position upon removal of power source.	
7.3	Leakage	CHECK that there is no excessive leakage past dampers when in the closed position (only where dampers are required to close fully).	
7.4	Bearings	CHECK linkage and damper bearings.	
7.5	Corrosion	CHECK dampers for corrosion. NOTE: Corrosion may adversely affect the operation of the damper.	
7.6	Air leaks	If motors are pneumatic, CHECK for air leaks in the air lines and connections.	

13.4.1.11 *Fire and smoke curtains—Six-monthly*

TABLE 13.4.1.11
SIX MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES FIRE CURTAINS AND SMOKE CURTAINS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
10.1	Operation	CHECK there are no physical obstructions likely to impede operation. RECORD any changes or additions to the surrounding area.	
10.2	Manual operation	CHECK manual deployment of curtain via switch at control panel.	
10.3	Curtain fabric	CHECK for damage to curtain fabric.	
10.4	Guide tracks (where fitted)	CHECK for damage and confirm the integrity of side tracks, to ensure correct operation.	
10.5	Electrical tests—Power supply unit (PSU)	(a) CHECK mains power input.	
		(b) CONFIRM correct display and LED notification.	
		(c) CHECK the battery charger outputs.	
		(d) CHECK the control voltage being supplied from the PSU to the MCU.	
		(e) CHECK the permanent d.c. power supplied from the PSU to the MCU (where applicable).	

NOTE: Curtains that deploy below 2.5 m from floor level should be checked at least monthly, to ensure that the area underneath the curtain is clear of obstructions.

13.4.1.12 *Fire curtains and smoke curtains—Yearly*

Fire curtains and smoke curtains shall be routinely serviced in accordance with the manufacturers' recommendations but in no case less than specified in Table 13.4.1.12.

TABLE 13.4.1.12
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES FIRE CURTAINS AND SMOKE CURTAINS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
11.1	Six-monthly service	COMPLETE all six-monthly service activities, as listed in Table 13.4.1.11.	
11.2	Top limit	(a) CHECK bottom bar and capping (where applied) positioning in relation to the ceiling. Adjust where necessary.	
		(b) CONFIRM that the curtain performs the soft ascent function (where fitted).	
11.3	Bottom limit	CHECK that the bottom limit position is closing to the correct position.	
11.4	Operating speed	CHECK the ascent and descent speeds. RECORD results and adjust if necessary.	
11.5	Automatic operation	CHECK automatic deployment of curtain via alarm signal activation.	
11.6	Fail-safe operation	CHECK gravity fail-safe or other fail-safe deployment of curtain by disconnecting all power sources to all controls.	
11.7	Battery function	REPLACE batteries that are more than two years old.	
11.8	Electrical tests—Motor control card (MCC)	(a) CHECK mains power input (where applicable).	
		(b) CONFIRM correct display and LED notification.	
		(c) CHECK the transformer outputs (where applicable).	
		(d) CHECK the control voltage being supplied from the PSU to the MCC.	
		(e) CHECK the permanent d.c. power supplied from the PSU to the MCC (where applicable).	

		(f) CHECK the motor brake voltage.	
		(g) CHECK the motor drive voltage.	
		(h) CHECK the motor stall-out function (where fitted).	
11.9	Light warning (where fitted)	CHECK that the light warning unit flashes with the correct intensity when required.	
11.10	Audible warning (where fitted)	CHECK that the local audible warning system is distinctly audible in the vicinity of the curtain.	
11.11	Obstruction warning (where fitted)	CHECK that the obstruction warning system activates the appropriate warning system when the curtain is obstructed for more than the required duration.	
11.12	Split/dual drop delay (where fitted)	(a) CHECK the half drop height.	
		(b) CHECK the hold time at the half height position.	
		(c) CHECK that the curtain closes when activated by the second alarm source (dual drop only).	
11.13	Emergency retract (where fitted)	CHECK that the curtain retracts temporarily when the retract button is pressed.	
11.14	Fusible link (where fitted)	REPLACE all fusible links throughout the building every 25 years from the date of manufacture.	

13.4.1.16 *Kitchen exhaust systems—Monthly*

Kitchen exhaust systems shall be inspected and subjected to a routine service on a monthly basis in accordance with Table 13.4.1.16.

TABLE 13.4.1.16
MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES KITCHEN EXHAUST SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
15.1	Filters	CHECK grease-arresting filters for excessive grease accumulation.	
15.2	Hood and plenum	CHECK hood and its exhaust plenum for excessive grease accumulation.	
15.3	Gutters	CHECK grease gutters for excessive grease accumulation.	Any activity deemed included
15.4	Filter (condition)	CHECK that grease-arresting filters are secured in the correct position and undamaged.	
15.5	Filter (clean)	CLEAN grease-arresting filters as required (monthly, see Note).	Any activity deemed included

NOTE: Owing to wide variations in usage, frequency of cleaning is subject to the assessment of the inspector or the requirements of the regulatory authority. In some cases, cleaning may need to be more frequent than monthly.

13.4.1.17 *Kitchen exhaust systems—Yearly*

Kitchen exhaust systems shall be inspected and subjected to a routine service on a yearly basis in accordance with Table 13.4.1.17.

TABLE 13.4.1.17
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES KITCHEN EXHAUST SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
16.1	Monthly service	COMPLETE all monthly service activities as listed in Table 13.4.1.16.	
16.2	Hood and plenum	CLEAN hood and its exhaust plenum.	Any activity deemed included

16.3	Filter (replace)	CHECK for excessive leaks or damage to grease-arresting filters, and REPLACE as necessary. NOTE: Non-metallic grease filters and other special types have to be replaced at specific time intervals whether damaged or not. In these cases, follow manufacturer's instructions.	
16.4	Duct	CHECK duct for accumulated grease and CLEAN.	Any activity deemed included

13.4.1.18 *Outdoor intakes—Monthly*

Outdoor intakes shall be inspected and subjected to a routine service on a monthly basis in accordance with Table 13.4.1.18.

TABLE 13.4.1.18
MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES OUTDOOR INTAKES

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
17.1	Fire hazards	REMOVE any combustible material from the vicinity of the intakes.	

NOTE: Removal of combustible material from air intakes on a monthly basis may be carried out by non-technical personnel who are aware of the fire hazards associated with this type of risk.

13.4.1.19 *Outdoor intakes—Yearly*

Outdoor intakes shall be inspected and subjected to a routine service on a yearly basis in accordance with Table 13.4.1.19.

TABLE 13.4.1.19
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES OUTDOOR INTAKES

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
18.1	Monthly service	COMPLETE all monthly service activities as listed in Table 13.4.1.18.	
18.2	Corrosion	CHECK intake louvres for corrosion and damage.	
18.3	Insect screens	CHECK and clean insect screens, replace if damaged.	Any activity deemed included
18.4	Oil bath filters	CHECK to ensure that the oil bath or adhesive coating is as specified by the manufacturer. NOTE: Oil bath filters are now obsolete in new commercial air-conditioning systems, and adhesive coated filters are uncommon; however, if such devices are still in service, the oil bath fluid or adhesive coating should be checked on an annual basis to ensure that the material is as specified by the original filter manufacturer and has a flashpoint not less than 160^{0}C.	

13.4.1.20 *Variable frequency inverters (VFIs)—Three-monthly*

Variable frequency inverters (VFIs) shall be inspected and subjected to a routine service on a three- monthly basis in accordance with Table 13.4.1.20.

TABLE 13.4.1.20
THREE-MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES VARIABLE FREQUENCY INVERTERS (VFIs)

Item No.	Item	Action required and pass/fail requirement	

			Inspection only (green), activity required (red)
19.1	Dust and dirt	CHECK for dust and accumulated dirt on vents and circuit boards and clean where necessary. Where there is evidence of moisture, inspect on a monthly basis or replace enclosure with one having an appropriate IP rating.	
19.2	Electrical	CHECK electrical connections and tighten where necessary.	Any activity deemed included
19.3	Cooling fans	CHECK the operation of all cooling fans.	

13.4.1.21 *Variable frequency inverters (VFIs)—Six-monthly*

Variable frequency inverters (VFIs) shall be inspected and subjected to a routine service on a six- monthly basis in accordance with Table 13.4.1.21.

TABLE 13.4.1.21
SIX-MONTHLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES VARIABLE FREQUENCY INVERTERS (VFIs)

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
20.1	Three-monthly service	COMPLETE all three-monthly service activities as listed in Table 13.4.1.20.	
20.2	Damage and overheating	CHECK for evidence of damage or overheating and clean or repair where necessary.	

13.4.1.22 *Variable frequency inverters (VFIs)—Yearly*

Variable frequency inverters shall be inspected and subjected to a routine service on a yearly basis in accordance with Table 13.4.1.22.

TABLE 13.4.1.22
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES VARIABLE FREQUENCY INVERTERS (VFIs)

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
21.1	Six-monthly service	COMPLETE all six-monthly service activities, (see Table 13.4.1.21).	
21.2	Calibration	CHECK calibration and set point of all adjustable components, including customer settings and correct if necessary.	
21.3	Fire mode override	CHECK operation of fire-mode override functions and correct if necessary.	Any activity deemed included

13.4.1.25 *Motor control centres—Yearly*

Motor control centres shall be inspected and subjected to a routine service on a yearly basis in accordance with Table 13.4.1.25.

TABLE 13.4.1.25
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES MOTOR CONTROL CENTRES

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)

24.1	Busbar connections	CHECK for loose busbar connections and cable terminations.	
24.2	Wiring and switches	CHECK general condition of conduits, connectors, switches and wiring for any condition likely to adversely affect their function.	
24.3	Contacts and relays	CHECK, clean or replace, as necessary, any faulty contacts or relays.	
24.4	Overload ratings	CHECK overload ratings against motor nameplate ratings.	
24.5	Fuses	CHECK circuit protectors (fuses and circuit breakers) for correct rating.	
24.6	Electrical connections	CHECK connections at motors, switchboards and equipment subject to vibration. Retighten cable terminations as necessary.	
24.7	Interpole barriers	INSPECT interpole barriers and shrouds where fitted.	
24.8	Cable insulation	CHECK and rectify any damaged or faulty exposed cable insulation.	
24.9	Switchboard	INSPECT each switchboard internally to ensure it is clean and free from rubbish.	
24.10	Panel seals	CHECK panel seals, and rectify if faulty.	
24.11	Wiring diagrams	CHECK and report where wiring diagram(s) are considered to be incorrect.	
24.12	Earthing	CHECK continuity to earth.	
24.13	Neutral current	CHECK and record neutral current.	

NOTE: Inspection and preventive maintenance on switchboards should be carried out by a relevant trade-qualified technician.

13.4.1.26 *Power supplies—Main switchboards (low voltage)—Yearly*

Power supplies, main switchboards (low voltage) shall be inspected and subjected to a routine service on a yearly basis in accordance with Table 13.4.1.26.

TABLE 13.4.1.26
YEARLY ROUTINE SERVICE SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES POWER SUPPLIES—MAIN SWITCHBOARDS (LOW VOLTAGE)

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
25.1	Busbar connections	CHECK for loose busbar connections and cable terminations and retighten any loose connections.	
25.2	Wiring and switches	EXAMINE the general condition of conduits, connectors, switches and wiring.	
25.3	Contacts and relays	CHECK, clean or replace, as necessary, contacts or faulty relays.	
25.4	Interpole barriers	INSPECT interpole barriers and shrouds.	
25.5	Fuses	CHECK all fuses for correct rating.	
25.6	Cable insulation	CHECK and rectify, where necessary, condition of exposed cable insulation.	
25.7	Switchboard	VACUUM clean switchboard interior and remove any rubbish.	
25.8	Panel seals	CHECK panel seals, and rectify if faulty.	
25.9	Wiring diagrams	CHECK wiring diagram and report where considered to be incorrect.	
25.10	Breakers	TEST operation of main breakers (manually) with power switched off.	
25.11	Current draw	CHECK current draw on main risers and compare to rating.	
25.12	Earthing	CHECK continuity to earth.	
25.13	Neutral current	CHECK and record neutral current.	

13.4.1.27 *Fire fan control panel (FFCP) and fire indicator panel (FIP)*

13.4.2.2 *Fire isolated exit pressurization systems—Three-monthly*

Fire-isolated exit pressurization systems shall be tested on a three-monthly basis in accordance with Table 13.4.2.2.

TABLE 13.4.2.2
THREE-MONTHLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES FIRE ISOLATED EXIT PRESSURIZATION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)

1.1	Simulation (from FIP)	SIMULATE by activation from FIP, the fire/smoke situation required to effect operation of the pressurization system. Check fans, dampers and indicator lamps operate in fire mode as documented. Check for excessive noise, ease of opening doors and correct movement of air from each pressurized area through a selected open door (see Appendices H and I).	
		(a) Fan operation.	
		(b) Damper operation.	
		(c) Indicator lamps.	
		(d) Noise.	
		(e) Ease of door opening.	
		(f) Air movement.	
		See Notes 1 to 5.	
1.2	Non-fire mode	SWITCH all systems back to 'normal' and check that all equipment and indicator lamps are in the correct non-fire mode (see Appendices H and I).	

13.4.2.3 *Fire-isolated exit pressurization systems—Yearly*

Fire-isolated exit pressurization systems shall be tested on a yearly basis in accordance with Table 13.4.2.3.

TABLE 13.4.2.3
YEARLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES FIRE-ISOLATED EXIT PRESSURIZATION SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Three-monthly tests	COMPLETE all three-monthly test activities, as listed in Table 13.4.2.2.	
2.2	Simulation (from Detector)	SIMULATE a fire/smoke situation from any device such as a sprinkler, heat of smoke detector, to effect operation of the pressurization and all other systems required to operate in fire mode.	
		CHECK that the following parameters meet the performance requirements (see Appendices H and I, and Notes 1 and 2).	
		(a) Airflow velocity across all required doorways.	
		(b) The force required to open each door.	
		(c) The noise level at typical doorways and those identified as subject to the highest noise level.	
		(d) Time taken for door opening force and airflow velocity to be restored, after opening and re- closing two successive doors adjacent to the test door(s) (to be that identified as having the longest restoration time).	
		(e) When smoke is introduced to the supply smoke sensor of any air-pressurization system, the associated pressurization fan is shut down.	
		Verify re-start when smoke clears and verify that the FFCP manual override 'ON' operates while the fan has shut down due to supply smoke detection.	
		(f) Operation of the manual switch provided for fire brigade personnel starts and stops fans supplying air to the pressurized fire-isolated escape routes.	
		(g) Check indicator lamps change status when fan starts or stops.	
2.3		(h) With all air-pressurization and other systems operating simultaneously, check that any specific air relief is fully operational and enables the required airflow from pressurized areas to be sustained.	
2.4	Revert system to normal	Switch system to 'normal' and check that all equipment and indicator lamps are in the correct non-fire mode. (Refer Appendices H and I.)	

13.4.2.4 *System changeover under fire condition—Three-monthly*

System changeover under fire condition shall be tested on a three-monthly basis in accordance with Table 13.4.2.4.

TABLE 13.4.2.4
THREE-MONTHLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SYSTEM CHANGEOVER UNDER FIRE CONDITION

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)

3.1	Simulation (from FIP)	SIMULATE by activation from FIP, the fire/smoke situation (for each system or zone where relevant), required to effect changeover from normal mode to fire mode or shutdown as appropriate. Check fans, dampers and indicator lamps operate in fire mode as documented (see Appendices H and I). NOTES: 1 The purpose of a simulated testing routine is to check the functioning of the air-handling changeover system and not the detectors themselves. The recommended practice in this case is to simulate activation of the system by initiating the fire alarm via the switch in the FIP. 2 This changeover test is initiated in the fire panel to verify the integrity of the interface between fire and mechanical systems. 3 Verification of fan or damper operation may use elementary testing procedures; e.g. hearing fan start, observation of indicator lamp change of status, feeling of air movement across doorway, grille, duct, etc.	
3.2	Revert to normal	SWITCH system back to 'normal' and check that all equipment and indicator lamps are in the correct non-fire mode (see Appendices H and I).	

13.4.2.5 *System changeover under fire condition—Yearly*

System changeover under fire condition shall be tested on a yearly basis in accordance with Table 13.4.2.5.

TABLE 13.4.2.5
YEARLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SYSTEM CHANGEOVER UNDER FIRE CONDITION

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Three-monthly tests	COMPLETE all three-monthly test activities as listed in Table 13.4.2.4.	
4.2	Simulation (from Detector)	CONDUCT a simulation of a fire/smoke situation (for each system or zone where relevant) to effect changeover from normal mode to fire mode or shutdown as appropriate. CHECK fans, dampers and indicator lamps operate in fire mode (see Appendices H and I). Tests required in Items 4.4, 4.5 and 4.6 are carried out during this simulation test (see Notes 1 and 2).	
4.3	Fans start and stop at Fire fan control panel (FFCP)	OPERATE the manual switches at the FFCP. Check that fans start and stop and dampers, if applicable, open and close as documented (see Appendices H and I).	
4.4	System shutdown	Where supply air systems are fitted with a smoke detector(s), check system shuts down when the detector is automatically activated as documented (see Appendices H and I). Verify re-start when smoke clears and verify that the FFCP manual override 'ON' operates while the fan has shut down due to supply smoke detection.	
4.5	Zone smoke control	CHECK zone smoke control system performance criteria as documented (see Appendices H and I).	
4.6	Fire curtains and smoke curtains	CHECK to ensure that the integrity and leakage performance are not compromised by operation of the mechanical systems in fire mode.	

13.4.2.6 *Smoke exhaust systems—Three-monthly*

Smoke exhaust systems shall be tested on a three-monthly basis in accordance with Table 13.4.2.6.

TABLE 13.4.2.6
THREE-MONTHLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SMOKE EXHAUST SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
5.1	Simulation (from the FIP)	SIMULATE a fire/smoke situation by activation from the FIP, to effect operation of the smoke exhaust system and all other systems required to operate in fire mode. Check fans, dampers, automatic doors and indicator lamps operate in fire mode as documented (see Appendices H and I). Check for excessive noise and correct movement of air.	
5.2	Revert to normal	SWITCH all systems back to 'normal' and check that all equipment and indicator lamps are in the correct non-fire mode (see Appendices H and I).	

13.4.2.7 *Smoke exhaust systems—Yearly*

Smoke exhaust systems shall be tested on a yearly basis in accordance with Table 13.4.2.7.

TABLE 13.4.2.7

YEARLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SMOKE EXHAUST SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
6.1	Three-monthly tests	COMPLETE all three-monthly test activities as listed in Table 13.4.2.6.	
6.2	Partial simulation	CONDUCT a simulation of a fire/smoke situation from any device such as a sprinkler, heat or smoke detector, to effect operation of the smoke exhaust system and all other systems required to operate in fire mode. Check fans, dampers, automatic doors and indicator lamps operate in fire mode as documented (see Appendices H and I).	
		CHECK: (a) Exhaust airflow rate from the space. (b) Indicator lamps change status when fan starts or stops. (c) That operation of the manual switch provided for fire brigade personnel starts and stops smoke exhaust fans. (d) The maximum noise level in the space. NOTE: In some installations maximum noise criteria may not be specified.	
6.3	Revert to normal	SWITCH all systems back to 'normal' and check that all equipment and indicator lamps are in the correct non-fire mode (see Appendices H and I).	

13.4.2.8 *System shutdown—Yearly*

Systems shutdown shall be tested on a yearly basis in accordance with Table 13.4.2.8.

TABLE 13.4.2.8
YEARLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SYSTEM SHUTDOWN

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
7.1	Simulation (from detector)	SIMULATE a fire/smoke situation from any device such as a sprinkler, heat or smoke detector, to effect shutdown of all mechanical ventilation systems not required to operate in fire mode. CHECK all systems required to shut down are not operating (see Appendices H and I).	

13.4.2.9 *Smoke dampers—Yearly*

Smoke dampers shall be tested on a yearly basis in accordance with Table 13.4.2.9.

TABLE 13.4.2.9
YEARLY TEST AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES SMOKE DAMPERS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
8.1	Normal operation	ENSURE all dampers operate open and close in accordance with the system requirements (see Appendices H and I). CHECK all systems required to shut down are not operating (see Appendices H and I).	

13.4.3 Survey and records

13.4.3.1 *General*

13.4.3.2 *Active fire and smoke control systems—Yearly*

Active fire and smoke control systems shall have a design and installation survey carried out on a yearly and five-yearly basis in accordance with Table 13.4.3.2.

TABLE 13.4.3.2

YEARLY SURVEY AND RECORDS SCHEDULE
FIRE AND SMOKE CONTROL FEATURES OF MECHANICAL SERVICES ACTIVE FIRE AND SMOKE CONTROL SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	System	CHECK for physical impediments that may impair safe operation of smoke control systems comprising exit pressurization systems, smoke exhaust systems, changeover systems and system shutdown.	
1.2	Alterations	CHECK to ensure mechanical services additions and removals, building work, or unintentional obstructions have not affected the functionality or performance of the original design.	

SECTION A – EMERGENCY LIGHTING AND EXIT SIGNS

A1 GENERAL

This Appendix specifies the requirements to be carried out on the designated emergency lighting or exit signs system at each routine service interval. Any changes and all results of service shall be recorded in accordance with Clause 2.7

A2 SIX-MONTHLY REQUIREMENTS

The activities specified in Tables A1 to A3 shall be carried out at the six-monthly service frequency, with a tolerance of ±1 month.

TABLE A1 – SCHEDULE 1 – SIX MONTHLY – SERVICE AND MAINTENANCE RECORDS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
1.1	Service and maintenance records	CHECK the service and maintenance records and confirm the previous scheduled inspection and/or test was completed and within tolerance.	
1.2	Service and maintenance records - Critical defects	CHECK the service and maintenance records and confirm any previously recorded critical defects have been rectified.	
1.3	Service and maintenance records - Non-critical defects	CHECK the service and maintenance records and confirm any previously recorded non-critical defects have been rectified or other actions taken.	
1.4	Service and maintenance records - Non-conformances	CHECK the service and maintenance records and confirm any previously recorded non-conformances have been rectified or other actions taken.	
1.5	Service and maintenance records - Observations	CHECK the service and maintenance records and review any previously recorded observations.	

TABLE A2 – SCHEDULE 2 – SIX MONTLY – SELF CONTAINED EMERGENCY LUMINAIRES AND EXIT SIGNS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
2.1	Emergency luminaire, exit and directional signs	INSPECT each emergency luminaire or exit sign. Record if it is functioning, i.e. operating as required.	
2.2	Emergency luminaire, exit and directional signs—Condition	CHECK each emergency luminaire or exit sign is free from significant damage, deterioration, contamination or other condition that is likely to adversely affect its function. Record outcome, e.g. noted, replaced, cleaned. See Notes 1 and 2.	
2.3	Exit and directional signs—Direction to required exit	INSPECT each emergency exit and directional sign. Confirm the sign is directing traffic correctly in accordance with the approved design	
2.4	Exit and directional signs—Sensors or other controls	INSPECT each emergency exit and directional sign, (i.e. internally illuminated, dual function or low luminance—theatre exits or externally illuminated exit signs) are not on a sensor or time controlled circuit.	
2.5	Requirements for exit signs	CHECK all exit signs for correct situational use in accordance with the baseline data. Record a pass if all exit signs are suitable for situational use. NOTE: Each type of exit sign (internally illuminated, low luminance or externally illuminated) has distinct applications.	

2.6	Automatic test systems, control and indicating equipment - Condition	INSPECT control and indicating equipment for any condition for that could adversely affect its operation. See Note 3.	
2.7	Emergency luminaire and exit signs—Initiate duration test	INITIATE the operation of each emergency luminaire and exit sign by simulating the loss of primary power using the designated test facility, which may be automatic, manual, circuit breaker or fuse.	
2.8	Emergency luminaire and exit signs	INSPECT each emergency luminaire or exit sign for the required duration. Record the pass/fail result for each fitting. (The record may be via self-test indication, automatic or manual methods.)	
2.9	Defined service life	CHECK the logbook and baseline data for any emergency luminaire, exit sign or component with a defined service life. Record each item that has exceeded the defined service life or is due for replacement before the next scheduled maintenance activity.	
2.10	Check each initiated discharge system is reverted to normal operation	INSPECT each automatic or manual discharge test facility and ensure it has been returned to normal operation	
2.11	Check externally illuminated exit sign. Greater than 200 lx is required on face	MEASURE illumination on face of any externally illuminated (i.e. image on wail) exit sign, Record measured result. Record higher than 100 lx.Pass if greater than 200 lx.	

Notes:
1. Refer to Appendix C for information on cleaning.
2. Conditions affecting exit signs include any aspect that may affect the visibility of an exit sign. Specular reflectance on the face of an exit sign may reduce sign readability at certain viewing angles. This should be considered by installers and in maintenance. For example, a window or bright light may be reflected in the face of an exit sign such that it is difficult to read.

3. Refer to Appendix F for guidance on computer system maintenance for automatic test systems.

TABLE A3 - SCHEDULE 3—SIX-MONTHLY-CENTRAL BATTERY SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
3.1	Control, charger and indicating equipment	INSPECT control and indicating equipment for any condition that could adversely affect its operation	
3.2	Battery power supply - Electrolyte level (where required)	INSPECT the electrolyte level in each cell and top up with distilled or demineralized water to comply with the manufacturer's recommendations	
3.3	Battery power supply- Electrolyte leakage	INSPECT each cell for any electrolyte leakage. Neutralize and mop up any spilt liquid, as necessary	
3.4	Battery power supply- Terminal connection	INSPECT each cell connection for any evidence of corrosion and ensure each conductor joint is secure. Treat each exposed metal surface with a coating of petroleum jelly or other suitable battery terminal preservative	Any activity deemed included
3.5	Control, charger and indicating equipment- Battery charger	INSPECT each battery charger for any condition which could adversely affect its function	
3.6	Control, charger and indicating equipment- Contamination	INSPECT each control, charger and indicating equipment cabinet and ensure excessive contamination is removed or cleaned prior to undertaking a test	Any activity deemed included
3.7	Control, charger and indicating equipment - Conductor connections	INSPECT each conductor connection and confirm each connection is secure	Any activity deemed included
3.8	Control, charger and indicating equipment- Float voltage	MEASURE and record the battery charger float voltage and ambient battery temperatures. Verify the charger float voltage against manufacturer's recommendation to ensure that, when corrected for temperature, the float voltage value is within the required limits.	
3.9	Batteries-Flooded lead acid (where installed)	MEASURE and record the overall battery voltage and each cell voltage to the second decimal place	
3.10	Control, charger and indicating equipment - Visual and aural Indicators	CHECK the operation (where possible) of each visual and/or aural indicator	
3.11	Battery enclosure ventilation	INSPECT each battery enclosure to ensure there is adequate ventilation and ensure there is no accumulated hazardous gasses	

A3 YEARLY REQUIREMENTS

The procedures specified in Tables A4 and A5 shall be carried out at the yearly service frequency, with tolerances interval of ±2 months. NOTE: All applicable tests of the shorter service intervals are also required at the yearly i.e. apply 6 month tests and then the 1 year conditions.

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
4.1	Six-monthly service	CONDUCT each activity set out in Schedules 1, 2, and 3, as appropriate. Confirm each activity has been completed and record the results	
4.2	Indirect lighting systems—Reflecting surfaces (where fitted)	INSPECT the finish of predominant reflecting surfaces, including ceilings and walls for any change that could adversely affect the approved design	
4.3	Directional beam luminaires (where fitted)	INSPECT each directional beam is aimed in accordance with the approved design and it is not directed into the eyes of the occupants while moving through the path of travel to a required exit	
4.4	Normal lighting and emergency operating relationship	INSPECT the emergency luminaire and exit sign is in the correct relationship to the normal lighting in the designated area. (See general requirements for the arrangement and control of emergency luminaires and exit signs in AS/NZS 2293.1.)	
4.5	Emergency luminaire and exit signs—Tubular fluorescent lamps	INSPECT each emergency luminaire or exit sign fitted with a tubular fluorescent lamp. Replace any lamp with excessive end-blackening	
4.6	Exit signs—Performance reduction through light emission depreciation	INSPECT each exit sign to ensure it is operating, is distinctly visible and that there has been no visually significant reduction in light output or brightness	
4.7	Exit signs—Externally illuminated	INSPECT each exit sign location. Ensure the associated emergency luminaire is operating and exit sign is distinctly visible	
4.8	LSL (end of light source life)	CHECK each emergency luminaire or exit sign has sufficient LSL remaining to achieve next routine service. Once LSL is achieved, refer to Table A6. Refer to Notes 2 and 3.	
4.9	Survey—Emergency light and exit sign schedule	CHECK the emergency luminaire or exit sign against the listing of products installed or location listing or drawings for any condition, alteration or addition since the last scheduled maintenance activity	
4.10	Survey—Fire control centre (where fitted)	INSPECT and test each required fire control centre to verify the minimum illumination requirement achieves the approved design	
4.11	Survey—Emergency Luminaires	INSPECT the building to ensure the there is adequate emergency lighting in accordance with the approved design	
4.12	Survey—Exit and directional signs	INSPECT the building to ensure that there is adequate identification of exits and paths of travel to exits, in accordance with the approved design; i.e. check for unauthorized modification of building use since last audit	
4.13	Inspect—Non- maintained exit signs	CHECK non-maintained exit signs are illuminated when smoke detectors are fitted and activated	
4.14	LED-maintained emergency luminaires—Performance reduction through light emission depreciation	Where no manufacturer LSL specified the ongoing viability of the installed luminaires shall be assessed in accordance with Clause 3.5.2. Check the spacing between emergency luminaires is in accordance with the classification determined above.	
4.15	LED exit signs or directional signs— Performance reduction through light emission depreciation	Where no manufacturer declared LSL specified, the ongoing viability of the installed signs shall be assessed in accordance with Clause 3.5.2.3.	

Notes:
1. Where fitted, recognizes that the absence of elements or components of a system that were not required as part of the approved design need not be retrofitted and the related routine service activity is not to be considered a defect or non-conformance if not performed.
2. LED manufacturer's LSL is as shown in AS/NZS 2293.3. It is based on L?o values calculated from the in-situ temperature measurement temperature applied using 1EC 63013 or the IES TM-21 or IES TM-28 methodology.
3. The LSL is a basic requirement checked each year, as the LSL may be rated as some other period than 1,5 or 10 years, i.e. 4 or 7 years. For example, If LSL is stated as being 7 years, it will be necessary to apply the LSL test conditions, once the luminaire has been in service for 7 years.
4. Exit sign type may include internally illuminated, exit sign only or dual function (emergency luminaire and exit sign), low luminance—theatre exits or externally illuminated (image on wall) signs.

TABLE 5 – SCHEDULE 5 – YEARLY – CENTRAL SYSTEMS

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
5.1	Six-monthly – Central systems	CONDUCT each activity set out in Schedules 1, 2 and 3. as appropriate. Confirm each activity has been completed and record the results	

5.2	Central systems only- Batteries—Lead acid	RECORD the electrolyte density and state of charge for each cell. NOTE: State of charge determined from the measured electrolyte density and the data provided in the operating and maintenance manual or by the manufacturer of the battery.	
5.3	Central systems only Batteries—All types	RECORD the overall battery voltage and each cell voltage with an instrument having an accuracy of 1.5% or better. Record each voltage to the second decimal place	
5.4	Central systems only- Batteries—All types	CHECK each battery and cell voltages obtained to ensure each battery is being charged correctly and operating within its required parameters	
5.5	Central systems only - Control, charger, batteries and indicating equipment - Voltmeter	VERIFY and record the calibration of each voltmeter used with an instrument having an accuracy of Class 1% or better	
5.6	Central systems only - Battery voltage—After mains fail test	RECORD the overall battery voltage immediately after the simulated mains fail test. Acceptable limits for the battery voltage are specified under particular requirements or exit signs in AS/NZS 2293.1	
5.7	Central systems only - Battery voltage—After mains fail test	Restore the system to normal operation, turn the battery charger on, and manually select the boost-charge mode, if provided. Carry out the following: a) Check that after the batteries have been recharged, the battery charger has changed over automatically to the float-charge mode. b) For d.c. reticulated systems, measure the maximum voltage at the origin of the emergency lighting distribution system during boost charging. The voltage measured as required by Item (b) shall be not more than 125% of the nominal system voltage. This check may require the connection of a suitable peak-reading voltage measuring instrument during boost charging.	

A4 – 10 YEARLY AND END OF LIGHT SOURCE LIFE REQUIREMENTS

The procedures specified in Table A6 shall be carried out at the 10-yearly service frequency, with a tolerance interval of ±3 months, or when maintained LED emergency luminaires and exit signs have reached the LSL.
NOTE: This means all applicable tests of the shorter service intervals are also required, i.e. apply tests of 6-monthly and yearly, unless LSL has been reached.

Item No.	Item	Action required and pass/fail requirement	Inspection only (green), activity required (red)
6.1	Six-monthly and yearly services—All systems	CONDUCT each activity set out in Schedules 1 to 5, as appropriate. Confirm each activity has been completed and record results	
6.2	Maintained LED emergency luminaires and dual function exist signs—LSL	Manufacturer declared LSL specified in the baseline data. The ongoing viability of the installed luminaire/exit sign shall be assessed (rounded to the nearest year) in accordance with Clause 3.5.2.5. Check the spacing between emergency luminaires is in accordance with the classification determined above	
6.3	LED exit signs or directional signs—LSL	Manufacturer declared LSL specified in the baseline data. The ongoing viability of the installed LED signs shall be assessed at the end of the specified LSL (rounded to the nearest year) in accordance with Clause 3.5.2.6	

Schedule 5 (Technical Specifications)

Table of Contents

Section 1 - Introduction **201**

Section 2 - Demolition **207**

Section 3 - Concreting **210**

Section 4 - Carpentry and Joinery and Minor Repairs **213**

Section 5 - Roofing **232**

Section 6 - Wall and Floor Tilings **238**

Section 7 - Carpet and Resilient Flooring **243**

Section 8 - Painting Preparation **248**

Section 9 - Painting Interior **251**

Section 10 - Painting Exterior **257**

Section 11 - Metal Work **264**

Section 12 - Electrical **268**

Section 13 - Master Antenna Television Systems, Data Cabling and Telephony **283**

Section 14 - Plumbing (General Use) **290**

Section 15 - Timber and Metal Fencing **300**

Section 16 - Tree Pruning **307**

Section 17 - Cleaning **309**

Section 18 - Pest Control **313**

Section 19 - Reinstatement of Fire Damaged Property **317**

Section 20 - Fire Safety Works **318**

Section 21 - Vacant Restoration **321**

Section 1 - Introduction

The document sets out technical requirements associated with the Maintenance Works under the Contract. The document is divided into the following Sections:

Section 1	Introduction (this section)
Section 2	Demolition
Section 3	Concreting
Section 4	Carpentry and Joinery and Minor Repairs
Section 5	Roofing
Section 6	Wall and Floor Tiling
Section 7	Carpet and Resilient Flooring
Section 8	Painting Preparation
Section 9	Painting Interior
Section 10	Painting Exterior
Section 11	Metal work
Section 12	Electrical
Section 13	Master Antenna Television Systems
Section 14	Plumbing
Section 15	Timber and Metal Fencing
Section 16	Tree Pruning
Section 17	Cleaning
Section 18	Pest Control
Section 19	Reinstatement of Fire Damaged Property
Section 20	Fire Safety Works
Section 21	Vacant Restoration

This document is to be read in conjunction with all other Contract Documents.

General

The Contractor must carry out and provide all activities, items materials and labour required to complete the Maintenance Works in accordance with this document and any other requirements of the Contract.

Building Classification: Building classifications are as defined in the Building Code of Australia (National Construction Code).

Drawings: The drawings in Schedule 6 (Component Requirements) are a **guide only** and must not be relied upon by the Contractor for the purposes of carrying out the Maintenance Works. The Contractor must complete all detailed drawings required to undertake the Maintenance Work, as required by the Principal.

Maintenance and operating instructions: The Contractor is responsible for periodic maintenance of installed products, equipment, appliances, surfaces, finishes, Equipment and buildings and structures in accordance with any maintenance instructions provided by manufacturers, suppliers or subcontractors.

Operating instruction manuals for gas and electrical equipment and appliances must be provided (or returned, if applicable) to the Tenant and the Contractor must instruct the Tenant in the use/cleaning of any new appliance provided by the Contractor or, in the case of Vacant Properties, leave the instruction manuals in the kitchen.

Standards: All work must comply with relevant regulatory codes and Standards including the *Work Health and Safety Act 2011 (NSW)* and *Work Health and Safety Regulation 2011 (NSW)*.

Where tolerances or Standards are not specifically identified in a particular relevant code or standard, reference must be made to the Guide to Standards and Tolerances 2017 for compliance.

Standard of Finish: Maintenance Works must be finished to the same specification, standard, surface preparation and paint finish as the adjoining finish unless otherwise specified by the Principal. The amenity or Equipment of a Property must not be downgraded as a result of maintenance work.

Colour Schemes: The Contractor **must provide** 5 external and internal colour schemes for approval by the Principal prior to the Maintenance Works Commencement Date.

Samples: Where the Contract requires prior approval of samples the Contractor must submit samples and adequate technical literature for the Principal to assess the proposed products or systems. The Contractor must not proceed with the work before receiving approval and must retain approved samples for comparison with the finished work.

Prior approval is required for finished colours of painted and other surfaces including, laminates, tiles, roofing (all roofing material must be Solar Absorptance and have a rating less than <0.45) Roof colour schemes should be equivalent to colorbond colours considered 'light' by BASIX classification with the exception of Dover White which should not be installed, tile patterns and carpets. The Contractor is to provide 5 generic colour schemes during the Transition In Period. The colour schemes are to be provided on sample boards sufficient to show the colour scheme for a complete Property.

During the Transition In Period, the Contractor must provide samples of floor coverings and tiles to the Principal together with all the technical information required to demonstrate the proposed carpets compliance with Schedule 6 (Component Requirements).

Terminology: The Glossary of Building Terms (HB 50 – 2004) published by the National Committee on Rationalised Building (NCRB) and Standards Australia is used as a reference source for building terminology in this document.

Rubbish and waste: The Contractor must remove from a Site all rubbish and waste resulting from any Maintenance Works:

- progressively as required (e.g. to prevent a safety hazard or to maintain access)
- at the end of any day on which Maintenance Works are carried out; and
- when a Work Order is completed.

Disposal of waste, materials and equipment: The Contractor must dispose of all waste and redundant material.

Testing: The Contractor must:

a) test (at its own cost) all Equipment and parts of the Maintenance Works specified in the Contact to be tested;

b) give the Principal the opportunity to witness any tests the Principal has instructed or requested to witness by giving reasonable notice; and

c) make the results available to the Principal.

Any testing that is required to be by an independent authority or other third party shall be carried out by an authority or third pary registered with the National Association of Testing Authorities Australia (NATA) to perform the specified Testing.

The Principal reserves the right to attend and witness any test, at its convenience.

The Principal may instruct the Contractor at any time to test any part of the Maintenance Works and the method of testing. The Principal must pay for the tests it has instructed if the results of the tests show full compliance with the Contract unless the test is consequent on the failure of the Contractor to comply with a requirement under the Contract, in which case the Contractor must pay.

The Contractor must record and make good any part of the Mainteannce Works where Defects have been identified due to the tests and must repeat the tests at its own cost, until the results of the tests, as reported in writing to the Principal, confirm that the Mainteance Works comply with the Contract.

Cleaning up prior to Completion: Maintenance Works work at a Site is not considered complete until the following activities, where relevant, have been finished in their entirety:

- any work of a temporary nature has been removed;
- all debris associated with the work has been removed from the Site;
- in the case of sewer, toilet, trap or gully repairs all waste has been removed and/or cleaned from the Site;
- all facilities, utilities, Equipment and appliances are clean and ready for use;
- all temporary markings, covering and protective wrappings have been removed;
- all glass has been cleaned both inside and out;
- all carpets have been vacuum cleaned;
- any item or Equipment which has been damaged during the performance of the work has been replaced or repaired;
- any paint damage has been touched up, carefully matching the colour, and feathering in edges (badly marked areas must be repaired back to a suitable break or junction) in accordance with sections 8, 9 and 10;
- all doors, windows, drawers, hardware, appliances and the like and any other related parts have been adjusted and lubricated as necessary to ensure easy and efficient operation;
- all utilities and appliances are operating and all Equipment in good working order; all items of equipment have been tested and are in good working order;
- maintenance instructions for any new appliances have been submitted to the Tenant or left in the case of a Vacant Property left in the kitchen; and
- paths, fences, lawns, grounds, gardens, and the like, including any item of personal property of any Tenant that was disturbed or in any way affected by the performance of the Services have been replaced or restored so that the items so disturbed or affected are in the same order and condition as they were at the start of the work.

Warranties: Warranties must be provided in accordance with the Contract.

The Contractor must also:

- fix, install or repair appliances, Equipment, utilities and fittings in accordance with the requirements of any relevant authority and the written specifications and directions of the relevant manufacturers so as not to void the manufacturer's warranties;
- test all systems and appliances after installation for correct and reliable operation; and

- leave all appliances in clean and full working order.

Schedule 6 (Component Requirements) specifies the third party warranties that the Contractor is required to provide for new or replacement Equipment and appliances.

Room Definition

Combined Rooms, Kitchen, Dining, and Living Rooms etc.: - a room is only considered to be a combined room where the opening between different functional spaces is greater than 900mm and the consistency and standard of floor or wall finishes cannot be maintained when carrying out Maintenance Works.

Heritage Works

Statutory requirements: Heritage work must be carried out under the requirements of the *Heritage Act 1977 (NSW)* and the *Heritage Regulation 2012 (NSW)*, the heritage requirements of the applicable local authority (e.g. the Local Environment Plan and Development Control Plan), the Principal's Heritage Asset Management Strategy (HAMS), and any specific conservation guidelines issued or exemptions granted by the Minister for Heritage and/or the Heritage Council of NSW to the Principal specifically or all NSW Government Agencies generally.

Maintenance Works carried out on Properties of State significance are to meet the Principal's statutory maintenance obligations under s118 of the Heritage Act, 1977 and the Heritage Regulation 2012, for State significant heritage items on the State Heritage Register.

Maintenance Works carried out on other Properties listed on the Principal's s170 Heritage and Conservation Register, for which it has care, control and management, are to meet the Principal's obligations under s170A (2) and (3), and are to be maintained with due diligence in accordance with the State Owned Heritage Management Principals and the Heritage Asset Management Guidelines issued by the Heritage Council of NSW.
The heritage maintenance work required under the Contract includes the repair and maintenance of Properties of heritage significance in the categories set out in Table 1 below.

Contract	Description of Category	Maintenance Standard
Category HA	Properties listed on the **State Heritage Register** (SHR) under the ***Heritage Act, 1977*** (e.g. the Millers Point Precinct).	Properties Requiring HERITAGE Maintenance
Category HB	Properties of significant to the history of social housing in NSW. Examples include Ways Terrace at Pyrmont, the Strickland Buildings at Chippendale, the Erskineville Estate and the Daceyville Garden Estate.	
Category HC1	Properties of **local significance**, generally related to building style, setting or history. They can be listed on Council **Local Environment Plans** (LEP) under the ***EP&A Act, 1979*** as: Individual buildings or groups of buildings; or as a significant streetscape within a Conservation Area.	

	They include much of the Glebe Estate, areas of Waterloo, Woolloomooloo, and individual local heritage items.	

Contract	Description of Category	Maintenance Standard
Category HC2D	Properties considered to have some degree of heritage significance but due to the nature of that significance or the degree of change heritage maintenance is not required to retain those values. Properties as listed on the HNSW s170 Heritage and Conservation Register with no intrinsic heritage values. They may be located within Local Conservation Areas e.g. modern infill developments etc.	**Properties Requiring STANDARDS Maintenance**

Category HA & HB Properties Category HC1 Properties

Local Heritage Value Maintenance addresses the repair and maintenance of nominated Housing NSW Buildings and precincts of local heritage significance requiring specialist heritage maintenance to retain their heritage significance. The Principal's maintenance principles to retain local heritage significance are similar as high heritage value properties, specifically:

- if repair is not feasible, replace like with like, and
- do as much as necessary but alter as little as possible (The Burra Charter 1999).

Category HC2D Properties

Not all Properties on the S.170 Register are nominated for heritage maintenance.

Heritage Properties are contained predominantly in the Inner City, Inner West and Eastern and Southern Suburbs Contract Areas.

The Principal also manages the maintenance of residential heritage properties for other organisations. The Contractor may or may not be required to undertake works on such Properties. The decision to direct such work to be carried out under the Contract shall be at the absolute discretion of the Principal.

Documentation - Heritage work: The Contractor must fully document Heritage work required and provide a report to the Principal. The work must not start before the Principal's approval is received.

Storage of Removed Elements - Heritage Works: Any elements of the heritage significant fabric that are temporarily removed from a place during the performance of Heritage work, including contents, fixtures and objects, must be properly catalogued, protected and stored temporarily in a secure area protected from weather. Details of each salvaged elements/objects must be stored at an approved designated area by the Principal. All stored materials remain the Property of the Principal.

Building Essential Services - Heritage work: The Contractor must adhere to best engineering building services conservation practice when carrying out work on mechanical, electrical, plumbing, fire protection, and security systems and the following:

- install services in areas and spaces that will require the least possible alteration to the structural integrity and physical appearance of the building or Property do not cause damage to the heritage significant fabric and appearance of the building or Property when installing new mechanical systems or additional mechanical services. Where practicable re-use service ducts and pipes, including plumbing and early lighting fixtures, fittings, switches etc.; install exterior electrical and telephone cables underground, where possible, to preserve the historic setting, unless they were part of the historic scene; where practicable install services such as ducts, pipes, and cables in closets, service rooms and wall cavities; do not install vertical runs of ducts, pipes and cables in areas where they will be a visual intrusion;

END OF SECTION 1

Section 2 - Demolition

General

Scope: This section sets out the requirements for the demolition required to carry out work under the Contract. It covers the whole or partial demolition of structures. Any demolition must be carried out in such a way to minimise risks to health and safety and damage to the environment.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 2601: Demolition of structures;
- AS/NZS 4576 : Guidelines for scaffolding;
- NSW Code of Practice for the Safe Removal of Asbestos, available on Safe Work NSW website https://www.safework.nsw.gov.au/; and
- Urban Growth NSW - Managing Urban Storm water: Soils and Construction, (the Blue Book) available on the website of the NSW Office of Environment and Heritage https://www.environment.nsw.gov.au/

And all other relevant standards, Acts, codes of practice and guidelines including WHS Management and safe working practices, Environmental Management, and Waste Management.

Authorities: Obtain all relevant permits and consents prior to commencing any work under the Contract. Pay all fees and charges.

Meters for Utilities (Water, Power and Gas): On Completion of demolition of Utilities the Contractor must remove and return all redundant meters to the relevant local authorities return and documentation to the Principal.

Extent of demolition work: Demolish existing structures, to the extent required to enable the new work to be carried out.

Complete demolition: If complete demolition is required:

- demolish Building and structures down to existing finished ground level. Do not remove any support to adjacent property;
- remove and dispose of old foundations, floor slabs and paths;
- remove and dispose of waste materials from redundant Utilities;
- cap disused drains and manholes in accordance with local authority requirements; and
- remove old tanks and underground structures and dispose of waste material off the Site; and
- place an adequately compact backfill in trenches from which Utilities have been removed.

Make good damage: if the demolition work results in any damage to Property or Structures on adjoining the Site or to reinstate and make good the damage at no additional cost to the Principal.

Mains power supply: ensure the disconnection and re-connection of mains power is undertaken by the local energy authority or by a suitably licensed and qualified electrician. Obtain approval from the local energy authority before disconnecting or re-connecting of the mains power.

Fixed appliances: The disconnection and re-connection of fixed appliances must be undertaken by a licensed and qualified tradesman, i.e.: electrician, plumber or gasfitter.

Burning off: Do not burn off waste on any Site.

Demolition licensing: Contractors are required to be properly licensed to carry out demolition work in accordance with the *Work Health and Safety Act 2011*, and the requirements of regulatory authorities including SafeWork NSW.

Demolished materials: except where otherwise specified in the Contract demolished materials become the property of the Contractor and must be removed from the Site as work proceeds and disposed of at waste management facilities that can lawfully receive the types of materials.

Site clearing - HERITAGE PROPERTIES: Do not make changes to the appearance of the Site by removing old plants, trees, fencings, outbuildings, and other elements without approval from the Principal. To seek approval the Contractor must submit to the Principal, a report on the feature to be removed including details of its importance in the history and development of the Facility.

Salvaged items or Heritage items: salvaged items and heritage items which the Principal identifies are to remain the property of the Principal must be carefully dismantled, stored safely and recorded on a register for salvaged/heritage Equipment. Refer Section 1 Storage of Removed Elements – Heritage Works.

Stockpile topsoil: Where required for reuse, stockpile excavated topsoil on Site. Keep separate from other excavated materials. Spread and level where required before Completion of the works.

Explosives: Do NOT use explosives in demolition

Preparatory Work

WHS Management Plan: Refer to AS 2601, Appendix A - Demolition Checklist. Undertake preliminary investigations to obtain relevant information and then develop and prepare a WHS Management Plan for the proposed demolition work.

Utilities: Before starting demolition ensure all Utilities are disconnected or removed as required.

Soil and water management: Implement erosion and sediment control measures on the Site prior before starting any demolition, clearing, scrub removal, bulk earthworks or excavations. Maintain and adjust these controls as necessary to protect the environment during the course of the work. Refer to Urban Growth NSW - Managing Urban Stormwater: Soils and Construction (the Blue Book).

Precautionary Measures

Adjoining Properties: Take all precautionary measure necessary to avoid damage or nuisance to adjoining Properties. Where it is considered necessary prepare a dilapidation report with photos of neighbouring properties, particularly where the Buildings to be demolished abut adjoining boundaries. Provide a copy of any dilapidation report to the Principal before starting the associated work. Provide supports to adjacent structures, where necessary, to prevent damage resulting from the works.

Protection: Protect parts of the Site that are not affected by the demolition and existing structures that are to be retained. Cut away and strip out with care to reduce the amount of making good to a minimum. Any Damage resulting from failure to protect adequately must be made good at no cost to the Principal.

Temporary screens: Erect suitable screens wherever required to prevent penetration by weather, dust and dirt and adjust as necessary as work proceeds.

Supports: Provide supports and brace existing Structures as necessary during cutting of new openings or replacing structural parts. Prevent debris from overloading any part of any affected structure. Do not remove supports until new work is strong enough to ensure all Structures on the Site at all times structurally stable and sound.

Security: Prevent access by unauthorised persons. Leave the Site safe and secure at the end of each days.

Dangerous hazards: protect the Site as necessary in accordance with the Contract.

Flammable or explosive conditions: Take precautions to prevent fire or explosion and where a risk of fire or explosion exists take all necessary actions to alert appropriate authorities.

Existing trees: Protect all trees and shrubs from damage, throughout the course of the work or unless otherwise approved by the Principal.

Separation of hazardous materials: Where it is difficult to separate hazardous materials for disposal, e.g. fire affected hazardous materials, all combined materials must be disposed of as if classified hazardous. Refer to NSW Environment Protection Authority for further direction where uncertain.

END OF SECTION 2

Section 3 - Concreting

General

Scope: This section sets out the requirements for the demolition and removal of existing concrete, excavation and filling of foundations, base preparation, reinforcement and for the supply and laying of concrete for paths, driveways, ramps, stairs and the like.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 2870: Residential Slabs And Footings – Construction;
- AS 3727: Guide To Residential Pavements;
- AS 3600: Concrete structures;
- AS 3799: Liquid membrane-forming curing compounds for concrete;

and all other relevant standards, Acts, codes of practice and guidelines.

Drainage: Before starting work the Contractor must ensure that the proposed surface levels and grades will drain all surface water to a suitable storm water drainage system.

Define boundaries: The Contractor must ensure that the completed work lies within the defined boundaries of the particular Facility.

Concrete Specification

Concrete may be either ready mixed or mixed on Site, as specified in this section.

Concrete mix:

- Water: must be clean, free from oil, salt, acid, alkali or other deleterious substances.
- Sand: must be clean, sharp and free from salt or other impurities.
- Cement: must be fresh and taken from unopened bags. Cement stored on Site must be adequately protected from moisture.
- Coarse Aggregate: must be clean, hard tough and durable crushed stone and/or gravel, free from elongated pieces, dust clay or other deleterious matter.

Site mixed concrete: Concrete may be mixed on Site where it is required for work involving up to $1m^2$. Accurately measure all the required materials using suitable gauge boxes. Mix in a suitable power mixer with the addition of sufficient water to ensure workability of concrete. When the wet concrete leaves the mixer, the slump must not be not less than 50mm or more than 100mm using a standard cone. Take slump tests and record the results for quality purposes. Add no water to concrete after it leaves the mixer.

Ready mixed concrete: The company supplying ready mixed concrete may be required to submit statistical evidence of the quality control measures adopted to ensure that the concrete supplied conforms to the specified requirements.

Strength: Concrete must have an average strength appropriate to the requirements for the finished structure. For example 20 MPa concrete is required for pedestrian traffic and 25 MPa for vehicular traffic.

Clearing

Site Preparation: Remove all turf, vegetation, trees, topsoil, stumps and rubbish from the area to be concreted.

Excavation

General excavation: Trim ground to required profiles, batters, falls and levels. Remove all loose material. Protect all cut faces from collapse. Keep all excavations free from water.

Filling: Provide and thoroughly consolidate suitable filling (75mm thick road base where required under reinforced concrete driveways) where required to achieve a suitable foundation within the area to be paved. Compact fill to the relevant Standards using a mechanical plate compactor.

Concrete Pavement

Workmanship: Lay and finish paving in alternate bays not exceeding 20m² in area. Paving thickness must be between 75 to 100mm thick as specified in this section.

Formwork: Securely fix and brace formwork as required to ensure it has sufficient strength to support all loads. Make joints and linings tight enough to prevent loss of water. Ensure curves are smooth in appearance. Hose out to clean thoroughly before pouring concrete and keep wet before and after concrete is placed.

Control joints: Provide control joints to be provided as specified in AS3727, Table 2.

Reinforcement: Reinforce slabs with reinforcing mesh, free from rust or any coating. Place reinforcement centrally in the slab and support on suitable saddles.

Surface finish: Provide a non-slip finish (broom or as directed) to surfaces. Use a smooth edging tool for joints and edges in accordance with standard practices.

Concrete Paths, Wheel Tracks and Driveways

Workmanship: Place concrete between properly supported forms in bays. Thickness must be 75mm thick for paths, 100mm thick for wheel tracks, and 100mm thick for driveways. Provide 10mm thick bituminous expansion strips between every third bay to full depth of concrete.

Broom finish concrete to a non-slip finish. Run a clean tooled joint between each pair of slabs. Rounds off all free outer edges with a suitable edging tool.

Repairs to paths / wheel tracks / driveways: Cut back broken paving to a solid edge. Break up and remove broken sections of concrete from Site. Supply and lay 75mm/100mm thick concrete for paths, wheel tracks and driveways respectively. Make joints and finish, and cure as specified below.

Concrete Ramps and Stairs

Mass concrete ramps: Form up and pour mass concrete ramps to a maximum rise of 450mm, gradient not to exceed the requirements of the relevant Australian Standard. Ramps must be a minimum of 1200mm wide and finished to a non-slip finish.

Provide termite treatment for mass ramps.

Install a suitable flexible membrane between the ramp and existing Buildings.

Mass concrete stairs: Construct to AS 2870 and AS 3600. Form up and pour mass concrete stairs to a maximum height of 600mm, with:

- equal risers and goings in accordance with BCA Table D2.13 Riser and Going Dimensions;
- broom finish;
- treads pitched forward at 1% to drain surface water;
- vertically splayed risers with non-projecting bevelled nosings; and
- 25mm rounding to nosings of all treads.

In common areas of a Facility provide two (2) 25mm wide carborundum strips to all stair nosings. Provide strips for the full length of treads. Cast strips in-situ and fixed to manufacturer's instructions.

Handrails to ramps and stairs: Refer to Section 11 Metal Work for specification for handrails.

Curing of Concrete

Protect fresh concrete from premature drying and extremes of temperature. Use suitable methods to limit evaporative drying and keep damp for not less than seven days. Cure all concrete, including exposed edges of slabs or edge beams, for the minimum period specified in the relevant Australian Standards.

Ensure curing of slabs commences as soon as practicable after final finishing of any unformed finish. Achieve curing by the application of water to, or the retention of water, in the freshly cast. Where the retention of water in the fresh concrete relies on the application to exposed surfaces of sprayed membrane-forming curing compounds, use compounds complying with AS3799.

Ensure any membrane used will not affect subsequent applied finishes.

Concrete Laybacks

Construct concrete laybacks to meet the requirements and approval of the relevant local authority

Vehicle Crossovers

Construct vehicle crossings to meet the requirements and approval of the relevant local authority.

Making Good - Top Soil, Grass Seeds and/or Turf

Make good adjoining areas with top dressing soil and grass seeds and/or turf of similar type to the surrounding grasses.

Remove all surplus excavated soil from the Site. Use clean topsoil and sow with grass seeds or turf to finish level with top of concrete. Remove all broken and surplus concrete and trade rubbish from the Site

END OF SECTION 3

Section 4 - Carpentry and Joinery and Minor Repairs

General

Scope: This section sets out the requirements for carpentry, joinery, reglazing of windows, internal glazing and mirrors, the provision of all door and window hardware, the repair and/or supply and installation of timber and or aluminium windows and doors, the repair/renewal of kitchen cupboards, timber joinery, wall and ceiling linings, clothes hoists, fly screens to doors and windows, floors, porches, exterior wall cladding and minor brickwork, including related heritage conservation work.

Standards: All work must be carried out to the current requirements of regulatory authorities as applicable to the type of work being performed (whether specifically mentioned or not). Examples of Standards applicable to minor repairs include (but are not limited to) the following:

AS1214: Hot-dip galvanised coatings on threaded fasteners (ISO metric coarse thread series)

AS 1231: Aluminium and Aluminium alloys

AS 1288: Glass in buildings - Selection and installation

AS 1397: Continuous hot-dip metallic coated steel sheet and strip

AS 1604: Specification for preservative treatment – Sawn and round timber

AS 1684.1: Residential timber-framed construction

AS/NZS 1859.1: Reconstituted wood-based panels - Specifications – Particleboard

AS/NZS 1859.2: Reconstituted wood-based panels - Specifications - Dry-processed fibreboard

AS/NZS 1859.4: Reconstituted wood-based panels - Specifications - Wet-processed fibreboard

AS/NZS 1860.1: Particleboard flooring – Specifications

AS 1905.1: Components for the protection of openings in fire-resistant walls - Fire-resistant door sets.

AS 2047: Windows in buildings - Selection and installation

AS/NZS 2269: Plywood – Structural - Specifications

AS/NZS 2588: Gypsum plasterboard

AS/NZS 2699.2: Built-in components for masonry construction - Connectors and accessories

AS/NZS 2699.3: Built-in components for masonry construction - Lintels and shelf angles (durability requirements)

AS/NZS 2699.1:Built-in components for masonry construction - Wall ties

AS 2796.1: Timber - Hardwood - Sawn and milled products - Product specification

AS 2904: Damp Proof Courses and Flashings

AS/NZS 2908.1: Cellulose-cement products - Corrugated sheets

AS 3566: Self-drilling screws for the building and construction industries

AS 3700: Masonry structures

AS 3715: Metal Finishing - Thermoset powder coating for architectural applications of aluminium and aluminium alloys

AS 4055: Wind loads for housing

AS 4145.2: Locksets and hardware for doors and windows- Mechanical locksets for doors and windows in buildings

AS4200.1: Pliable building membranes and underlays - Materials

AS4200.2: Pliable building membranes and underlays - Installation requirements

AS4456: Masonry units and segmental pavers and flags - Methods of test

AS 4506: Metal Finishing – Thermoset Powder Coatings

AS4600: Cold-formed steel structures

AS/NZS 4680: Hot –dip galvanized (zinc) coatings on fabricated ferrous articles

AS 4785.1: Timber - Softwood - Sawn and milled products - Product specification

Glazing

Materials: Provide glazing to AS1288 unless otherwise specified or directed and in accordance with Schedule 6 (Component Requirements).

Glazing Material:

- **Clear Glass:** Provide clear float glass processed to give flat parallel surfaces.
- Wired Polished Glass: Provide Georgian wired steel mesh clear glass.
- **Laminated Glass:** Provide standard clear glass with a high adhesion interlayer, min 0.38mm thick.
- **Glass Mirror:** Provide silvered float glass with back face plastic sprayed.
- **Obscure Glass:** Where located in a bathroom or WC, glaze with cast pattern on the inside face. Match pattern to existing or similar.
- **Double Glazed:** Provide double glazed windows, two panes of glass separated by a vacuum:
- **Safety Glass:** Provide permanently branded safety glass of the following grades:
- Clear toughened safety glass grade 'A', or
- Clear laminated safety glass grade 'B'.
- **Louvre Blades:** Provide safety glass, with ground and arrised edges.

Glazing Accessories: Provide accessories including putty, glazing compounds, sealants, gaskets, glazing tapes, spacing strips, spacing tapes, spacers, setting blocks and the like appropriate for the application and required performance and to manufacturers written specification.

Workmanship:

Installation: Ensure each piece of glass is held firmly in place by permanent means applicable to its location without damage to, or failure of, glass or glazing materials. Ensure external glazing is watertight and prevents the entry of rainwater into the Building. Install flashings, weather bars, drips, storm moulds, caulking and pointing so that water is prevented from penetrating the Building between the frames and the Building fabric.

Broken Glazing: Dismantle and remove from the Site all broken glazing, including mirrors. Clean out rebates. Repair glass to match existing.

Glass replacement in high vandalism areas: When replacing broken glass in high vandalism areas, Polycarbonate material may be used.

Windows and Sliding Doors

General: Provide proprietary windows and sliding doors including all the necessary hardware and accessories. Comply with the testing and performance requirements in Schedule 6 (Component Requirements).

Samples: Submit samples, when requested by the Principal, of full size sections with the selected finish and hardware for all profiles offered.

MATERIALS – ALUMINIUM WINDOWS AND SLIDING DOORS: as above for glazing materials

MATERIALS – TIMBER WINDOWS AND SLIDING DOORS: Provide only where required to match existing.

Exterior frames:

- provide heads, jambs, frames, mullions and transoms manufactured to existing in accordance with the details in Schedule 6 (Component Requirements - Timber Schedule and Drawing Details);
- provide frames to match existing available; and
- select glazing type and thickness to suit performance requirements, with particular consideration for human impact.

Sashes and Reveals: Match the existing where available, or provide similar.

Workmanship:

Handling: Handle, unload and store Equipment in accordance with the manufacturer's written specifications. Prevent distortion, pre-finished surfaces rubbing together, and contact with mud, moisture and other damaging materials.

Corrosion protection: Before fixing glazing, apply suitable barriers of bituminous coatings, slips or underlays between dissimilar metals and between concrete or masonry and aluminium.

Fixing: Fit flashings to frames and framing as required. Fix frames in place in accordance with the manufacturer's written specifications, plumb, level and true to line and face without distortion and with all opening sashes operating easily. Fit all architraves, mouldings and trims as required. Seal frames to adjoining Buildings as recommended by the manufacturer to ensure the Building is weather tight.

Protective covering/coatings: Retain these in place during fixing wherever possible. Provide additional protection as necessary to prevent the marking of surfaces in completed work.

Repairs – Existing Aluminium windows and sliding doors: Straighten or replace aluminium sections and reinstate all aluminium. Where matching beads are unobtainable provide a solid rectangular extrusion screw fixed and bedded with sealant or neoprene weather-strips. Replace weather-strips to match existing. Supply and fit rollers to match existing. Fix sealing strips as required with profile sizes to suit.

Repairs – Existing Timber windows and sliding doors: Repair by replacing timber sections with similar profiles to those existing, e.g. head, jamb, sill, mullion, sash, stile, transom, etc. Reinstate all weather grooves. Check for and ensure full swing and ease of action. Supply and fit rollers to match existing. Re-seat or replace hinges where required and if needed plane sashes and paint bare timber providing an even gap all around that is sufficient to allow finishing without binding. Replace rusting screws with non-ferrous type screws. Replace/install window seals to reduce draughts.

Replacement of all windows in a Building: Prior to ordering the windows, confirm by calculations that the aggregate solar heat gain from the proposed replacement windows is equivalent to that of the existing windows and in accordance with Schedule 6 (Component Requirements).

Timber Doors

Timber doors: Comply with Schedule 6 (Component Requirements).

Timber/Steel door frames: Comply with Schedule 6 (Component Requirements).

Fire rated door frames: Comply with Schedule 6 (Component Requirements). Install as part of an approved fire-rated door set assembly in accordance with the BCA.

HARDWARE:

Materials: Provide new hardware to windows and doors to match the existing in the Property. Hardware must comply with Schedule 6 (Component Requirements).

Workmanship:

Installation: Fit replacement hardware to doors, windows and joinery furniture in existing positions. Unless otherwise directed by the Principal, match existing door, window and joinery furniture existing throughout. Provide all necessary fixings to suit the conditions. Conceal fixings where possible. For exterior work, provide aluminium, stainless steel or brass screws and fixings are to be used as appropriate. Avoid contact between incompatible materials and replace affected items where this occurs. Provide fixings of sufficient strength and dimensions to suit the items and materials concerned and to sustain the loads and operation of the equipment. Remove any non-standard hooks, nails, screws and fittings from windows and doors, and make good as required.

Doors: Hang exterior doors on a minimum of 3 x 100mm fixed pin hinges, with electro galvanised finish or in brass. Hang interior doors on a minimum of 2 x 90mm loose pin hinges for doors up to 2040mm high and a minimum of 3 x 90mm loose pin hinges for solid core doors and doors over 2040mm high. Toilet door where the toilet pan and the door is less than 1200 mm is not considered large enough to allow safe removal of an unconscious occupant within the compartment then lift off hinges must be used. Re-hang existing doors and windows with existing hinges when the hinges are in good condition.

Door closers: Provide door closers where required for fire egress purposes, for example for access doors to common stairwells in multi-level, and multi-unit Buildings. Provide types and sizes in accordance with relevant codes. The Contractor must provide and retain certification of compliance with the relevant code where a door closer is fitted on a fire resistant door set assembly.

Door handles: Replace internal door handles like for like, unless otherwise directed.

Door locks: Changing of locks must be undertaken by an accredited Locksmith and precautions must be in place to not key alike properties across the portfolio. The accredited Locksmith must provide certification to Contractor to be held by them but be provided to Principal on request.

Replacement door locks must comply with Schedule 6 (Component Requirements).

Door stops: Provide standard rubber or cushion type door stops and fix to timber or masonry.

Changing/re-keying locks: Remove the cylinder to all entrance doors, including front and rear doors and any keyed patio doors and, for Vacant Properties when directed, keyed screen doors, garage door, external laundry door or lockable internal access door from the garage to the Property, letter box and keyed window locks. All new/replacement lock cylinders are to be keyed alike within the property to the existing lock system, unless the Property is Vacant and lock cylinders must be

replaced; in which case all new lock cylinders must be keyed alike within the property to a new combination. Provide two new keys for each new lock installed. If locks are master keyed all replacement locks and cylinders must be keyed alike to the master key.

Where key-alike is not possible across all key locks, key-alike across groups, e.g. key-alike all window locks.

WINDOWS - ALUMINIUM/TIMBER: Provide the following hardware:

Double Hung:

- keyed window lock, all windows must be capable of being locked in a closed position, and provide safe ventilating locking points 50mm and 100mm from closed position
- sash fastener
- sash balances
- sash lifts

Casement/Hopper:

- keyed window lock
- sash fastener
- window stays

Sliding:

- keyed window lock
- sash fastener

Awning:

- keyed window winder
- window stays

MISCELLANEOUS: Provide the following hardware:

Kitchen Cupboards (HMR/MDF):

- 'D' Handle
- concealed side wall-mounted hinges with 170^0 swing
- full height brass piano hinges for split or bi-fold corner units doors
- Cupboard vent (Timber Only)

Kitchen Cupboards (Timber)

- 'D' Handle

Kitchen Drawer:

- 'D' Handle
- integrated drawer slide system

Kitchen other:

- Tea towel bar

Bathroom:

- Toilet paper holder

- bath towel rail
- shower curtain rail
- stainless steel grab rails
- soap holder
- robe hooks
- shaving cabinet and/or mirror

Joinery

General: Comply with the details applicable to joinery found in Schedule 6 (Component Requirements - Timber Schedule and Drawing Details) if applicable. Prevent or rectify any surface defects.

Architraves/skirting/mouldings: Match existing profiles. Scribe or mitre skirting corner joints and mitre in length joins.

Timber stairs: Provide closed type stairs (i.e. no open risers).

Handrails: Provide and fix handrails to match existing. Where new stair handrails are required, comply with the requirements of the current Australian Standard and the Building Code of Australia.

Linen cupboard: Fit out cupboards with full depth 16mm melamine faced moisture resistant particleboard or moisture resistant medium density fibreboard, clear finished. Finish edges with a 2mm PVC edge strip or equivalent. Screw-fix shelves at max 360mm centres to 25mm thick rails along the back and sides.

Built-in-wardrobes: Comply with Schedule 6 (Component Requirements) unless replacing components only, then replace like with like.

Trim: Where a whole section of trim is defective remove, scribe and fit architraves to interior joinery, skirting to all walls, and timber bead to match existing. Use single lengths. Pieces in short sections will not be accepted.

Easing of doors: Check door closing and swing and ensure ease of action. Re-seat or replace hinges where required and, where needed, plane doors to provide an even gap all around that is sufficient to allow closing without binding. Adjust striker plate. Paint disturbed surfaces and raw edges following easing to match existing.

KITCHEN CUPBOARDS

General: Comply with Schedule 6 (Component Requirements) and the standard details in Drawing Nos. KD02 to KD11 in Schedule 6 (Component Requirements) if applicable.

Construct kitchen cabinetry in modular fashion to facilitate any subsequent replacement that may be required.

Seal bench tops to walls with a silicone sealant and provide a flexible waterproof sealant between tiles and bench top. Ensure that all openings or spaces between or behind kitchen cupboards and walls are sealed and vermin proof. Relocate or close and patch wall vents as required to suit the installation of kitchen cupboards.

Replacement doors and drawers to cabinets: Match existing fittings.

Replacement shelves: Provide either a Melamine or painted finish to match existing.

Replacement sinks: Refer to Schedule 6 (Component Requirements).

Kitchen replacements: Where the condition of a kitchen is assessed as requiring replacement, replacements must include all subcomponents and in accordance with this Section 4 and Section 6.

All units are to be manufactured to AS/NZS 4386.1 and installed in accordance with the appropriate standards, codes and or guidelines ensuring the use of approved Equipment, subcomponents and products.

Floor cupboards and benches to be 850mm high for aged Properties and 900mm high for Properties other than aged and for disabled.

Benchtops must be continuous over units without joints (except where a change of direction in the benchtop is required in which case a toggle joint must be used).

The Contractor must prepare and supply work as executed drawings to the Principal for all kitchen replacements.

BATHROOM

General: Comply with Schedule 6 (Component Requirements) applicable to bathroom accessories and fittings.

Shaving cabinet: Surface mount or recess the cabinet, complete with perimeter bead/quad trim.

Vanity unit: Construction, repairs and installation is as for kitchen cupboards.

Bathroom fittings: Screw fit fittings (e.g. towel rails, toilet roll holder, grab rails etc.) using countersunk S.S. screws.

Refixing fittings: Where fittings (e.g. towel rails, toilet roll holder, grab rails etc.) are to be refixed, reinstall the fittings in the existing locations. Where the existing location is no longer appropriate, either:

- refix in a new location as agreed (only for Modifications) or
- provide a surface mounted screw fixed nom. 75mm x 25mm DAR cleat fixed to wall framing; or
- remove wall sheet, install additional noggings to wall, re-sheet and make good wall and refix fitting.

Bathroom replacements: Where the condition of a bathroom is assessed as a condition grading of 1, replacements must include all new bathroom accessories and fittings and all subcomponents detailed in Section 6.

Wall and Ceiling Linings

MATERIALS:

Plasterboard sheeting: Internal wall, ceiling and cornice etc lining boards are to be impact and moisture resistant and meet the required Fire Resistant Level (FRL) for the Building type.

Cornice: Provide plasterboard 90mm Scotia type cornices. Where walls are masonry, nail to ceiling framing. Do not nail to wall plates.

Accessories: Supply and install in accordance with the relevant manufacturers written specification adhesives, including nails and clouts, perforated angles, jointing tape, jointing cement etc.

Wall linings - plasterboard: Fix horizontally and in single length for walls up to 4800mm high then stagger butt joints on both sides of internal walls, with no joints occurring in line with window or door studs.

Fix plasterboard wall lining by the adhesive-nail/screw on system in accordance with the manufacturers written specification.

Wall linings – fibre cement sheet: Fix horizontally using maximum length sheets for walls to minimise butt joints.

Wet areas: Provide the flashings, trims and sealant necessary to ensure that wet areas are waterproof.

Tiled walls: Fix fibre cement wall lining sheets with nails or screws only. Use furring in accordance with the manufacturer's written specification. Take special care when fixing fibre cement sheets, where junctions between walls and floors are flashed, that fasteners do not penetrate the flashings.

External angles: Where no other corner finish is specified or detailed, finish with 25mm x 25mm x 0.5mm gauge galvanised iron purpose made perforated angle. Fix metal angle to corners with galvanised nails spaced max.150mm apart, with the edge plumb. Fill and set as specified for butt joints.

Ceiling linings – gypsum plasterboard/fibre cement sheet: Fix all ceiling lining before wall sheeting is applied.

Fix ceiling lining by the adhesive-nail/screw on system in accordance with manufacturer's written specification.

Only provide butt joints in ceiling sheets where the length exceeds 4800mm.

External Wall Cladding

MATERIALS:

General: Provide vapour permeable sarking and insulation under cladding, which provides a permanent waterproof seal, including:

- Boards fixed vertically or diagonally
- Boards or planks fixed in exposed locations where driven rain can penetrate the joints, and
- Unpainted or unsealed cladding

Fibre cement: Use Type A, Category 2 for low impact areas and Type A, Category 3 for impact and pedestrian areas.

Flat sheet proprietary systems, (smooth or textured) must be minimum 6.0mm thick.

Plank proprietary systems (smooth or textured) must be minimum 7.5mm thick.

Flat sheet and plank proprietary systems must be:

- manufactured in accordance with AS2908.2;
- manufactured pre-primed;
- early fire hazard index (AS1530.3) of 0 Ignitability, 0 Spread of Flame, 0 Heat evolved and 0-1 Smoke Developed index; and
- resistance to Termite attack.

Hardboard: Provide exterior grade proprietary system planks, smooth or textured, minimum 9.5mm thick.

Sarking: Supply to AS4200.1 and installation to AS4200.2

Wall sarking and insulation: Insulate walls to comply with BASIX optimum rating for the appropriate climate zone when renewing either internal wall lining or external wall cladding.

Workmanship:

Installation: Apply to the outer face of external stud walls from the top plate down over the bottom plate and flashing. Run across the studs and lap at least 150mm at joints.

Wall cladding - complete: Cover framing with reflective foil. Provide proprietary plank or sheet cladding systems to manufacturer's written specification, including any necessary jointing and flashing.

Wall cladding – repair: Cut damaged external wall cladding to a line of suitable fixings (studs etc) and replace with necessary jointing and flashing.

Eaves, soffits, bargeboard – repair: Cut damaged eaves, soffits, bargeboards etc. to a line of suitable fixings (rafters, beams etc.) and replace. Provide necessary jointing and flashing.

Finishing: Paint to match existing. Comply with Section 10, (Painting Exterior).

FRAMING:

Materials/Workmanship: Provide additional timber members as required to support lining, cladding, hardware, fixtures and fittings. Provide fastenings of types appropriate for their purposes, sufficient to transmit the loads and stresses imposed and to ensure the rigidity of the assembly. Install without splitting or otherwise damaging the timber.

Flooring

MATERIALS:

Timber strip flooring: Provide grades equal to those required by the Timber Schedule in Schedule 6 (Component Requirements).

Structural particle board: Use Bond Type A tongue and grooved sheets on the longitudinal edge. Minimum thickness must be 19mm for 450mm joist spacing, and 22mm thick for 600mm joist spacing.

Structural plywood: Use Bond Type A tongue and grooved sheets on the longitudinal edge.

Minimum Thickness for F8 sheeting must be as follows:

- For joint spacing up to 450mm = 14mm
- For joint spacing 450mm up to 600mm = 19.5mm

Minimum Thickness for F11 sheeting must be as follows:

- For joint spacing up to 450mm = 13mm
- For joint spacing 450mm up to 600mm = 18.5mm

Compressed fibre cement: Use Type A, Category 4 for wet area flooring, minimum thickness must be 15mm for 450mm joist spacing, and 18mm for 600mm joist spacing.

Adhesive: Provide adhesive as per manufacturer's written specification.

WORKMANSHIP:

Setting out for services: At the earliest opportunity set-out the position and size of all holes, recesses and chases for services, pipes, conduits, equipment and their trimming out.

Fixing timber strip flooring: Lay strip flooring across joists with staggered joints. Cramp and double nail flooring at regular intervals to ensure there are no gaps between boards. Punch and stop all nails.

Fixing plywood: Lay sheets across joists in a staggered pattern with all edges and joints fully supported. Provide fixings in accordance with the manufacturer's written specification. Provide a 2-3mm gap at the perimeter of floors for sheet expansion.

Fixing particleboard: Do not expose particleboard flooring to the weather. Lay sheets across the joists in a staggered pattern from the centre of large areas with all edges and joints full supported. Do not allow water to pond on the floor surface.

Fixing compressed fibre cement: Lay sheets across joists in a staggered pattern with sheet ends fully supported. Screw fix in accordance with the manufacturers written specification.

Penetrations: Site measure for all penetrations and cut to tight fit with a hole-saw or similar for pipe work and the like where penetrations of flooring occur. Repair existing penetrations as required.

Brickwork

MATERIALS:

Bricks: Provide metric standard bricks of even size and shape with true arrises.

Clay brick durability: Below damp proof course, use exposure category bricks to AS4456.

Blocks: Provide concrete masonry bricks in accordance with the appropriate Australian Standards.

Lintels: Use proprietary cold-formed flat based type designed to AS4600. Lintels must be mild steel galvanised to AS4680, with minimum coating mass 600g/m2. Do not cut after galvanising. Mild steel sections must be hot dip galvanised after fabrication.

Damp Proof Course: Supply and install to the appropriate Australian Standards.

WORKMANSHIP:

Wall ties: Comply with AS 2699.1.

Mortar: Use fine aggregate sand with low clay content and free from efflorescing salts, selected for grading and colour of face work.

Use admixtures to suit the manufacturer's written specification. Provide to the maximum practical density, fully laid, firmly placed, correctly cured and not re-tempered. Ensure joints are 8mm minimum to 10mm maximum wide and uniform.

Mortar mix must be in accordance with AS 3700.

Vermin stop: Provide galvanised steel wire "chicken mesh" netting strips with reinforced edges and galvanised staples for fixing.

Brick work: Lay bricks on a full bed of mortar and ensure the joints are completely full. Do not mix or change the brick type laid from course to course. In face work, distribute the colour range of units to prevent colour concentrations.

Bond: Lay using stretcher bond unless otherwise required to match existing.

Pointing: Integrate pointing colouring with the mortar, and point as the laying work proceeds after an initial stiffening period.

Weathering: Joint to a concave tooled form as the laying work proceeds and after an initial stiffening period.

Weepholes: Rake out every third perpend where weep holes are required.

Control joints: Expansion Joints: Form from footing level to top of wall and infill with a strip of an approved compressible material the full depth of the joint.

Articulation joints: Form from footing level to top of wall and infill with a strip of an approved compressible material the full depth of the joint. Install flexible ties and finish with sealant bead to match mortar colour.

Sub-Floor Ventilation: Where required, provide new sub-floor ventilation system in damp subfloor areas. Supply fans similar or equal to Solar Fan SF5 and install in accordance with the manufacturer's recommendations. Locate on the front and back walls for cross ventilation where possible. Use existing sub-floor openings and vents where possible. Make provision for access to the fans for inspection and maintenance purposes by means of a floor hatch or removable air vent.

Co-ordination: Co-ordinate the building-in of all exterior joinery and items required to be fitted as the work proceeds. Rake out for or build-in flashings as required.

Aluminium: Ensure that all mortar droppings are cleaned off aluminium immediately.

Repairs: Carry out repairs using the required materials to match existing.

Efflorescence: Remove this where it appears, with a stiff bristle broom, wiping with a damp sponge and washing well with clean water.

Cleaning: Clean the face of brickwork with acid wash in accordance with the brick manufacturer's written specification to remove all stains and excess mortar.

Flyscreens

Screen Doors – hinged and sliding: Where required or as directed comply with the requirements in Schedule 6 (Component Requirements).

Fly screens to windows: Where required or as directed, provide aluminium extruded or folded box frame sections nom. 25mm x 11 mm with mesh fixing channel, mitred, staked and screwed at corners. Provide an extended frame section where necessary to adapt to window opening gear. Provide hard grade anodised aluminium or stainless steel (in bushfire prone areas) and fibreglass flyscreen mesh fixed in position within the frame with continuous tubular P.V.C. retaining strip for the full perimeter of frame so that the mesh is taut and without distortion. Provide cross bracing when the height or width of a screen exceeds 1200mm.

Use one of the following methods, to suit application, when installing window screens:

- Fixed screens: Face fix using stepped turn buttons, minimum 4 per screen, or fix externally on a 50mm x 25mm timber frame screw fixed (where structural integrity of the window is not compromised).

- Sliding screens: Provide a matching aluminium head guide, sill runner, and frame stile sections for screens not part of the window frame.
- Hardware: Provide nylon slide runners and finger pull handle. Provide pile strip closers against sash where necessary to close gaps.
- Anodised aluminium frame colour must match windows
- Internally fit screen with “Magi Flap” type access to the window fastener.

External Work

GENERAL: This clause deals with the repair or replacement and supply and installation of the following items, including hardware:

- Existing and new clotheslines (Refer to Schedule 6 (Component Requirements))
- Existing and new letterboxes (Refer to Schedule 6 (Component Requirements))
- Existing and new timber decking and landings
- Existing and new veranda posts
- Existing and new handrails

MATERIALS:

Site-mix concrete: Comply with Section 3 Concreting.

Pipe handrails and balustrades: Comply with Section 11 Metal work.

Galvanising: After fabrication surfaces must be protected to achieve a 25+ year protection performance for a medium to high level of atmospheric corrosivity as set out in AS2313 “Guide to the protection of Structural Steel against atmospheric corrosion by the use of protective coatings.”

Timber: Provide grades equal to those required by the Schedule 6 (Component Requirements - Timber Schedule and Drawing Details) or another appropriate standard applicable to the application.

Unseasoned timber: If unseasoned timber is provided or variations in moisture content are likely, make allowance for shrinkage, swelling and differential movement.

DURABILITY:

General: Provide timbers with natural durability appropriate to the conditions of use, or preservative treated timbers or equivalent durability.

Natural durability classification: To AS1604 (*Timber – Preservative treated – Sawn or round*) Table F2.

Minimum requirements: Use classified timbers as follows:

- Class 1: for timbers in contact with the ground.
- Class 2: for timbers above ground, not in continuous contact with moisture, well ventilated, protected from moisture but exposed to the weather.
- Class 3: for timbers above ground, not in continuous contact with moisture, well ventilated, protected with a finish and well maintained.
- Class 4: for timbers fully protected from moisture, indoors, above ground and well ventilated.

PREVENTATIVE TREATMENT:

Standard: Comply with AS1604 (Timber – Preservative treated – Sawn or round) Table D1.

Fixings – bolts, screws and nails: Provide galvanised steel, brass or stainless steel fixings to suit the location and application.

Standard: Comply with AS3566 (Screws – Self drilling – For the building and construction industries) corrosion resistance class 2.

TIMBER FASTENERS:

Metal washers: Provide washers to the heads and nuts of all bolts and coach screws.

Steel straps: Use zinc-coated steel to AS1397 (Steel sheet and strip – Hot dipped zinc coated or aluminium/zinc-coated)/Z275, minimum size 25 x 1mm or 30 x 0.8mm.

Galvanising: Galvanise mild steel components (including fasteners) to AS1214 (*Hot-dip galvanised coatings on threaded fasteners* (ISO metric coarse thread series)) or AS/NZS4680 (*hot-dip galvanised* (zinc) *coatings on fabricated ferrous articles*), as appropriate, if:

- exposed to weather;
- embedded in masonry; or
- in contact with chemically treated timber.

Workmanship: All work must be in accordance with the best trade practice, and include those methods, practices and processes contained in all relevant manufacturers' written specification.

Clothesline (extendaline): Install and repair to the manufacturer's written specification.

Clothesline (awning type): Install and repair to the manufacturer's written specification.

Clothesline (rotary type): Install and repair to the manufacturer's written specification.

Clothesline Maintenance: Ensure any parts supplied are compatible with the existing clothesline. Where re-wiring is required, refer to Component Requirements, remove the existing wire and replace with new and tension the wire as required. Plumb clotheslines and re-concrete as required.

Footings – clothesline/letterbox: Dig 200mm dia x 500mm deep footings for clotheslines and 250mm x 250mm x 350mm deep footings for individual letterboxes. Set clothesline and letterbox posts plumb in the excavated footings and set in concrete.

Letterbox repairs: Complete the repairs with suitable new components, unless otherwise specified to return the fixture to its original condition.

Where components require re-securing, use new non-corroding fasteners to effect permanent repairs. Prior to completing work test for the soundness of fixings.

New letterbox: Where required, replace existing letterboxes with new to Australia Post requirements, in accordance with Schedule 6 (Component Requirements). Provide new pre-finished posts in 38mm square or 38mm dia. round tubular steel fitted with a 75mm x 75mm attachment plate to match letter box. Site the letterbox to allow good access. Provide new riveted 50mm high street numbers.

Numbering (street/unit): Comply with Schedule 6 (Component Requirements).

Landing flooring: Remove existing damaged flooring and supply and fit new strip flooring to match the existing. All joints must be staggered, nails HD galvanised and punched below surface and stopped.

New veranda post: Where required, remove existing veranda posts and replace them with like sized, full height H3 treated pine veranda posts full height, complete with galvanised stirrup bases. In all cases prime mortises, housings, cut ends and all faces of dressed all round (D.A.R.) timber with suitable timber primer and fix galvanised stools with M12 galvanised bolts. Fix the stools to concrete using minimum 12mm masonry anchors.

Replace existing porch blade and sole plate: Where required, remove existing porch blades and sole plates and replace them with H3 treated pine to match the existing. Chamfer edges and paint to match the existing.

Replace existing handrails: Where directed to remove damaged/unsound existing timber handrails, replace them with timber handrails to match existing. In all cases prime mortises, housings, cut ends and all faces of D.A.R. timber with suitable timber primer prior to fixing or assembly.

Comply with Section 11 Metal work, for galvanised steel pipe handrails.

Fencing repairs: Comply with Section 15 Timber and Metal Fencing.

Street and common area furniture: Table and seats must have a minimum 1 year written warranty and be:

- vandal proof and durable street furniture and tables
- 98% recycled wood/plastic composite;
- recycled co-mingled wood/plastic independently tested not to crack, splinter, rot, rust or warp;
- CCA and toxin free;
- UV stabilised and non permeable;
- fixed with vandal proof galvanised or stainless steel fixings; and
- framed in galvanised steel or other vandal proof material.

Heritage Specific Works (Only on nominated properties)

HERITAGE CONSERVATION WORK - woodwork generally: The best woodwork Conservation practices must be adhered to and including but not limited to the following:

- retain and preserve heritage significant timber architectural features whenever possible;
- do not reclad timber-framed Buildings with new materials which were not available when the Building was constructed;
- only repair/replace deteriorated heritage significant material where necessary. Replacement material must match the original in size, shape, colour, texture and pattern;
- use timbers that have natural durability appropriate to the conditions of use, and matching that of the adjacent original timber;
- use recycled timber where possible;
- match new timber to existing original timber species;

- protect new and existing timberwork with a borate preservative in order to prevent rot and termite attack. Allow to dry fully before other surface coatings are applied;
- retain as much as is practically possible of the original/early Building fabric. For example, a timber sill which is rotted out on the two ends should have the central section remain with the two new ends jointed onto the existing central section. Whole sections of work such as windows are not to be taken out and replaced with new;
- to retain original timber members affected by termites, methods of steel reinforcement and epoxy may be used where approved by the Principal; and
- to retain an existing timber beam with rotted ends, concealed steel reinforcement and spliced timber replacement to damaged area may be used where approved by the Principal.

Also refer to:

Heritage Council Victoria “Timber Repairs”:

https://www.heritage.vic.gov.au/__data/assets/pdf_file/0019/505270/Timber-repairs.pdf

HERITAGE CONSERVATION WORK - Windows and Doors: The best Conservation practices must be adhered to and including but not limited to the following:

- retain and preserve heritage significant windows and doors whenever possible;
- retain and repair existing window and door materials and openings, including window sashes, glass, lintels, sills, architraves, doors, hoods, steps and all hardware, etc.;
- repair rather than replace heritage timberwork. Duplicate the material, design and hardware of the heritage significant window sashes and doors of the Building if new sashes and doors are necessary;
- retain all original door and window hardware where it can be repaired. Subject to approval, individual items only may be replaced with new hardware;
- repair or install doors and windows so that the frames are plumb, level, straight and true within acceptable Building tolerances unless otherwise required to match;
- ease and adjust all doors and make operable, oil hinges and lock as necessary. Retain all original door hardware on doors. Re-putty glazing where required to give a watertight seal;
- ease and adjust all frames and sashes so as to make all windows operable, replace all sash cords, repair sashes if broken, repair parting beads if damaged. Retain all original window hardware on windows. Re-putty glazing where required to give a watertight seal, retain original glass;
- to retain extremely weathered timber window sills, epoxy patch methods may be used where approved. Repair and repaint timber window joinery, especially sills and frames which may are semi decayed or split allowing water into the timber;
- do not introduce new window and door openings into the external facade of a Building;

- do not alter the size of window panes, sashes, window openings or doors, to facilitate the fitting of replacement stock windows or doors, as such changes destroy the scale and proportion of the Building;
- do not install inappropriate new window or door features such as aluminium, canvas or metal strip awnings or fake shutters that detract from the character and appearance of the Building; and
- store and catalogue original doors and door hardware when they can be repaired and reused. Do not replace original timber windows and doors with aluminium.

HERITAGE CONSERVATION WORK - Internal Finishes & Fitments, Plastering & Stucco:

The best internal finishes and conservation practice must be adhered to, including but not limited to the following:

- retain original material, architectural features and hardware, whenever possible, such as stairs, handrails, balusters, ornamental columns, cornices, wall ceiling plaster ceilings and pressed metal ceilings, picture rails, skirtings, doors, doorways, windows, mantle pieces, panelling, lighting fixtures, flooring, built in furniture, etc.;
- repair where possible or replace where necessary deteriorated material with new material that duplicates the old as closely as possible;
- retain stucco with a stucco mixture that duplicates the original as closely as possible in appearance and texture. Prepare sample areas for approval by the Principal before commencing the repair works;
- repair cracked, drummy and loose lath and plaster wall and ceilings where possible with approved re-attachment methods rather than replacing with new plaster;
- repair cracked and drummy set plaster walls with approved re-attachment methods rather than replacing with new material;
- do not remove original material, architectural features and hardware, except where essential for safety or as directed by the Principal;
- do not replace interior doors and transoms. For fire safety upgrading refer to the Principal's Fire Safety Program alternative solutions for fire safety in heritage properties;
- do not install inappropriate decorative material and panelling, which may distort the original architectural features or heritage significant fabric, without approval;
- do not destroy original plaster or pressed metal ceilings;
- do not remove plaster to expose brickwork or stonework etc. to give the wall an appearance it never had;
- do not change the texture and patina of exposed timber architectural features (including structural members) and masonry surfaces through sandblasting or use of other abrasive techniques to remove paint discolouration and plaster; and
- do not replace deteriorated material with new materials that differ to such an extent from the original in composition, size, shape, colour, texture and pattern that the appearance of the Building is altered.

For traditional methods, refer to the following:

http://www.environment.nsw.gov.au/Heritage/conservation/techadvice.htm

Use pozzolanic additive such as “Trass” for promoting a chemical set where required to match original traditional mix.

Refer to NSW Heritage Office Maintenance of Heritage Assets Information Sheets, Plaster finishes.

HERITAGE CONSERVATION WORK - Building Structure repair: The Contractor must adhere to best Conservation practice for Building structures, including but not limited to the following:

- where existing structural systems are damaged or inadequate the Contractor must submit a report to the Principal. Replacement of heritage significant structural members may only be undertaken with the Principal’s approval. The report must describe the damage, its cause and recommended remedial treatment, to carry out the recommended work and seek a Direction on the extent of any further work to be performed;
- where, in the opinion of the Contractor, it is necessary to engage a structural Heritage Engineer to advise on structural matters, the Contractor must obtain prior approval from the Principal. In seeking approval to engage a structural Heritage Engineer the Contractor must submit a preliminary report to the Principal. The preliminary report must describe the issue and its likely cause, and prepare a detailed report recommending a solution;
- where problems are inherent in the structural systems of heritage Buildings, treat with minimal visual and physical intervention to heritage fabric, especially where there is any sign of cracking, deflection, or failure;
- all stabilisation and repair to weakened structural members and systems must be undertaken with minimal physical intervention to heritage significant fabric;
- do not disturb existing footings with new excavations that may undermine the structural stability of any heritage Building; and
- do not leave untreated, structural problems that may cause continuing deterioration and shorten the life of the Building.

Consistent with the objective of retaining the original fabric and features, consider the use of interventions in concealed locations which will extend the life of the original Building fabric.

Where necessary use an appropriate grade of stainless steel, in concealed locations, to extend the life of original structural Fabric.

Only replace damaged portions of timber beams and posts. Use traditional jointing methods to splice repair rotted ends.

Do not fill chimneys with reinforced concrete.

Do not use expanding fixings in stonework.

Methods of repair and stabilisation must be such as to avoid damage to the adjacent Fabric, e.g. do not use methods of fixing which cause vibrations which lead to failure of lath and plaster ceilings.

HERITAGE CONSERVATION WORK: - Masonry

The Contractor must adhere to best masonry Conservation practice including but not limited to the following:

- retain all existing masonry and mortar, wherever possible, without the application of any surface treatment;
- re-point only those mortar joints where there is evidence of moisture problems or where missing mortar allows water to penetrate into the mortar joint;
- clean masonry only when necessary, for example to inspect for repairs, or to halt deterioration, and always with the gentlest method possible such as low-pressure water and soft natural bristle brushes. Do not clean masonry to make it look new;
- graffiti must only be removed by appropriately experienced personnel. A work method statement for graffiti removal must be submitted to the Principal prior to removal;
- repair rather than replace. Where replacement is necessary, match deteriorated material with material that duplicates the old as closely as possible – recycled material is preferable to new;
- retain the original or early finish, colour and texture of masonry surfaces, including early signage, wherever possible. Brick or stone surfaces may have been tinted or whitewashed for practical or aesthetic reasons;
- where brickwork repairs are required, match old mortar in method, joint size, composition, colour, application and texture. Provide samples and sample areas to the Principal for approval prior to commencement of the work. Never point with hard mortar that may allow brickwork to deteriorate;
- do not apply new material, which is inappropriate or was unavailable when the Building was constructed, such as artificial brick panelling, artificial cast stone or brick veneer;
- do not apply waterproof or water repellent coatings or surface consolidant treatments unless required to solve a specific technical problem that has been specifically studied and identified, and only after extensive trials and study for the task. Coatings are frequently unnecessary, expensive and can accelerate deterioration of the masonry. Coatings can change the appearance of a masonry wall;
- do not sandblast using dry or wet grit and other abrasives, on brick or stone surfaces. This method of cleaning erodes the surface of the material and accelerates deterioration. Do not use chemical cleaning products that would have an adverse chemical reaction with the masonry materials, e.g. acid on limestone or marble;
- do not remove architectural features such as cornices, chimneys, brackets, and doorway pediments;
- do not remove paint from masonry surfaces indiscriminately. This may subject the Building to damage and change its appearance;
- do not re-point mortar joints in a differing size or joint profile, texture, or colour to the original pointing and jointing; and
- do not re-point mortar joints that do not need re-pointing. Do not use electric saws and hammers to remove mortar as their use can seriously damage the adjacent brick or stone arises and faces.

Refer to drawings in Schedule 6 (Component Requirements - Timber Schedule and Detail Drawings).

HERITAGE CONSERVATION WORK - Sub-Floor Ventilation: Where required, provide new sub-floor ventilation system in damp subfloor areas. Supply fans to be

solar fans so as not to place electrical load on the Tenants power supply and installed in accordance with the manufacturer's recommendations. Locate on the front and back walls for cross ventilation where possible. Use existing sub-floor openings and vents where possible. Make provision for access to the fans for inspection and maintenance purposes by means of a floor hatch or removable air vent.

END OF SECTION 4

Section 5 - Roofing

General

Scope: This section sets out the requirements for the complete re-roofing and/or repair of existing sheet or tile roofing together with the requirements of the accessories necessary to make a watertight roof.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 1684.1: Residential timber-frames construction.
- AS/NZS 1170.0: Structural design actions.
- AS 1720.1: Timber structures Part 1 Design methods.
- AS 1562.1: Design and installation of sheet roof and wall cladding.
- AS 2049: Roof tiles.
- AS 2050: Installation of roof tiles.
- AS/NZS 4200.1: Pliable building membranes and underlay (sarking).

and all other relevant standards, Acts, codes of practice and guidelines as amended.

Materials

General: Supply roof tiles and roof sheeting and associated accessories complying with the relevant Standards and Schedule 6 (Component Requirements). Where no listing is found, provide recommendation and details of Manufacturers warranties.

Roofing tiles: Must be concrete or terracotta to current Australian Standards and have a minimum 25 year written manufacturer's warranty. Installation must be in accordance with current Australian Standards and the manufacturer's specification.

Metal roofing: Metal roofing must have a minimum 15 year written warranty from the manufacturer and be:

- designed and installed to current Australian Standards and to the manufacturers written specification; and
- Provide fall arrest to meet AS1891.1-4

Sarking/Vapour barrier: Must have a minimum 7 year written warranty and:

- Be manufactured in accordance with AS 4200.1 and installed to AS4200.2;
- provides required Thermal Performance in accordance with AS4859 and ICANZ;
- if a Vapour Barrier, be rated Medium to High (<2 ng/Ns);
- If a Water Barrier be rated high AS4200 or better than 0.5 MNs/g; and

  For tiled roofs sarking must:

- have low flammability and Heat Factor of 5 or less AS 1530.2;
- have high Tensile Strength greater than 18 kN/M in both directions; and
- have UL2218-1998 (impact resistance) pass.

For metal decked roofs, when bulk insulation is laminated directly to sarking membrane the composite product must achieve a fire hazard rating (AS 1530.3) of:

Ignitability Index	0
Spread of Flame	0
Heat Evolved	0
Smoke Developed	0-1
Tensile strength >	12kN/M in both directions

Workmanship

REPAIRS AND MAINTENANCE

Repairs to existing fascia – timber: Replace defective sections with new timber fascia to match existing. Prime all faces before restoring guttering.

Do not over clad existing timber fascias with pre-finished metal fascias unless approved by the Principal.

Repairs to existing fascia – prefinished metal: Replace defective sections with new fascia to match existing. Conceal fixings.

Repairs to concrete or terracotta tile roof: Replaced damaged tiles with new tiles matching existing or, where suitable new tiles are unavailable, recycled tiles of matching pattern and colour of a minimum standard equal to the remainder of the roof.

Ensuring compatibility of roof sheeting: Prevent direct contact between incompatible metals.

If only some sheeting is replaced then the material will also not be compatible to galvanised steel sheeting adjoining it.

When fitting a new roof sheet to an existing corrugated galvanised iron roof, install either a foam or plastic isolation barrier to separate the new and old sheets. See Compatibility Table below:

Compatibility Table

System 1:	System 2:
Drainage flow from higher to a lower surface:	**Drainage flow from higher to a lower surface:**
Flashing Zinc, Alum, Alcor, Galvanised Steel	**Flashing** Lead, Galvanised steel
Roofing Metal roofing, Tiles, Glass	**Roofing** Galvanised steel, Unglazed tiles
Guttering and downpipes Metal	**Guttering and downpipes** Galvanised steel

Investigate roof leaks: Locate roof leak and carry out required repair. Where repairs would be extensive, precluding an immediate repair Make Safe and provide a written report to the Principal on the condition, and a Scope of Works required.

Replace roofing sheets and fix new sheets: Use a fastening system recommended by the manufacturer of the specified profiled metal roofing making due allowance for dynamic local wind pressures on the Building and thermal movement in the sheet.

Sealant: Use a neutral curing silicone or synthetic rubber based paintable sealant recommended by the roofing manufacturer.

Closure strips: Provide compressible foam strips to fit profiled sheets where required.

Profiled metal roofing: Fold ends and seal cut edges all to manufacturer's written specification.

Metal separation: Prevent direct contact between incompatible roofing systems, fixings and other products. Metal sheets can be used as replacement sheets for damaged galvanised sheets as a galvanised steel roof. Follow the manufacturer's written specification. Refer to Compatibility Table above.

Gutter guards: Replacement Gutter Guards must be factory pre-painted metal roofing steel and in a colour to match guttering. Prior to installing gutter guard the Contractor is to clean out, re-fall guttering and re-seal all joints prior to installing gutter guard.

When installed in designated bush fire prone areas gutter guards must be non-combustible metal and securely fixed underneath the roof and to the gutter in accordance with AS 3959.

Re-Roofing - General

Roof Sheeting: When undertaking a complete roof replacement new roof sheeting must comply with the approved products as supplied by the contractor and approved by the Principal and have a maximum Solar Absorptance of <0.45.

Wind and earthquake loadings: Use fixings and methods that will be capable of sustaining the loads appropriate to the area.

Vermin proofing: Ensure the roof, wall, down pipes and vents are completely bird and vermin proof. Provide and fix all materials required for this purpose.

Battens: Fix to the roofing manufacturer's written specification and with all joints fully supported and staggered.

Insulation: Insulate to comply with BASIX optimum rating for the appropriate climate zone. Refer to Component requirements for full details.

Do not install Foil Laminates and Bubble Foil on top of any ceiling to cover joists, rafters and any services. Foil Laminates and Bubble Foil may only be installed as a sarking on top of the roof trusses and battens underneath the roofing. Sarking must be installed in the roof with roofing wire underneath to ensure the sarking remains in place and does not sag.

Ensure that appropriate separation is maintained between electrical services and installed Foil Laminates and Bubble Foil Sarking in roofs and external walls.

Tile Roofing

Concrete / terracotta tiles: Fixed to manufacturers written specification, flashed to all roof features and penetrations, fitted with anti-ponding boards all to manufacturers written specification.

Fixing concrete tiles - ridge: Fix to the manufacturer's written specification. Point raked joints with a flexible pointing product.

Concrete tiles to ridges and hips: Support and bed edges and joints of ridge and hip tiles with a flexible pointing product to the manufacturer's written specification.

Valley (concrete tiles): Machine cut tiles to a neat clean line leaving a minimum gap of 100mm. Form and fix bird proofing to valley battens. Fix all cut tiles.

Verge (concrete tiles): Fix gable end barge tiles to the manufacturer's written specification.

Sheet Metal Roofing

Sheet metal roofing: Supply and fix complete with all matching accessories, flashed to all roof features and penetrations, all to the manufacturers' written specifications. Form stop-ends, profiled foam rib closers and downturns as necessary to aid in flashing.

Set out: Set out the planned layout before commencing fixing to ensure true lines, correct relationship to module, grid and roof features. The Principal prefers all roofing to be factory pre-cut to minimise on-site cutting.

New sheets: Fix in place using the fastening system recommended by the manufacturer of the specified profiled metal roofing making due allowance for dynamic local wind pressures or earthquake loadings on the Building and thermal movement in the sheet.

Weathering: The under corrugations of the sheet must be turned up the full corrugation height, where covered by the ridge or hip ridge capping.

Insulated Metal deck roofing and ceilings: Install Roofing Blanket consisting of a glasswool blanket adhered to an impermeable reinforced reflective foil facing (equal to Anticon) installed on roofing wire laid over the roof battens. Foil faced insulation blanket must be a minimum of 50mm thick. Install Ceiling batts between the ceiling rafters and joists.

Roof flashings: Fix to verges, ridges, hips, walls and penetrations where required to comply with the manufacturers written specification and to ensure the Building is completely watertight. Co-operate with the plumber for flashing penetrations related to plumbing work. Step and apron flashings shall be 0.6mm to match roof sheets. Apron flashings shall be turned a minimum of 60mm under step flashings and gutters.

Valley (profiled metal roofing): Machine cut sheet to a neat, clean line leaving a minimum gap of 100mm. Form and fix bird proofing to valley battens. Fix all cut sheets. Valleys must be 0.6mm base Metal Thickness, colour to match roof sheeting, machine formed and beaded 19mm at edges to stand up at least 10mm. Valleys must not be nailed through the iron and care must be taken to prevent the beaded edge from being flattened. Valley gutters must be fixed in a straight line to true planes.

Ridges: All hip and ridge covering must be 400mm width x 0.6mm base Metal Thickness, colour to match roof sheeting, and securely fixed with fasteners to the top batten not more than 50mm from the edge and through an over corrugation. All edges must be dressed down into under corrugation on hips and ridges. Hip and gable ends of ridging to finish with stop ends. Ridges at apexes must be mitred and all apexes to be flashed with a suitable flashing material in a colour to match the roof sheets.

NOTE: Installation to manufactures specifications.

Heritage Specific Works

HERITAGE CONSERVATION TRADE PRACTICES: Use good conservation trade practice including but not limited to the following:

- preserve the original roof form;

- do not remove from the roof any architectural features important to its heritage significant character. Preserve or repair/replace where necessary all architectural features that give the roof its essential character, such as dormer windows, cupolas, cornices, brackets, chimneys, cresting, weather vanes, gutters, downpipes, rainwater heads and lighting rods;
- do not change the essential character of the roof by adding inappropriate features such as dormer windows, vents, skylights, or air conditioning plant and equipment. Retain the original roof covering where possible;
- do not apply new roof cladding which is inappropriate to the style and period of the building and environs, except with the Principal's approval; and
- do not replace deteriorated roof covering with new materials that differ to such an extent from the old in composition, size, shape, colour, texture or pattern that the appearance of the Building is altered, except with the Principal's approval.

Refer NSW Heritage Office Information Sheet 4.2 – Slating, tiling and roof plumbing and Information Sheet 3.1 Metalwork.

Slate tile roofing: Salvage slate tiles that are in good condition and re-use, preferably concentrated in one area.

New slates tiles must be best grade complying with current Standards for matching the existing slates in appearance and size.

Use copper nails, complying with current Standards, with large heads for slate tiles.

Corrugated steel sheet roofing: New galvanised steel roofing shall be used to match existing in length, lapping and profile. Do not use modern alternatives such as Colorbond unless approved by the Principal.

Also refer to Heritage Council Victoria "Galvanized Roof Coverings":

https://www.heritage.vic.gov.au/__data/assets/pdf_file/0021/505263/Metalwork.pdf

Galvanised steel rainwater goods: Supply and install to relevant Australian Standards. Use existing gutter and downpipe brackets where possible. Use soldered joints in galvanised steel vents, gutters and rainwater goods.

Copper rainwater goods and copper work jointing: Carry out work in accordance with Traditional Copper Roofing Technical Notes TN6 by the Copper Development Association.

Lead capping and flashings: Carry out work in accordance with relevant provisions of Rolled Lead Sheet – The Complete Manual https://leadsheet.co.uk/service/rolled-lead-sheet-the-complete-manual/

Completion

General: Roofing work must be completed with all necessary flashings, valleys, ridges and hips all properly installed as the work proceeds so that the finished roof is completely weather-tight.

Maintenance manual: On Completion of a complete re-roofing the Contractor must keep a manual of recommendations from the roof manufacturer or supplier for the maintenance of the roofing system including: frequency of inspection and recommended methods of access, inspection, cleaning, repair and replacement.

END OF SECTION 5

Section 6 - Wall and Floor Tilings

General

Scope: This section sets out the requirements for the supply and installation of ceramic tiles to flooring, walls and bench tops, for both new work and repairs, and the supply and installation of waterproofing to wet areas.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- ISO 10545: Ceramic Tiles
- AS 3958.1: Guide to installation of ceramic tiles
- AS 3958.2: Guide to the selection of a ceramic tiling system
- AS 2358: Adhesives – For fixing ceramic tiles
- AS 3972: General Purpose and blended cements
- AS 1672.1: Limes and limestone
- AS3740: Waterproofing of Domestic Wet Areas

and all other relevant standards, Acts, codes of practice and guidelines.

Materials

Wall and skirting tiles: wall and skirting tiles must have a minimum 10 year written manufacturer's warranty and:

- be first Quality to ISO 13006;
- compliant to AS 4586;
- be vitrified or porcelain;
- have a minimum tile thickness ≥ Min 5.5mm;
- be fully glazed over face ceramic tile;
- if ceramic biscuit (Bisque), must be engobed;
- have a minimum surface hardness of MOHS Min 3 - test method EN101;
- be laid with extruded PVC or aluminium tile trims on exposed edges and silicon seal to cupboard boundaries; and
- extended to floor behind upright stoves

Floor tiles: floor tiles must have a minimum 10 year written manufacturer's warranty and:

- be within the range of 50 x 50 mm up to 600 x 600 mm
- be first quality to ISO 13006
- comply with AS 4586;
- be vitrified or porcelain;
- in colours as appropriate to the Principals colour scheme;
- have warpage not exceeding 0.5mm for any tile batch;
- have a minimum surface hardness of MOHS Min 6 - test method EN101;
- be capable of water absorption to ISO10545-3/EN99;
- have a chemical resistance to ISO10545-13/EN16;
- be slip resistance to current Australian Standards AS4586;

- have a slip rating of R10 and Pendulum test score of 'X' for Wet areas, common areas and external areas;
- have a slip rating of R9 and pendulum test score 'Z' for all other areas;
- have a minimum tile thickness ≥ 7.0mm; and
- be laid with extruded PVC or aluminium tile trims on exposed edges.

Entrances/Exits, outdoor terraces and verandas etc: Tiles must be quarry tiles with a minimum 10 year written manufacturer's warranty and meet the following:

- be unglazed quarry tiles and quarry nosing tiles shall be first quality;
- comply with the requirements of ISO 10545;
- used only at external locations and external doors above the damp proof course; and
- be installed with an appropriate waterproof membrane.

Grouting: must comply with AS3958.

Thin bed tile adhesive: must be flexible rubber based Type 1 to AS2358.

Leak control flange: Provide leak control flanges around floor wastes to all wet area floors. Install to the manufacturer's written specification.

Movement joint filling sealer: Use silicone sealant or equal with mould inhibitor.

Waterproofing – all internal wet areas: must be installed to the manufacturer's specification and have a minimum 10 year written manufacturer's warranty and:

- waterproofing membrane must be applied in accordance with AS3740 and AS4654.1;
- work must comply with AS3740 Waterproofing of domestic wet areas;
- all junctions must be tiled to current Australian Standards with caulked joint sealants;
- tiling of wet area floors and walls must comply with AS4858 for a wet area membrane class III for high extensibility;
- wet area membrane must be water based (no solvent release); and
- retain a certificate of installation and provide to the Principal upon request.

Waterproofing – external floors (balconies, terraces, decking, planter boxes, terrace gardens etc): must be installed to the manufacturer's specifications and have a minimum 10 year written manufacturer's warranty and:

- waterproofing membrane must be applied in accordance with AS3740 and AS4654.1;
- membrane must satisfy tests to class III high extensibility AS4858; and
- retain a certificate of installation and provide to the Principal upon request.

Extent of work

General: Tiles for repair must match existing installations. Projects requiring complete retiling of walls, floor or both, must be tiled with colours as per the approved colour scheme, with tile sizing and patterns to current trends.

Kitchen: Wherever the benchtop meets a wall, provide tiled splashback. Provide to walls over sink, stove and for full length of all fixed floor cupboards, including returns as applicable, extending behind stove for full width of stove. Where applicable provide tiles from the benchtop to the underside of the wall cupboards. Extend wall tiles to rear of stove down to floor, remove skirting boards, supply and fix mould or quad to

close off any gaps between face of tiles and floor. In addition to the above provide border, frieze or feature tiles to the tiled area in kitchen as per the approved colour scheme.

Where stove abuts a return wall, return tiles on that wall for a distance of 600mm.

Under windows, tile to sill nosing or to sill-returning tiles in reveals.

Bathroom shower recess and bath riser wall: Tile walls to a minimum height of 1800mm from floor level at showers and 1350mm from top of the bath.

Provide border, frieze or feature tiles to tiled area in bathroom as per the approved colour scheme.

Tile riser and hobs to bath, finishing tiles flush with external lip of bath, neatly cut and fitted to bath. Provide two (2) 150 x 75mm matching glazed tile vents to bath riser if the bathtub is renewed.

Where hobs remain, fully tile all exposed surfaces.

Provide skirting tiles to walls to a minimum height of 150mm at junction with floor and bath riser.

Remove existing towel rails, shower curtain rails, toilet roll holder and grab rails in the area to be tiled and refixed after tiling.

Where distance from edge of bath and bathroom door architrave is less than 300mm, tile to back of architrave.

Where hob at opposite end exceeds 450mm, brick-in end of bath, remove bath plinth concrete where necessary and tile floor. Extend wall tiles in bond from over bath to corner and return wall up to door architrave or as indicated above.

For refurbishments for a Disabled Modification, tile all walls to a height of 1800mm

Laundry: Provide tiles over laundry tub, a minimum 300mm high. Where tub is located in a corner, return tiling to full depth of tub minimum, and work to full tiles.

Separate W.C.: Provide skirting tiles to walls at junction with floor to a minimum height of 150mm.

Separate hand basin: Supply and fix wall tiles to full width of hand basin extending from floor, bonding with skirting tiles to underside of new/existing wall cabinet or mirror above basin.

Where basin is on wall adjacent to bath, tile that wall complete to height of window sill.

Workmanship

General: Set out tiles to give joints of uniform widths. Grade floor from all walls to floor wastes. Suitably prepare the substrates to receive the bedded finish.

Ensure all internal wet area floor tiling falls directly to floor wastes. Ponding in wet areas will not be accepted.

Preparation: Prepare area for tiling to tile and adhesive manufacturers' requirements. Include removal of all previous floor coverings, including existing tiling.

Floor tiling: Apply tile adhesive to meet manufacturer's specifications.

Shower hobs: Where required, form new brick / concrete hob one course high to suit tiling.

Waterproof shower recess: Where a shower recess is found to be leaking, remove floor tiles and wall tiles up to 2 courses high from floor and one tile each side of corners between walls. Waterproof floor and corners at the floor/ wall junction. Install a vertical waterproof angle to corners of walls weathered over floor/wall junction flashing. Supply and fix a suitable floor waste to replace existing and provide leak control flange around floor waste. An approved bond breaker is to be used at wall and floor junctions. Retile the treated areas to match existing.

Waterproof bathroom floor: Where a bathroom floor is found to be leaking, remove the floor tiles and skirting or wall tiles up to 2 courses high off floor level. Waterproof the whole of the floor and corners between floor and walls. Take care to ensure that all penetrations are sealed in with the general floor surface; particularly ensuring that water is not contained by the penetration. Renew floor wastes and provide leak control flange around floor waste. Retile the treated areas to match existing tiling.

Waterproofing walls: Provide a waterproofing system to connect with any existing or proposed waterproofing floor system.

Waterproofing must be carried out by suitably qualified tradespersons.

FIXING OF TILES:

Wall: Fix tiles in accordance with the written specifications of the tile and adhesive manufacturers.

Floor: Prime, seal or otherwise treat floors as recommended by the manufacturer of the tile adhesive.

Set floor tiles with a suitable waterproof floor tile adhesive, applied strictly in accordance with manufacturer's written specification. Finish tiles flush with top of floor waste and brass angle to door opening.

Where a new pedestal pan is to be installed, tile continuously under the pan position, leaving a 50 x 50mm key recess in centre.

Clean off after pointing up, leaving joints full and smooth.

Core holes in floor under bath to be sealed to prevent entry of vermin.

Neatly fix tiles to bath flange, basin, or sink as applicable.

JOINTING AND FINISHING

Joints: Ensure joints are even and not more than 3mm wide to wall and floor tiles. Set quarry tiles with 10mm joints.

Grouting: Grout as specified in applicable Standards.

Wall tiles: Grout wall tiles with "white" coloured cement based sanitised grout, leaving joints full and smooth.

Floor tiles: Grout up with a suitable grout mix worked well into joints when bed is sufficiently firm to prevent disturbance of the tiles. Clean off surplus grout from face of tiles.

On Completion of all work, clean down with suitable solution to remove all traces of mortar and acid stains.

Movement joints: Provide movement joints not less than 6mm or more than 10mm wide through the tile and bed to the floor being tiled. Locate joints over structural movement joints, at junctions between different background materials and/or to divide large tiled areas into bays, preferably rectangular, at 3m to 5m joint spacings in both directions, in accordance with AS 3958.1.

Floor waste: Adjust height of floor waste as necessary to suit new tiling levels. Where necessary provide new suitable floor waste, equal to the diameter of the existing waste (and sealed to the existing drainage with suitable sealant).

Door angle: Provide 3mm thick brass or bronze angle or 5mm thick aluminium angle across the door opening. Securely fix to concrete floor with suitable 25mm stainless steel screws and suitable plastic plugs.

Angle must is to extend a minimum of 25mm under tiles and is to finish flush with the finished surface of tiles.

Where tiles are to be glued, recess angle to finish flush with tiles and adjacent surfaces.

Tile trims: Install PVC or aluminium tile trims at termination of wall tiles, all vertical returns and horizontal returns. Do not mitre tile junctions. Thickness and colour must match tiles.

Removing and refitting of taps: Work must comply with Section 14 Plumbing, Draining and Gas Fitting.

Removing and refitting of fittings: (e.g. towel rails, toilet roll holder, grab rails etc.) Work must comply with Section 4 Carpentry and Joinery and Minor Repairs.

Traffic: The Contractor is responsible for protecting the works and must make or arrange for adequate protection of the works during the initial curing period.

Finish: After washing down with acid solution, allow to dry and then polish with a soft dry cloth to a clean finish. Protect all floor wastes, waste pipes and sumps from excess cement deposits when washing and sponging tiles during grouting, jointing, finishing and cleaning after Completion.

END OF SECTION 6

Section 7 - Carpet and Resilient Flooring

General

Scope: This section sets out the requirements for the supply of all necessary materials, associated work and labour for the installation of Carpet and Resilient Flooring, and the repair of existing carpets as specified.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 1884: Floor Coverings – Resilient Sheet And Tiles – Installation Practices
- AS/NZS 2455/1: Textile floor coverings – Installation practice
- AS/NZS 3733: Textile floor coverings – Cleaning maintenance of residential and commercial carpeting,
- The National Standard for Manual Tasks (2007) and to the NSW Safe Work NSW Regulation and Code of Practice,

The Contractor must ensure that the moisture content of the floor surface is satisfactory for the product being to applied or installed prior to installation.

The Contractor must rectify any unsatisfactory surface before commencing any installation work.

Materials

Comply with Schedule 6 (Component Requirements) and the colour schemes as approved by the Principal.

The Principal is committed to ecologically sustainable development and products which contain recycled products or which can be recycled (to minimise waste) will be supported.

Quality and Work Practices

Inspection: Before starting work inspect the base surface of the floor to ensure that it will allow first class Workmanship and that all fittings and fixtures, around which the carpet and Resilient Flooring is to be scribed, are in place.

Commencement: Do not begin work before the Building is enclosed, all wet work is complete, doors are hung and lockable, finishes and trim are complete, all outlets, duct covers and fixtures round which the carpet and Resilient Flooring need to be cut have been fitted and good lighting is available.

Commencement of installation work means that the base floor is warranted by the Contractor as satisfactory for first quality work.

Protection: Protect adjoining work surfaces and finishes during installation and make good any damage to them at no expense to the Principal.

Testing: All carpet, and resilient flooring products submitted for approval must have a current copy of the following tests in accordance with AS/NZS 2111:

- flammability test;
- AS 1530-Methods for fire tests on building materials, components and structures Part 3 Simultaneous determination of ignitability, flame propagation, heat release and smoke release; and

- AS ISO 9239.1 Reaction to Fire Tests for Floor Coverings.

Total mass pile must be determined in accordance with AS/NZS 2111.

PREPARATION

Timber floor - existing: Strip off all existing floor coverings completely, including all adhesives and surface contaminants. Sand all floors to a flat finish. Vacuum to remove all dust. Overlay all tongue and groove floors to receive Resilient Flooring or direct stick on carpet \ with 5.5mm hardboard underlay or equivalent with staggered joints. Allow 1mm expansion gaps between sheets and 3mm gaps at the perimeter. Fix with 25 x 2mm flooring staples at 150mm centres throughout sheets and 75mm centres to perimeter of sheets, and a maximum 12mm from sheet edges in accordance with the manufacturer's written specification.

Concrete floor - existing: Remove all existing coverings completely including adhesives and surface contaminants. Patch cracks and depressions with a suitable levelling compound to the manufacturer's written specification. Leave the surface level, smooth and clean with all loose material and dust removed. Seal powdery surfaces where required.

Handling: Avoid distortion, stretching, marking and damage to edges while shifting, unrolling and handling carpet and Resilient Flooring and accessories. Do not use damaged material.

Follow the manufacturer's written specification in relation to handling and working temperatures and conditions for vinyl.

CARPET LAYING

Planning and general layout: Determine the layout of carpet in accordance with the following general principles:

- seams run in lengths as long as possible, straight and parallel with the main access of the Room;
- traffic runs along the seams;
- light from windows is not across the seam;
- pile faces away from the light source;
- pile faces towards the main entry to the area of installation;
- on stairs, pile lay runs towards leading stair edge;
- selvedge seams are accurately aligned throughout the entire installation;
- textile floor coverings start with a full width on the door side;
- part width fill-outs are placed on the opposite side of the Room from the door;
- floor coverings are accurately and closely fitted to skirting, architraves and other perimeters;
- where different floor coverings abut at doorways and there is a fitted door, the junctions of the floor coverings are within the thickness of the closed door;
- fill-outs are not used in doorways where the same textile floor covering is on both sides;
- in circumstances where two fill-outs are used in one room, they do not abut; and
- fill-outs are not positioned between full widths.

Seaming and joining: For all seams and cross-joins the following applies:

- seams and joins must be installed to prevent break down when under traffic use or being stretched;
- the pile lay must be in the same direction on either side of a seam or cross-join;
- pile lay must not be caught down into a seam or cross-join and there must be no gaps in the pile;
- the seams and cross-joins must be straight and aligned and as flat as possible;
- where there are diagonals or designs straight seams must be correctly aligned;
- backing edges must butt and not overlap or gap;
- cross-joins in an installation must be minimised without resulting in excess wastage;
- cross-joins must not be used in high traffic areas;
- cross-joins must:
  - be unobtrusive;
  - not be placed in main traffic ways;
  - be not less than 1m apart;
  - have a seaming adhesive applied prior to seaming
- the number of cross-joins in a filler is not greater than:
  - in a half-width, one cross-join;
  - in a third width, two cross-joins; and
  - in a quarter width, three cross-joins; and
- where the pattern of a textile floor covering requires cross-joins less than 1m apart, they must be the closest multiple of the pattern to 1m.

Dye lot: Contractors must ensure that carpet laid in a single area must be of a single specified type, quality, colour and design comes from one manufacturing batch and dye lot.

Heat bonding tapes: When binding or seaming use the tape type and width recommended by the tape and carpet manufacturers to suit the specified carpet and the standard of performance required. The seams and cross joins must have an appropriate seam adhesive applied to both edges prior to heat tape joining.

Carpets are to be joined using low odour and low smoke foil backed heat-bonding tape.

Installation – carpet direct-stick system: Carpet must only be installed using the direct-stick system in Properties modified for disabled Tenants, and in BCA Class 3 and Class 9 Properties.

Underlay seams: Seams of underlay shall not coincide with those of the carpet when laid in the same direction. Ensure seams of underlay do not shadow through the carpet. Join seams of underlay with tapes at least 50mm wide, with non-staining adhesive.

Smooth edge (carpet gripper): All conventionally laid carpet must be installed on commercial grade architectural type carpet gripper (smooth edge) to the following specifications:

- Length: >1200 mm
- Thickness: Minimum 6.8 mm, Maximum 8.00 mm

- Width: Minimum 33 mm
- Pins: Minimum- 3 rows in width, 98 per unit
- Plywood: Minimum 3 ply (must be evenly sized veneers)

Domestic carpet gripper will not be acceptable on any commercial carpet installations in common areas under any circumstances. Domestic Carpet Gripper (smooth edge) may only be used on the installation of domestic products in domestic applications.

The gripper is to be fixed as necessary by a combination of: -

- nailing with suitable nails;
- sticking with anchor weld or equivalent adhesive; and
- A drill, plug and screw method.

Timber floors – Replace smooth edge that has rusted gripper nails in the same location.

Concrete floors – Replace smooth edge that has rusted gripper nails in a location adjoining existing. Do not remove existing.

Stairs – internal to Property: Provide and fit suitable aluminium stair nosing fixed in accordance with manufacturers' recommendations as directed.

Stairs – common areas: Provide and fit Heavy duty (commercial quality) extruded aluminium stair nosings in Common Areas and to stairs in BCA Class 3 and Class 9 Properties.

Domestic quality naploc or stair nosings will not be accepted in Common Area or in BCA Class 3 and Class 9 Properties under any circumstances.

Trims: Fix binder bars, carpet to carpet bars, and trims to manufacturers' recommendations and to best trade practice.

Double bonding: All double bonding must be carried out using a solvent free, low odour adhesive. All seams on dual bond carpets must be sealed using a carpet seaming adhesive.

Pattern or texture: Match over whole surface of continuous spaces.

Stretching: Install carpet flat and taut so that people/furniture movement over it does not cause rucking. Use a power stretcher to ensure maximum tension between walls with knee kickers only used to assist. Apply force by correct pin adjustment to carpet base only to avoid damage to pile and underlay.

The Contractor must ensure that all products and services supplied comply with the specifications.

Cut away: Cut away all loose nap ends, remove scrap and vacuum clean.

Adhesives: All adhesives used (for both carpet and resilient flooring) should be non solvent and low odour. If a solvent based contact adhesive is the only option; no more than 1 x 4 litre container is permitted to be taken onto a Site (additional contact adhesive must be secured in installer’s vehicle until required).

RESILIENT FLOOR COVERINGS

Resilient flooring: Use of resilient flooring in kitchens, dining areas, hallways and other high traffic areas of a Property. Do not lay resilient flooring or wall sheeting in

wet areas instead of Ceramic tiles or Common Areas without the prior written approval of the Principal.

Planning and general layout: Determine the proposed layout of material, direction of pattern, and set out of Resilient Flooring to provide a uniform appearance.

All adhesives must be low or non solvent and low odour. The only exception is when there is no alternative to using a contact adhesive (which must be avoided where ever possible). When contact adhesive must be used no more than 1 x 4 litre container is permitted to be taken to the Site. Additional contact adhesive must be secured in the installer's vehicle until required. Safety Data Sheets must be supplied for the adhesives used in the installation in line with the manufacturer recommendation for use with their products.

Primer: Prime porous plaster, concrete and timber substrate with primer recommended by the adhesive manufacturer.

Installation: Install resilient flooring in accordance with the manufacturer's recommendations. Accurately cut, scribe and fit against all walls, pipes and other permanent projections and fixtures.

All installation must be carried out in compliance with AS1884.

Hardboard Underlay: must comply with the following:

- Thickness 5.5mm ± 0.15mm
- Sheet Size 1200mm x 900mm ± 1.0mm

Fibre Cement Underlay

- Thickness 5.5mm ± 0.15mm
- Sheet Size 1200mm x 900mm ±1.0mm

Fixing of Hardboard and Fibre Cement Underlay: Lay hardboard and fibre cement underlay to ashlar or brick pattern and fixed using 25 mm ring grooved nails or 22 mm staples, spaced at 75 mm intervals at perimeters and 150 mm throughout the body of the sheet.

Dye Batch: Ensure that the Resilient Flooring laid in a single area is of a single specified type, quality, colour and design and comes from one manufacturing batch and dye lot.

LAYING RESILIENT FLOORING IN WET AREAS, AND COMMON AREAS

When laying in wet areas or common areas use homogeneous sheet resilient flooring product with a minimum slip rating of R10. Products containing abrasive material in order to comply will not be considered. Refer to Schedule 6 (Component Requirements).

Wherever possible replace existing waste outlets with a three part vinyl clamping outlet or similar.

Against all walls a minimum of 150mm integral cove edging is required. Use an appropriate adhesive for fixing cove formers to both walls and floors. A capping strip to prevent water penetration must be adhered to the wall above the cove edging.

Hot weld all forming joints when laying resilient flooring sheets.

END OF SECTION 7

Section 8 - Painting Preparation

General

Scope: The specified information within this section is provided to clarify the contract expectations and requirements of the Principal in relation to the subject trade works.

This section sets out the requirements for the preparation of unpainted surfaces and the surface preparation of previously painted surfaces ready for the application of coating systems specified in Section 9 Painting.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 2311: Guide to painting of buildings
- AS 4361.2: Guide to lead paint management Part 2: Residential and commercial buildings.

And all other relevant Acts, codes of practice, Standards and guidelines.

MANAGEMENT OF LEAD CONTAMINATED PAINTED SURFACES

“Lead-Safe” practice: must be in accordance with AS 4361.2, Guide to lead paint management.

Testing by the Contractor: must be carried out in accordance with Section 1 Testing.

Materials

Filling, stopping and cleaning materials: Ensure all paint strippers, abrasive papers and blocks, cleaning agents, etching solution, mould inhibitors, rust inhibitors, size, stopping, knotting, fillers and other commodities are the types recommended by the coating manufacturer of the coating for the surfaces being prepared.

Workmanship

Surface preparation: Prepare all surfaces to coating manufacturer’s written specification.

The Contractor is responsible for ensuring that the substrate is suitable and satisfactory to deliver first quality painting work and deliver a suitable top coat that meets the manufacturer’s performance specification.

Protection: Protect all Equipment and Tenants' belongings from damage, including furniture, floor coverings, curtains, gardens, plants, lawns and the like and make good any damage. When working on or about any open windows and doors ensure that any necessary temporary barriers are in position to stop dust and/or debris from entering the premises. Attach dust bags to power tools, in particular electric sanders and planes and ensure the encapsulation of all disturbed debris and dust.

Mould Removal: Mould removal is a multi-stage procedure to treat the entire surface, the Contractor must carry out the following sequential steps:

- Thoroughly clean contaminated hard surfaces and materials using water and detergent (soapy water) or a vinegar solution and drying completely. Cleaning all tools and equipment after use.

- Discarding porous materials (plasterboard, insulation and carpets) that can't be readily cleaned, have been wet for more than 48 hours or have visible mould growth.
- Wrap and seal contaminated items and discarding into plastic bags or sheets to reduce the spread of mould spores.
- For severe mould conditions apply a mould steriliser; and
- Apply a fungicidal paint.

Heritage Specific Works

Heritage Buildings - Retention of Original Fabric and Features: The principles of repair or replacement work involved in heritage maintenance must be guided by the property's classification as per the Principal's Heritage Asset Management Strategy.

PAINTED SURFACES – Heritage Conservation Trade practices: The Contractor must adhere to best painting Conservation practices which include:

- The Contractor must obtain expert advice to determine the historic paint colours and finishes of the Building fabric and repaint with matching colours to illustrate the distinctive character of the Building;.
- where possible the Contractor must keep samples of early paint and paint colours at the Building;
- do not remove paint and finishes down to the bare surface unless recommended by expert advice. Strong paint strippers, whether chemical or mechanical can permanently damage the surface. Paint stripping obliterates evidence of the historical paint finishes;
- do not paint fabric which is presently unpainted, unless recommended otherwise by expert advice;.
- obtain all necessary local council approvals prior to commencement of works when changing the external colour scheme of a heritage item;
- only repaint deteriorated heritage significant paint where necessary. New paint shall match the original in colour, texture and pattern unless recommended otherwise by the Principal and/or expert advice;
- provide paints and other materials that are scheduled in the Australian Paint Approvals Scheme "List of Approved Products". (**www.apas.gov.au**);
- when old paintwork is sound it is best left undisturbed and used as the base for new paintwork;
- there could be paint types of technical interest or valuable colour schemes which have remained undisturbed for many years and which contribute to the archaeological interest of the Building;
- when stripping back to the original substrate is necessary, retain some areas of previous paint layers in an obscure location, as historical evidence;
- provide adequate protection to adjacent fabric areas beside and below areas being painted including drop cloths and protection to stone windowsills, plinths and copings below window joinery and below metal palisade fencing being painted, etc.;
- do not paint over original hardware fixtures;
- do not remove paint from wooden architectural features that were never intended to be exposed; and

- do not remove original hardware for the purpose of painting the surrounding Fabric if the removal is likely to damage the hardware.

END OF SECTION 8

Section 9 - Painting Interior

General

Scope: This section sets out the requirements for normal thin film coating and sealing work on surfaces prepared as specified in Section 8, Painting Preparation, in the interiors of Buildings.

Paint all previously painted surfaces, including but not limited to walls, doors, skirting/mouldings, sills, architraves, inside fixed cupboards, internal walls/ceilings of attached garages.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 2311: Guide to painting of buildings

And all other relevant standards, Acts, codes of practice and guidelines.

In some circumstances, the specified paint system may be unsuitable for a particular portion of the work. In these situations, the Contractor must propose an alternative system for the Principals approval, complete with supporting data, technical details and a full quality plan when submitting a report in accordance with Schedule 10 (Reporting Templates).

Materials

Coating materials: Must have a minimum 10 years written manufacturer's warranty and meet the following requirements:

- 100% premium Acrylic (Waterborne) paint or alkyd base solvent-borne or polyurethane paint must be used;
- Workmanship must meet current Australian Standards;
- colours must match approved samples;
- paints must conform to the appropriate APAS (Australian Paint Approval Scheme) paint specification number as per the APAS paint specification;
- paint must be provided in sealed containers branded with the manufacturers name, type of content and APAS approval number;
- paints must comply with APAS specification 0215 for low VOC interior paints;
- tinted and untinted undercoats, enamels and topcoats must be low surface emitting product complying with APAS for VOC emissions; and
- pigments, tints and stainers must be as recommended by the paint manufacturer.

Delivery and application: All paint materials to be used must be brought on to the Site in the original sealed containers with the manufacturers label, seal intact, applied in accordance with the manufacturers written specification and conforming with the appropriate Australian Paint Approval Scheme (APAS) specification and certification. Where required, make samples available for testing purposes.

Primers and undercoats: These must be of the same brand as the finishing coat for all surfaces.

Mould resistant paints: Must be used in all areas prone to mould such as laundries, bathrooms and kitchens.

Workmanship

Surface preparation: Must comply with Section 8, Painting Preparation. Rectify any surfaces which may not provide the required finish or contain defects that may adversely affect the painting work. Commencement of painting will be taken to mean that the substrate is warranted by the Contractor as satisfactory for first quality work.

Colour range: Carry out painting in the approved colours. For touch-up works use a paint colour to match the existing. Generally, paint ceilings and windows white.

Dry film thickness testing: If directed by the Principal the Contractor must carry out a dry film thickness Test in accordance with AS1580 to establish film thickness.

Paint demarcation: Paint windows and doors as follows:

- butt windows and doors interior paintwork to exterior paintwork; and
- extend windows and doors interior paintwork to the outside corner of the head / stile of doorjambs and paint the outside corner of heads / sills / stiles / reveals / sashes and the like (including areas hidden by sash in closed position).

Preparation of Materials

General: Prepare coating materials as recommended by the manufacturer. Strain through fine gauze any coating material showing small particles in application. Do not intermix different coating materials. Stir coating materials to obtain an even consistency before use, unless otherwise recommended by manufacturer. Only add thinners, driers and extenders in accordance with manufacturer's written specification.

Protection

Damage: Protect freshly applied coating surfaces from damage.

Signs: Where necessary to prevent damage to the coating, exhibit 'Wet Paint" signs and provide protective barriers.

Adjacent surfaces: Protect surfaces adjacent to those being coated particular attention should be given to protection of electrical fittings.

Glazing: Protect etched, sand blasted and ground glass glazing from attack by oily constituents of coating materials by treating and protecting edges before applying the coating and cleaning surfaces immediately after coating.

Fittings, fixtures and hardware: Remove these from surfaces to be coated. Clean and replace them square, plumb and true on Completion of the painting work. Do not paint hinges unless previously painted.

Application

General: Apply coatings as specified and in accordance with the manufacturer's written specification. Do not re-coat until any previous coats have achieved the necessary drying.

Unsuitable conditions: Do not apply coatings:

- to surfaces affected by damp or frost;
- When the surface or ambient temperature inhibits the proper application of the paint; and
- when heat is likely to cause blistering or wrinkling.

Priming (generally): Apply priming coats by brush unless other methods are specifically permitted. Work primer into surfaces, joints, angles and end grain. Ensure that priming coats are of adequate thickness and suit surface porosity.

Ensure that any primed surfaces which have deteriorated on Site or in transit are touched-up or re-primed. If more than one Month has elapsed since priming, re-prime before applying top coat.

Priming Joinery: Where timber has been treated with a preservative, check to ensure that the coating materials are compatible with the preservative.

Priming metal: Prime metal surfaces on the same Day as they are prepared and cleaned.

Undercoats: Apply an even film over all surfaces, to a continuous wet edge, avoiding uneven thickness at edges and angles. Tint undercoats differently relative to the surface colour scheme.

Finishing coats: Apply an even film over all surfaces, to a continuous wet edge, avoiding brush marks, sags, runs and other defects. Where two gloss finishing coats are specified, apply the second coat within 48 hours after applying the first coat.

Timber fittings: Apply the finish required to top, bottom, edges and all internal surfaces, including shelves.

Timber doors: Prime and paint top and bottom edges of new doors before hanging doors with the same number of coats as specified for the exposed surfaces. Paint the inside and outside of doors and frames. Prepare and paint existing internal in situ doors front, back and stile sides only.

Rub down: Rub down all priming and undercoats to a smooth surface with fine glass paper and remove all dust before applying the next coat.

Glazing rebates and beads: Apply coatings to rebates and beads before glazing.

Glazing putty: Remove all loose putty. Prime rebates, sprig and reputty as required and prime and paint glazing putty and compounds, as recommended by their manufacturer. Clean glass before priming putty faces. Extend paint adjacent to glazing across putty and 2mm on to glass, but not beyond sight lines. Wipe off any over-painting beyond sight line while wet. Do not allow it to dry and later cut back.

Schedule of Interior Paint Finishes

The following table should be used as a **guide only**. The Contractor must make an assessment of the condition of the surface and prepare surfaces as required. The number of coats must be applied to achieve the desired result to ensure first quality work.

Location – and condition	**Preparation (See Note 1)**	**Top Coats**
KITCHENS / BATHROOMS /LAUNDRIES		Finish the walls of all kitchens, cooking recesses, bathrooms, combined laundry/bathrooms, laundries and W.C. recesses.
• Previously painted – good condition	Prepare surface	Apply one (1) coat of 100% Acrylic (Waterborne) full gloss (Bathrooms). Apply (1) coat of 100% Acrylic (Waterborne) semi-gloss (Kitchens and Laundries.
• Previously painted – poor condition	Prepare surface then apply one (1) coat of a suitable	Apply one or two coats of 100% Acrylic (Waterborne) full gloss (Bathrooms) as required. Apply (2) coats of 100% Acrylic (Waterborne)

Location – and condition	Preparation (See Note 1)	Top Coats
	oil based undercoating	semi-gloss (Kitchens and Laundries.
• Unpainted	Prepare surface as specified, then apply one (1) coat of sealer prior to painting with a suitable oil based undercoating or two (2) coats of undercoating	Apply two (2) coats of 100% Acrylic (Waterborne) full gloss (Bathrooms). Apply (2) coats of 100% Acrylic (Waterborne) semi-gloss (Kitchens and Laundries.
KITCHEN AND LINEN PRESS CUPBOARDS (Timber)		
• Previously painted – good condition	Prepare surface	Apply one (1) coat of 100% Acrylic (Waterborne) full gloss.
• Previously painted – poor condition	Prepare surfaces then apply one (1) coat of a suitable oil based undercoating	Apply one (1) coat of 100% Acrylic (Waterborne) full gloss.
• Unpainted	Prepare surface as specified, then apply one (1) coat of sealer prior to painting with a suitable oil based undercoating or two (2) coats of undercoating	Apply two (2) coats of 100% Acrylic (Waterborne) full gloss to cupboards.
ALL OTHER INTERNAL ROOMS		
• Previously painted – good condition	Prepare surface	Finish friezes and walls of other rooms in 100% Acrylic (Waterborne) semi-gloss and finish woodwork with varnish or paint as specified.
• Previously painted – poor condition	Prepare surface then apply one (1) coat of acrylic based undercoating.	Finish with one (1) coat of 100% Acrylic (Waterborne) semi-gloss, and finish woodwork with varnish or paint as specified.
• Unpainted	Prepare surface then apply one (1) coat of acrylic based undercoating.	Finish with two (2) coats of 100% Acrylic (Waterborne) semi-gloss, and finish woodwork with varnish or paint as specified.

Location – and condition	Preparation (See Note 1)	Top Coats
CEILINGS, FRIEZES, AND CORNICES		
• Previously painted – good condition	Prepare surface	Apply an appropriate ceiling paint (100% Acrylic Waterborne) matt finish.
• Previously painted – poor condition	Prepare surface then apply one (1) coat of acrylic based undercoating.	Apply an appropriate ceiling paint (100% Acrylic Waterborne) matt finish.
• Unpainted	Prepare surface then apply one (1) coat of acrylic based undercoating.	Apply two (2) coats of 100% Acrylic (Waterborne) ceiling paint.
WOODWORK OR HARDBOARD		
• Previously Varnished – good condition	Prepare surface and touch up with stain where necessary to match existing	Apply one (1) or two (2) coats of Satin type polyurethane
• Crazed or perished varnish – poor condition	Remove all varnish with paint and varnish remover, then thoroughly neutralise as specified. Putty and fill with suitable wood filler, and apply one (1) coat of Shellac.	Stain to the approved colour. Finish with two (2) coats of Polyurethane Satin clear.
• Previously Varnished – good condition, but to be changed to a painted finish	Remove all varnish with varnish and paint remover, then thoroughly neutralise as specified and apply one (1) coat of primer, stop up and apply one (1) coat of a suitable undercoating and	Apply one (1) finishing coat of suitable alkyd full gloss Solvent-borne paint.
• Previously Painted – good condition	Prepare surface	Apply one (1) coat of a suitable alkyd full gloss Solvent-borne paint.
• Unpainted	Clean down to the original surface and apply one (1) coat of primer, stop up	One (1) coat of a suitable alkyd full gloss Solvent-bourne paint.

Location – and condition	Preparation (See Note 1)	Top Coats
	and then apply one (1) coat of a suitable undercoat.	

Note 1: In this Schedule, 'Prepare surface' means to prepare in accordance with section 8 (Painting Preparation).

Where the dining Room and kitchen or living Room and kitchen have common wall surfaces, all such wall surfaces are to be painted as for the kitchen.

Cover interior sash channels (runners) and parting beads, where stained and varnished, with two (2) coats of Shellac or equal and where painted, with one (1) coat of a suitable undercoating and one coat of Acrylic (Waterborne) gloss. Allow to dry and harden overnight, then move sashes so that they run freely in the channels (runners).

Painting of new and old concrete floors: Previously Painted: Floors in external porches and stairs should not be painted. If previously painted, assess the existing worn painted surface, and if safe leave it in place. However, if it is peeling and lifting, thus posing a safety risk, the appropriate treatment, such as, scrape, grind to remove paint.

Intumescent Paint: (Refer to Fire Safety upgrade works)

- ensure intumescent paint is applied only by applicators trained by an approved supplier;
- clean all surfaces so that they are free of dust, dirt, oil, wax, grease, mildew, mould, loose flaking paint or other foreign matter that could impair bonding of intumescent paint;
- apply paint in accordance with the manufacturers specification;
- apply paint within manufacturers guidelines for temperature and humidity;
- record all wet film thicknesses for each coat;
- drop all light fittings so that paint is applied continuously, ensure that they are properly refixed on Completion of painting;
- when painting ceiling cornice apply a bead of intumescent mastic to the top and bottom of the cornice where it meets the walls;
- provide a semi-gloss over coating in all wet areas;
- ensure that each coat is completely dry before applying the next; and
- apply paint at a minimum dry film thickness of 1000 microns for internal applications.

END OF SECTION 9

Section 10 - Painting Exterior

General

Scope: This section sets out the requirements for normal thin film coating and sealing work on external surfaces prepared as specified in Section 8, Painting Preparation for the exteriors of Buildings.

Paint all previously painted surfaces, including eave, balcony and verandah soffits, feature panels, mail boxes, railings, valley iron, vent pipes, all surfaces of carports / garages etc. and yard storage lockers as standard items.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 2311: Guide to painting of buildings

In some circumstances, the specified paint system may be unsuitable for a particular portion of the work. In these situations, the Contractor must propose an alternative for the Principals approval complete with supporting data, technical details and a full quality plan when submitting the request.

Property identification, date of completion of painting and brand of paint used: When the external painting of a Building is completed, record the date of Completion and the types/brands of paint used thereon.

Materials

Coating materials: Must have a minimum 10 years written manufacturer's warranty and meet the following requirements:

- Paints, Primers and Undercoats:
- 100% premium Acrylic (Waterborne or Solvent borne) paint must be used;
- Workmanship must meet current Australian Standards;
- colours must match approved samples;
- paints and primers must conform to appropriate Australian Paint Approval Scheme (APAS) paint specification numbers as per the APAS Paint Specification;
- paints and primers must be provided in sealed containers branded with the manufacturers name, type of content and APAS approval number;
- low surface emitting product complying with APAS for low Volatile Organic Compound (VOC);
- Tinting:
- pigments, tints and stains must be as recommended by the paint manufacturer;
- Anti-Graffiti Treatments must be:
- registered with APAS—cope with Xylene based and solvent based graffiti;
- fire rated to AS1530.3; and
- satisfactorily tested to ASTM D968-51

Delivery and application: all paint materials to be used must be brought on to the Site in the original sealed containers with the manufacturers label, seal intact. Paint must be applied in accordance with the manufacturer's written specification and must

conform to the appropriate APAS specification. Where required, make samples available for testing purposes.

Primers and undercoats: These must be of the same brand as the finishing coat for all surfaces.

Workmanship

Surface preparation: must comply with Section 8, Painting Preparation. Rectify any surfaces which may not provide the required finish or contain defects that may adversely affect the painting work. Commencement of painting will be taken to mean that the Contractor warrants that the substrate is satisfactory for first quality work.

Colour range: Carry out painting in the approved colours. For touch-up works use a paint colour to match the existing. Generally, paint ceilings and windows white.

Dry film thickness testing: If directed by the Principal the Contractor must carry out a dry film thickness Test in accordance with AS1580 to establish film thickness.

Paint demarcation: Paint windows and doors so exterior paintwork butts to interior paintwork, extending to the inside edge of all accessible edges of sashes and doors.

Interior of gutter: Thoroughly clean guttering of leaves and other debris prior to painting the exterior of the gutter.

Preparation of Materials

Prepare coating materials as recommended by the manufacturer. Strain through fine gauze any coating material showing small particles in application. Do not intermix different coating materials. Stir coating materials to obtain an even consistency before use, unless otherwise recommended by manufacturer. Only add thinners, dryers and extenders in accordance with the manufacturer's written specification.

Protection

Damage: Protect freshly applied coatings surfaces from damage.

Signs: Where necessary to prevent damage to the coating, exhibit "Wet Paint" signs and provide protective barriers.

Adjacent surfaces: Protect surfaces adjacent to those being coated.

Glazing: Protect etched, sand blasted and ground glass glazing from attack by oily constituents of coating materials by treating and protecting edges before applying the coating and cleaning surfaces immediately after coating.

Fittings, fixtures and hardware: Remove these from surfaces to be coated. Clean and replace them square, plumb and true on Completion of the painting work. Do not paint hinges unless previously painted.

Application

General: Apply coatings as specified in accordance with the manufacturer's written specification. Do not re-coat until after any previous coats have achieved the necessary drying.

Unsuitable conditions: Do not apply coatings:

- To surfaces affected by damp of frost.
- When the surface or ambient temperature is below 10 degrees C.
- When heat is likely to cause blistering or wrinkling.

Priming (generally): Apply priming coats by brush unless other methods are specifically permitted. Work primer into surfaces, joints, angles and end grain. Ensure that priming coats are of adequate thickness and suit surface porosity.

Ensure that any primed surfaces which have deteriorated on Site or in transit are touched-up or re-primed. Re-prime if more than one Month has elapsed since priming before top coating.

Priming Joinery: Where timber has been treated with preservative, check and ensure that the coating materials are compatible with the preservative.

Priming metal: Prime metal surfaces on same Day as they have been prepared and cleaned.

Undercoats: Apply an even film over all surfaces, to a continuous wet edge, avoiding uneven thickness at edges and angles. Tint undercoats differently relative to the surface colour scheme.

Finishing coats: Apply an even film over all surfaces, to a continuous wet edge, avoiding brush marks, sags, runs and other defects. Where two gloss finishing coats are specified, apply the second coat as per the manufacturer's specification.

Timber fittings: Apply the finish required to top, bottom, edges and all internal surfaces including shelves.

Exterior timber doors: Prime and paint top and bottom edges before hanging doors with the same number of coats as specified for the exposed surfaces. Paint the inside and outside of doors and frames.

Rub down: Rub down all priming and undercoats to a smooth surface with fine glass paper and remove all dust before applying the next coat.

Glazing rebates and beads: Apply coatings to rebates and beads before glazing to previously treated surfaces.

Glazing putty: Remove all loose putty. Prime rebates, sprig and re-putty as required and prime and paint glazing putty and compounds, as recommended by their manufacturer. Clean glass before priming putty faces. Extend paint adjacent to glazing across putty and 2mm on to glass, but not beyond sight lines. Wipe off any over-paint beyond sight lines while wet. Do not allow it to dry and later cut back.

Schedule of Exterior Paint Finishes

The following table should be used as a guide only. The Contractor must make an assessment of the condition of the surface and prepare surfaces as required. The number of coats must be applied to achieve the desired result to ensure first quality work.

Location – and condition	Preparation (See Note 1)	Top Coats
EXTERNAL SURFACES/ WALLS		
• Previously painted – good condition	Prepare surface OR Where a change in paint system is approved, apply one (1) coat of a suitable compatible undercoat.	After preparation, apply one (1) coat of Acrylic (Waterborne or Solvent borne) Gloss paint.

• Previously painted – poor condition	Prepare surface Where existing paintwork is perished, seal all worn or perished areas with one (1) coat of pigmented sealer and then apply one (1) coat of a suitable compatible undercoat.	After preparation, apply two (2) coats of Acrylic (Waterborne or Solvent borne) Gloss paint.
• Unpainted	Prepare surface Seal all surfaces with one (1) coat of pigmented sealer then apply one (1) coat of a suitable compatible undercoat.	After preparation, apply two (2) coats of Acrylic (Waterborne or Solvent borne) Gloss paint.
EXTERNAL WOODWORK		
• Previously painted	Prepare surface	Apply one (1) coat of 100% Acrylic (Waterborne) Gloss or one (1) coat of Solvent-borne Full Gloss
• Unpainted or Perished Painted woodwork	Where paint has completely perished and the original surface is exposed, first remove all perished paint by a suitable method. Thoroughly strip the surface, then treat and apply to all bare surfaces one (1) coat primer. Stop up and fill cracks etc., sand back and then apply one (1) coat of a suitable undercoat	Apply either two (2) coats of 100% Acrylic (Waterborne) Gloss or two (2) coats of Solvent-borne Full Gloss finish. Lightly sand between coats.

TREATED PINE DECKING		
• Previously painted	Prepare surface	Apply one (1) coat of treated pine finishing oil.
• Unpainted	Prepare surface	Apply two (2) coats of treated pine finishing oil.
FENCES (Woodwork to be painted)		
• Previously painted	Prepare surfaces	Apply one (1) coat of a suitable finishing coat of paint.
• Unpainted	After preparation apply one (1) coat of a suitable wood primer. Stop and putty up and then apply one (1) coat of a suitable undercoating. Allow at least twenty-four (24) hours for each coating	Apply two (2) coats of a suitable finishing coat of paint.

	to dry and harden before applying the next coat.	
FENCES (Woodwork to be stained)		
• Previously stained	Prepare surface	Apply one (1) coat of 100% Acrylic (Waterborne) wood stain.
• Unpainted	Prepare surface	Apply two (2) coats of 100% Acrylic (Waterborne) wood stain.

METAL GUTTER, DOWNPIPES FLASHINGS, VENT PIPES, ETC		
• Previously painted	Prepare surface	After preparation apply one (1) coat of a suitable undercoating, and either one (1) coat of 100% Acrylic (Waterborne) Gloss or one (1) coat of Solvent-borne Full Gloss paint and ensure adequate coverage.
• Unpainted	Prepare surface	After preparation, one (1) coat of a suitable undercoating, and either two (2) coats of 100% Acrylic (Waterborne) Gloss or two (2) coats of Solvent-borne Full Gloss paint and ensure adequate coverage.
PORCHES, VERANDAHS		
• Previously painted	Where fully enclosed and permanently locked up for use as a front or back entrance, finish when directed, with a non-slip finish.	Floors in external porches and stairs should not be painted. If previously painted, assess the existing worn painted surface, and if safe leave it in place. However, if it is peeling and lifting, thus posing a safety risk, the appropriate treatment, such as, scrape, grind to remove paint
CORRUGATED IRON ROOF		
• Previously painted	Prepare surface	Apply two (2) coats of approved roof paint
• Unpainted	Spot prime with one (1) coat of a suitable rust inhibiting metal primer, (water based is acceptable) then apply one to the whole surface (1) coat of a suitable metal primer undercoating coloured to match the finishing coat	Apply two (2) coats of approved roof paint.

Note 1: In this Schedule, 'Prepare surface' means to prepare in accordance with section 8 (Painting Preparation).

Street numbers: Where previously painted and where directed, paint all street numbers in black or the colour directed by the Principal.

Flyscreen doors and windows (except aluminium): Paint both sides, including W.I. in-fills as specified according to the condition / material. If removed for painting,

allow paint on flyscreen frames 24 hours to dry and harden after the application of each coat. Re-fix them after the final coat in accordance with good trade practice.

External balcony verandah or toilet doors: Where doors open out, paint BOTH SIDES.

Lattice screens, or unpainted batten infills: Paint all lattice work which has been previously painted or oil stained as specified. Where the lattice work and batten infills were unpainted, 2 coats of 100% of Acrylic (Waterborne) Wood stain or paint as directed.

Thoroughly clean down and completely de-grease by washing with mineral turpentine, thinner or suitable solvents all new or unpainted G.I. gutter, downpipes and combined gutter/fascia. Dried to a clean surface and then paint with one coat of suitable galvanised iron primer (water based type is acceptable) and then painted as specified above.

Wrought iron: Spot prime with 1 coat of a suitable rust inhibiting metal primer (water based is acceptable), then apply to the whole surface 1 coat of a suitable metal primer undercoating coloured to match the finishing coat, followed by either 1 coat of 100% Acrylic (Waterborne) Gloss or Solvent-borne Full Gloss paint as directed.

Intumescent Paint: (refer to the Fire Safety Works section) The Contractor must:

- ensure intumescent paint is applied only by applicators trained by an approved supplier;
- clean all surfaces so that they are free of dust, dirt, oil, wax, grease, mildew, mould, loose flaking paint or other foreign matter that could impair bonding of intumescent paint;
- apply paint in accordance with the manufacturers specification;
- apply paint within manufacturers guidelines for temperature and humidity;
- record all wet film thicknesses for each coat, and record on a log sheet;
- ensure that each coat is completely dry before applying the next;
- apply paint at a minimum dry film thickness of 1500 microns for external applications; and
- overcoat with weatherproof paint.

END OF SECTION 10

Section 11 - Metal Work

General

Scope: This section sets out the requirements for the supply / repair and installation of grab rails, handrails, steel support posts, wrought iron railings, meter / foundation doors, garage doors, heavy duty grilles, bollards, meter / downpipe guards, mobile bins, steps and landings.

Handrails must comply with all relevant Standards and codes. Before commencing construction submit the drawings required. On completion, provide to the Principal as built drawings certified for structural adequacy and compliance.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 1074: Steel tubes and tubulars for ordinary service
- AS/NZS 1554 .1: Structural steel welding
- AS 1428.1 & AS 1428.2: Design for access and mobility
- AS 1657-1992: Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS 2312: Guide to the protection of structural steel against corrosion by the use of protective coatings
- AS/NZS 4586 - Slip resistance classification of new pedestrian surface materials

If compliance cannot be achieved due to structural or other constraints in existing Properties, advise the Principal when undertaking the Scope of Work.

Materials and Workmanship

General: Unless otherwise specified all materials used must be the best of their respective kinds. Carry out all work with this Part G2.1 (Maintenance Specification) and best trade practice. Keep all members true, free from twist and other distortion. Drill all holes. Form any bends in tubes without deforming the true cross-section.

Corrosion Protection: Apply a corrosion protection system in accordance with AS2312 (Guide to the protection of Structural Steel against atmospheric corrosion by the use of protective coatings) to deliver a 25 plus years protection for the appropriate atmospheric category.

Garage doors: Refer to Schedule 6 (Component Requirements). Provide single panel lift or rolling shutter types.

Mobile bins: Repair and replace mobile bins in accordance with the requirements of the local authority relevant to the Property.

Hand and **grabrails:** must comply with AS 1428.1 and AS 1428.2.as directed

New landing with steps and handrails: Construct these of precast concrete and galvanised steel, all of suitable manufacture. Where Site welding is necessary, prime all welded joints with a suitable corrosion protection system compatible with the original coating and to achieve a 25 plus years protection for the appropriate atmospheric category.

Stair stringers and landing bearers: Provide 100mm deep x 50mm wide M.S. tube OR 71mm deep x 51mm wide x 6.5mm M.S. angle.

Step brackets: Provide 51mm x 5mm M.S. flat bar OR 51mm x 51mm x 6.5mm M.S. angle welded to 51mm face of angle.

Fixing brackets: Provide 63mm x 6.5mm bent down where practicable, drilled for fixing. Where down fixing is not practicable, fixing brackets may be turned up.

Riser and Going: must comply with BCA Table D2.13 Riser and Going Dimensions.

Step tread (Going): reinforce with F8TH trench mesh, fix each end with one 63mm x 5mm cadmium plated cup head bolt, nut and washer.

Landing treads: As for step treads, but minimum 535mm wide fixed each end with two (2) bolts, OR full size of landing, supported on inverted angles and unbolted.

Tie bars to landings: Provide two (2) 25mm x 5mm galvanised bolts to bearers.

Landing standards: Provide 50mm NOM dia. galvanised pipe or equivalent.

Newel and handrails: Provide 35mm NOM dia. galvanised pipe newels and 50mm NOM handrail/top rail, and weld all joints. Provide galvanised fixing lugs and angles - where fixing to timber walls provide fillet welded angle frame between rails and coach screw fixing. Provide intermediate standards at less than 1200mm centres, and top handrail 1000mm above the landing or step tread.

Fixing bolts: Provide galvanised, brass and stainless steel bolts complete with nuts and washers to suit location and application.

Free standing starter post: Design and construct in accordance with AS 1428.1: & AS 1428.2: Design for access and mobility.

Erection: Keep standards plumb and other sections level where applicable. Secure turned down landing fixing brackets to brickwork; with two (2) 10mm diameter masonry bolts. Where fixing to brickwork is not practicable, secure turned up landing fixing brackets to the edge of concrete slabs with bolts as above. Provide additional centre standard to stringers when more than eight (8) treads are required.

Provide additional bracing where the landing height exceeds 1830mm.

Welding: Comply with AS/NZS 1554.1.

Concreting of posts: Refer to Section 3 Concreting for mixing on Site concrete. Set posts in a concrete footing of minimum 250mm dia x 600mm deep.

Foundation door and frame: Mechanically fix 75mm x 50mm x 5mm welded steel Angle frame to structure. Steel door 40mm x 40mm x 5mm welded Angle. Door mesh is to be equal to Expamet WK 25-17 Grade, welded to the frame. Fit doors with 2 x 100 x 85mm fixed pin steel hinges and make door latches from 40mm x 6mm flat bar x 100mm long with a slot 12mm wide x 60mm long to slip over lug on frame to allow locking of door with padlock. Weld all components to the frame and hot dip galvanise after fabrication.

Gas meter door and frame: Construct the door and frame to be constructed from 75mm x 50mm x 3mm welded unequal angle. Door mesh must be expanded metal mesh (large mesh with a smooth flat finish suitable for machinery guards) welded to door angle. Mechanically fix frame to prepared opening/structure at maximum 450mm centres. Fit door to frame with welded 2 x 100 x 60mm steel fixed pin hinges. Make door latch from 40mm x 6mm flat bar, 100mm long, welded vertically to frame,

with a vertical slot 12mm wide x 60mm long on door frame to allow locking of door with padlock.

Recessed external gas instantaneous HWS guards: Install a manufacturer's standard sized recessed instantaneous HWS anti-theft box or a manufacturers standard sized anti-theft bracket for surface mounted instantaneous HWS, as per Section 14. If no manufacturer's standard anti-theft system exists fabricate and install as for GAS METER DOOR.

External HWS tank cage: As for gas meter door, fabricate and install where directed by the Principal.

Down pipe guard: Fabricate guards from 3mm galvanised plate folded to wrap around existing downpipes with a minimum 20mm clearance. Fix to brickwork with minimum 6 fixings. Finish the top a minimum height of 1300mm from ground level and the bottom a nominal 200mm clear from ground level.

Steel tube bollards: Fabricate from heavy steel tube, to a minimum nominal size DN100 to AS 1074. Seal top with fabricated end caps, spot-welded and ground smooth OR fill with concrete to a domed finish. Apply a corrosion protection system in accordance with AS2312 (Guide to the protection of Structural Steel against atmospheric corrosion by the use of protective coatings) to deliver a 25 plus year protection for the appropriate atmospheric category

Footings: Encase in a concrete footing at least 600mm deep x 250mm diameter.

On slabs: Weld on 10mm thick base plate drilled for 4 bolts, and fix with M12 min. masonry anchors.

The base plate must have a minimum clearance of 50mm all around the bollard, with fixings in corners.

Ramps: All steel and metal accessories are to be hot dipped galvanised.

Ramp panels: CFC panels are to be thoroughly cleaned and prepared for treatment as per manufacturer's specification. Apply an anti-slip surface coating compliant to AS/NZS 4586 - Slip resistance classification of new pedestrian surface materials.

Metalwork – Conservation Trade Practices

The Contractor must adhere to best metalwork conservation practice which includes but is not limited to the following:

- retain and preserve heritage significant metal architectural features whenever possible;
- clean metals by methods that do not abrade the surface;
- reinstate missing cast iron elements;
- repair cast iron and wrought iron elements insitu wherever possible, as cast elements are fragile and wrought elements are often forged together;
- provide new metalwork items for structural stabilisation where recommended by a Heritage Structural Engineer and approved by the Principal;
- provide new metalwork handrails where recommended by Heritage Structural Engineer or Principal;
- avoid placing dissimilar metals in contact by the use of appropriate insulating materials;

- where required by the Heritage Structural Engineer and approved by the Principal, use reproduction replacement cast metal elements of cast iron to match adjacent cast iron original elements. Where possible use existing panels to make new moulds for these elements. Allow for shrinkage during casting process;
- welding and brazing of cracked cast iron elements must only be carried out by experienced welders. Welding must be undertaken without causing damage to the adjoining fabric;
- retain and preserve cast iron elements, repair wherever possible and reproduce missing elements to match existing;
- do not expose metals that were intended to be protected from the environment; and
- do not use cleaning methods which alter the colour or texture of the metal.

END OF SECTION 11

Section 12 - Electrical

General

Scope: This section sets out the requirements for all electrical work including electrical cabling, fittings and Equipment to Properties.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 3000:2018, Electrical installations: Buildings, structures and premises (SAA Wiring Rules);
- the relevant local supply authority; and
- the 'Service and Installation Rules of New South Wales' published by NSW Trade and Investment, Resources and Energy Division.

If the requirements in this Section are incompatible with the relevant electricity distributor's distribution system design standards, the latter will apply.

SPECIAL NOTE

(1) Give Tenants at least 48 hours' notice of any proposed interruption to the electricity supply, which must not to be interrupted during non-daylight hours or for a period of more than 6 hours during any one Day.

(2) Install all wiring in such a manner as to give the rating of circuits specified and increase the size of wiring where necessary for long runs to comply with Australian Standard AS/NZL 3000 Section 3.6 Voltage Drop.

Standards: The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 3000 and AS/NZS 3018 (Electrical Installations).
- AS 3786, AS 1670.6 (Smoke Alarms).
- AS 2053.1-8, AS/NZS 3008.1, AS 3013, AS 4296, AS 5000.1 (Electrical cabling).
- AS 3439, AS 3947.3 (Switchboard).
- AS 2293.1, AS 2293.2 (Inspection and Maintenance), AS 2293.3, AS 60598.1 (Luminaries).
- AS 14443.1-4 (Proximity Cards).
- AS/NZS 60335.2 (various sub sections) (Domestic Electrical Appliance Safety).
- AS1158 Lighting for Roads and Public Spaces

Regulatory authorities: Applicable regulatory authorities include (but are not limited to) the following:

- Resources and Energy (NSW Trade and Investment)
- Jemena Gas Network
- Local Government authorities
- Local electricity providers.

All electrical work involving power supply and electrical fittings must be carried out by suitably qualified tradespeople or competent person under the direct supervision of an appropriately qualified and licensed person.

Work standards and materials: All materials used must be of first quality, free from defects or blemishes. Match the existing in all details, where applicable. Provide all necessary materials, finishes, equipment etc., even where not specially mentioned, but necessary for the satisfactory Completion of the work.

Completion of work: Remove all debris and surplus materials associated with the work from the Site and disposed of appropriately. Make good any damage caused while undertaking the work.

Materials

Materials: Comply with Schedule 6 (Component Requirements).

Colour / Finish of all internal power outlets, light fittings and switches: Must be white polycarbonate unless a different colour is required to match the existing fittings.

Socket outlets: A reference to "socket outlets" is a reference to general purpose outlets (GPO's).

Wiring: Ensure replacement wiring is PVC/TPS insulated.

Equipotential Bonding and Earthing Arrangements

Prior to carrying out any work ensure that all sink benches, metal water pipes, metal shower trays etc. are properly secured and bonded.

Testing and Commissioning

Testing: Test all systems and equipment after installation for correct and reliable operation. Where requested by the Principal demonstrate the operation of the system or equipment repaired.

Commissioning: Clear away rubbish, clean and make good any soiled or damaged surfaces, replace faulty lamps and other components, and hand over the completed installation in good working order.

Description of Work

GENERAL

Electrical work: On Completion, self-test all work and complete to the Supply Authority's requirements.

Electrical rewiring: refer to Electrical Re-wire sub-section.

Earthing: Prior to carrying out any work, test the circuits on which work is to be undertaken in accordance with the latest edition of the SAA Wiring Rules to ensure that the earth system is satisfactory.

Earthing electrode: Ensure earthing electrodes and leads comply fully with the requirements of the SAA Wiring Rules.

Replacements: Install all electrical appliances in accordance with manufactures' specifications and the requirements of the relevant supply authority. Test all systems and appliances after installation for correct and reliable operation.

Where new installations are required, the following minimum number of outlets in each Property must be provided:

Room/area	Lighting	Power Points
Living area/Room	**1**	2 x double
Dining area/Room	**1**	1 x double
Kitchen/cook area	**1**	1 x single (refrigerator) 1 x single (range hood, if installed)

		1 x single (microwave shelf, if installed 2 x double (above bench)
Stairway	**1**	
Each bedroom	**1**	1 x double
Bathroom	**1**	1 x double
Enclosed hallway	**1**	1 x double
Laundry	**1**	1 x double
Attached carport	**1**	
Each exterior doorway	**1**	
Separate toilet	**1**	
Garage (attached or under)	**1**	1 x double

Repairs: Carry out all repair work in accordance with manufactures' recommendations.

Tenants' light fittings: Re-install any Tenants' light fittings removed to allow rewiring or other work.

Lighting

Lamps: Replace any existing lamps broken or damaged as a result of the work being carried out in accordance with the following:

- Do not install incandescent or low voltage dichroic halogen lamps.
- Do not install mercury vapour lamps. Provide compact or linear fluorescent, LED or metal halide lamps.
- Do not install any new fluorescent light fittings in kitchens, bathroom, laundries or utility areas. Replace broken or damaged existing fluorescent light fittings with bayonet fittings and an LED light globe.
- Do not install any new fluorescent light fittings in common areas. Replace broken or damaged existing fluorescent light fittings with new LED fittings with adjustable light output.

Replacing / repairing light fittings: When replacing or repairing light fittings check and make good wiring to the fitting, supply and install light fitting accessories, including ceiling rose, mounting base, flex pendant and lamp holder (heat resistant), batten holder (white heat resistant or colour to match), mounting flange and adjustable batten holder as required to match existing.

New light fittings: Where new light fittings are required, supply and install new LED fittings to suit location and environment, complete with the lamps with adjustable light output. Provide heat resistant batten holders fixed to eaves or walls, with concealed wiring to the existing circuit, and separately switched. Refer to Schedule 6 (Component Requirements) for new light fittings in common areas.

External wall mounted, garden or pathway fittings must be AS4282 Type C floodlight or cut-off floodlight and AS1158.3.1 Type 4 or 6 luminaires with the LED lamps. Do not install bollard lights.

Emergency light fittings: Emergency light fittings must be emergency LED luminaires with inbuilt photocells and motion sensors that switch off during daylight hours and switch to low level lighting at night when areas are unoccupied.

Exit lighting: Must be energy efficient LED.

Light fitting components: Replace faulty T5 fluorescent tubes and starters if required with new LED fitting with adjustable light output (excluding lights mounted on posts) Refer to Part G2.2 (Servicing Specification) for repairs to lights mounted on posts.

Fluorescent fitting: install new LED fitting with adjustable light output, including and remove the existing fitting and make good. Use masonry anchors or screws to fix materials. Supply and install earthing to the new fitting where no earth wire exists.

Ballast fitting: Provide ballast [all sizes] up to 40W to suit a fluorescent fitting, or 80W to suit a mercury vapour fitting.

Light outlets: light outlets to entries must be separately switched internally.

Light switches: Lighting outlets must be controlled by 10 amp flush switches mounted under moulded flush plates cut flush into architraves or walls in existing positions. Mount any new switches, 1000mm above floors or in another suitable location if this is not possible due to existing conditions.

When replacing switches check and make good wiring to the switch. Provide single, double triple or 4 gang light switches (architrave or wall mounted), ceiling switches, combination light/fan, dimmer switches, weatherproof light switches and cover plate to light switches as required.

Wet areas: Position accessories in locations containing baths showers or other fixed water containers to comply with the requirements of AS/NZS3000

Large rocker switches: Provide large rocker switch, including earth, and sleeve in disabled person and modified Properties ONLY or as directed by the Principal.

Batten holders: Unless otherwise specified provide "Electric white", heat resistant type batten holders with polyester skirts, with which the body cannot be extracted without first removing the base securing screws. Where mounted under junction boxes, provide an enlarged base but firmly secure all others on wooden battens fixed to ceiling joists or roof trusses or a similar frame component.

Sloping ceilings and soffits: Provide adjustable type white heat resistant batten holders where the height is 2400mm or less. Where the height exceeds 2400mm a flexible drop in lieu of batten holders.

Skirting shield: Shields to batten holders (skirt), must be heat resistant and match the existing.

New light circuit: New light circuits must include circuit breakers (up to 20amp) and wiring from meter board to fitting.

Photocell: Check and make good wiring to the photocell, and/or supply and fix a new photocell complete to suit the lighting load, including brackets, masonry fixing to wall as required and testing.

Ensure all outdoor light circuits that should be switched off during daylight hours have working photocells; supply and fix new photocell to switch outdoor lighting circuits where required.

Time delay switch: must include a mounting block as necessary (Button type), equal to “Clipsal 319”.

Common area time clock: Check and make good wiring to the fitting, and supply and fix a new common area time clock to the meter board. If common area time clock requires is broken or damaged, do not replace, and install new photocell.

Override switch: Supply and install an override switch to the meter board for common area lighting, as required.

Intercom Systems

Intercom systems must comply with Schedule 6 (Component Requirements)

Quick module reader: must be a new entry quick module weatherproof reader installed to manufacturers written specification. Remove and dispose of existing.

Proximity card: Supply one only proximity card programmed (all approved types) to suit the Building and each Unit within the Building. The Building proximity card must be provided to the Principal.

Door station: When replacing door station, install a 4, 6, or 8 button door station mounted or recessed type, weather proof, and install to the manufacturers written specification.

Buzzer button: Supply a new buzzer button for the intercom system, and install in accordance with the manufacturer's written specification.

Power supply: Supply a new 12 volt D.C. power supply for intercom system, and install in accordance with the manufacturer's written specification.

Reed switch: Supply a new reed switch for the intercom system, and install in accordance with the manufacturer's written specification.

Electric door striker: Supply a new electric door striker/lock including checking and making good wiring to the fitting, and install in accordance with the manufacturer's written specification.

Wiring from the door striker to the entry quick module, including all weatherproof components to secure entry to the Building must be in accordance with the manufacturer's written specification.

Hand set: Supply wall or desk mounted handset and base including touch screen systems (all approved types) for the intercom system, including checking and making good wiring to the Property, and install in accordance with the manufacturer's written specification.

Door alarm: Supply a new door alarm light and fitting for the intercom system, and check and make good wiring to the alarm light unit, install in accordance with the manufacturer's written specification.

Power Outlets

Power outlets: Where power outlets are replaced or altered, sleeve any bare earth wires with green PVC sleeving.

Power outlets must comprise of combination flush switch socket outlets of the rating specified with red dot to indicate "ON" position, with moulded flush plates and must be mounted flush in wall linings of timber framed walls or in metal wall boxes chased flush into brickwork 1000mm above the floor, 600mm from corner, except in kitchens, bathrooms, and laundries where all outlets and switches must be positioned in accordance with AS/NZS 3000.

All moulded flush plates on switches and power outlets must be electric white when on painted surfaces and walnut when on stained woodwork.

Location: Where existing power outlets are renewed, re-install in the existing position.

Replace outlet and switch: Check and make good wiring to the GPO, supply and fix a new switch, including an earth wire sleeve where required. Provide a suitable GPO outlet combination switch, one way key operated switch, double GPO outlet combination switch or combination light switch and power outlet single or double.

Wet areas: In wet areas power outlets must be double waterproof, including an earth wire, and sleeved in for disabled person modified Properties and if directed by the Principal.

Common areas: Provide a complete surface mounted protected switch plug combination [Lockable].

Wiring

General: Run all surface wiring in white low profile conduit installed in accordance with the manufacturer's written specification. Do not install wiring in eaves or the cavity of full brick or brick-veneer walls.

Inspection: When requested Inspect and supply a written report on the condition of the existing wiring at a Property in accordance with Schedule 10 (Reporting Templates).

Replacing mains connection box: Remove and dispose of existing and supply and fix a new mains connection box, including repairing the circuit as necessary. Work to comply with AS/NZS 3000:2018. Pay any fee to disconnect/reconnect supply, and liaise with supply authority as needed for the work.

Replacing mains: Remove and dispose of existing and supply and fix either: single phase consumer mains T.P.S. or multi-phase consumer mains, installed in the roof space with no mains connection box. Provide not less than 16 mm^2 wiring, maximum length 18m. Pay any fee to disconnect / reconnect and liaise with the supply authority as needed for the work.

Fix a main earth in conjunction with the mains, and liaise with the Supply Authority as needed.

Supply and install consumer neutral link to the switchboard, to suit Supply Authority requirements.

When undertaking work in residential properties the following applies:

In domestic/residential installations:

a. The number of circuits protected by one RCD shall not exceed three;
b. Where there is more than one final sub-circuit, a minimum of two RCDs shall be installed;
c. All final sub-circuits shall be RCD protected;
d. The RCD shall be installed at the switchboard from where the final sub-circuit originates; and
e. RCD protection is not required where only repairs are undertaken.

Alterations and switchboard replacements (all installations):

a. If an alteration to an existing circuit or a switchboard replacement is undertaken, RCD protection is required;
b. Where socket outlets are added to an existing circuit, the RCD need only be installed at the commencement of the new additional wiring;
c. Additions to existing lighting circuits without RCD protection do not require RCDs to be fitted;

d. Where all of the circuit protection on a switchboard is replaced, RCD protection is required; and
e. Repairs only to a circuit do not require RCD protection to be installed. This includes the changing of a GPO from a single to a multi-point.

Fuse units: Replace switch fuse units that are beyond repair with circuit breakers.

Circuit breaker: Circuit breakers must be single phase or multi-phase miniature De-ion 8-55 amp – 3KA, equal to Email Scanlec, with a Traffolyte type label. Where the circuit breaker replaces a fuse wedge or an existing circuit breaker, remove and dispose of the existing unit.

Residual current device: Provide either a combined residual current device circuit breaker or a residual current device to protect all lighting/power circuits. Label circuits "Protected" with a Traffolyte type label – Remove and dispose of existing.

Local isolation switches: Supply isolation switch for new cooking appliances and hot water heaters where there is none existing. Install in accordance with Supply Authority requirements and SAA Wiring Rules. For Class 9 Properties (Group Homes) isolation switches are to be key locked to prevent unsupervised operation of cooking appliances.

Dedicated power circuit: Power circuits must be permanently connected and dedicated, with a separate circuit breaker/ residual current devise for cooking appliances and hot water heaters, to suit the specification and rating of the appliances connected. They must comply with Supply Authority requirements and SAA Wiring Rules and AS/NZS 3000:2018. If a new appliance is installed, relocate the power connection if necessary to suit the new position of the appliance.

Meter box replacements: Replace in the existing position, including reconnection of the existing wiring and supply and installation of a new meter board, circuit breakers and earth leakage device, in accordance with the Supply Authority requirements.

Remove and dispose of existing box and equipment and supply and fix/install a galvanised metal raiser bracket to the point of attachment.

Electrical cabling: Supply and install heavy-duty underground conduit complete with electrical cabling connected to supply, including all excavation and backfilling.

Supply and install electrical cabling within wall and roof spaces, were possible, connected to common area supply.

Supply and install heavy duty ducting with cabling securely fixed to walls, eaves etc.

Electric Space Heaters

Replace heater subcomponents: Remove existing and supply and fit equivalent new subcomponents, install in accordance with the manufacturer's written specification. If existing fixed electric space heater in living area cannot be repaired, replace with energy efficient reverse cycle air conditioner, and conduct make good works.

Combination fan / heater: Only when directed by the Principal, supply and install a combination light fan and heater.

Air Conditioners

The Principal has specified the installation of air conditioner to replace wood fire heaters, gas flued space heaters and electric space heaters that are beyond economic repair.

Split systems must be installed, and maintained to the relevant provisions of AS 1677 including pipework, fittings, wiring, and accessories necessary for the proper functioning of the installation.

A standard installation is based on:

- 3 metres of pipework and 2 metres of capping
- 15 metres of electrical cable between main switchboard and outdoor unit

The actual length of pipework, capping and electrical cable required for each dwelling will vary considerably. The standard installation allowances above are considered to be generous.

Air conditioner shall be appropriately sized to heat and cool the living area. Install hard wired wall mounted control panel at height that can be easily reached by the tenant. Remotes are only to be provided to tenants when directed by the Principal.

The following standard installation types have been identified. In all cases, make sure the manufacturers' installation guidelines and required clearances around the units are applied appropriately. The tenant must be consulted in respect of the position and location of the internal AC unit. If the tenant prefers an alternative location for the internal AC unit, the contractor shall explain to the tenant why the internal AC unit has been placed in the location nominated by the Contractor.

Indoor unit: Back to back installation: Where possible, the indoor unit and outdoor unit shall be mounted back to back.

Internal wall: The indoor unit is mounted on an internal wall, where necessary internal pipework and capping may be required to reach the outdoor unit.

Clear from sockets: The indoor unit should not be positioned above an electrical socket, to ensure that in the event of a fault, drips do not create an electrical hazard. The tenant should be consulted about the position of the indoor AC unit and any concerns they may have should be considered, such as the AC blowing across blinds or curtain window coverings.

Outdoor unit: Wall mount installation: The outdoor unit is mounted on a bracket on the wall to minimise accidental/intentional damage and reduce dust/insect intrusion. Outdoor units are to be at least 1,800mm above ground level.

Ground mount installation: The outdoor unit is mounted on the ground either on an existing slab or pad, or on a pre-cast pad to be supplied by the Contractor. The outdoor unit shall not be located on existing concrete paths, imped access or create a trip hazard.

Roof mount installation: The outdoor unit is mounted on the roof, due to inaccessibility of external walls.

General and other requirements: The Contractor is to undertake the following works as specified and scheduled and in accordance with the manufacturer's recommendations:

- Installation of indoor and outdoor units according to type of installation specified in manufacturer's installation manual.
- Supply of all required equipment excluding the split system and wall mounted control panel (supplied by the air conditioning supplier). Equipment to be supplied by the Contractor includes but is not limited to:
  - Capping, pipework and fixings
  - Drainage connections

- Appropriate flexible connections
- Trim and sealing around openings
- Anti-vibration mountings

- Seal all penetrations to prevent insect infestations.
- The provision of all hoisting and scaffolding required for the installation of the above systems.

All outdoor units are to be fastened securely with anti-vibration mounts.

The Principal as owner of the air conditioner is the only party entitled to Energy Saving Certificates (ESC's) under the New South Wales Government's Energy Savings Scheme (ESS) and the Peak Demand Reduction Scheme (PDRS). Prior to the installation of an air conditioner, the Principal shall be requested to provide an Instrument of Authorisation to assign the right to create ESCs, so the Principal can receive a point of sale discount on the air conditioner.

Solar PV Panels

Photo-Voltaic systems: The Principal has installed Solar PV panels on its properties. As part of its servicing requirement Contractors are to undertake a detailed inspection of single dwelling solar systems every 5 years and common area solar every year. The Principal requires Contractors to undertake an annual visual inspections of single dwelling solar systems (as part of the annual component servicing) to confirm that the solar inverter is functional. When a faulty system is identified the Contractor is to prepare a report in accordance with Schedule 10 (Reporting Templates) identifying if applicable the fault and the required repairs.

Exhaust Fans / Range Hoods

Electric exhaust (ventilator, range hoods) fans: Fit fans in accordance with the manufacturer's recommendations. Supply and install with ducting where appropriate, of fire and heat resistant material.

Exhaust fan installation: Supply and fix new 250mm exhaust fan equal to Mistral or Airflow wired into a convenient circuit and terminate in a 3 pin plug base with a switch marked "FAN". Fan must not exhaust to ceiling space.

Provide all wiring, parts and materials, with wiring concealed in a cavity. Ensure internal wall face is trimmed and external wall face is trimmed and made good, weather sealed and insect proofed. Remove and dispose of any materials that have been replaced.

New Exhaust fan / range hood with ducting: Supply and install new ducted exhaust fan/range hood. Ducting must be 0.5mm minimum galvanised steel and concealed behind bulkhead matching kitchen laminates. Penetrate the roof covering, flash with material compatible with the existing roof cladding, and supply and fix a cowl. Make good, waterproof and bird proof ducting. Remove and dispose of the existing exhaust fan/range hood, and reuse existing wiring where possible or provide all new wiring and switches required for operation.

Room ventilator exhaust fan: must be wall mounted, continuous flow, installed in accordance with the manufacturer's specification. Remove and dispose of any existing redundant materials. Reuse existing switches and wiring where possible. Fit to masonry / timber walls, and provide internal and external trims and cover plates, ducting, all wiring and switches as required.

Ceiling fan: When replacing an existing ceiling fan/light combination or as directed by the Principal, provide a 3 or 4 blade ceiling fan and install in accordance with the manufacturer's specification.

Washing Machine / Dryer

Subcomponent repairs: Remove sub-components that are beyond economic repair and supply replacement sub-components with the parts recommended by the manufacturer. Install in accordance with the manufacturers specifications.

Remove and refit the appliance to the wall as necessary to undertake any repairs.

REPLACEMENT OF WASHING MACHINE/CLOTHES DRYER

Washing machine: Provide and install a new top loading washing machine including fitting hoses and waste, in accordance with Schedule 6 (Component Requirements). Dispose of the replaced items.

Clothes dryer: Must comply with Schedule 6 (Component Requirements). Dispose of the replaced items.

Washing machine and clothes dryer security clips: In Common Areas provide security clips for each washing machine and dryer, fixed to Building and able to accept hasp and staple type padlock fixing or similar.

Electric Range / Cooktop / Oven

Stoves: Prior to carrying out any work on a stove, i.e. replacement of elements or controls, test the insulation resistance with a 500v Megger tester.

Fixed cooking appliances functional (isolating) switches: Install functional switches (emergency cut-off) to fixed and stationary electric cooking appliances, including stoves, ovens, hot plates etc. for new installations. Switches must comply with Australian Wiring Rules and be appropriately rated. Mount switches in an accessible position, within 2 metres of the appliance. Switches must have a neon indicator and be labelled except if this is not available on the appropriately rated switch. Isolation switches in BCA Class 9 Properties (Group Homes) must have an emergency cut off and be able to be key locked to prevent cooking appliances from being turned on without supervision.

Replacing elements: Remove replace element and supply and fix a new element, to suit the appliance and install in accordance with the manufacturer's written specification.

Stove clips: Provide safety clips to new and replacement stoves to prevent tipping. Install in accordance with manufacturers guidelines.

New equipment – cook tops and ovens: Disconnect and remove existing, and supply and install either a new range where existing is BER or an electric cook top and electrical oven as directed for full kitchen replacements. New equipment must comply with Schedule 6 (Component Requirements)

Where Modifications are undertaken and identified as part of the extent of work, supply and install either a new range or elevated oven and cook top with as specified. Provide equipment complying with Schedule 6 (Component Requirements).

Cook tops: Supply and install new hot plate cook top including all wiring, circuit breakers and modifying the bench top where required to accommodate the hot plate cook top where the existing is BER. NOTE: New stovetops must have solid type elements or glass ceramic cooktop.

Oven: Supply and install new wall or under bench oven in existing position, including all wiring and circuit breakers where the existing is BER. Supply and install 240V single phase electric supply to cupboard where new oven to be housed. Refer to Drawing KD11 for cupboard layout.

Smoke Alarms

General: This clause deals with the installation, replacement and servicing of smoke alarms. Comply with Schedule 6 (Component Requirements) and AS 3786, and for installation with AS 1670.6 and AS 3000.

Remove and dispose of existing smoke alarms. Cabling to be removed and replaced as per Australian Standards AS/NZS 3000.

Alarms provided under the Contract that are still under warranty must be managed in accordance with warranty provisions.

Where smoke alarms are owned by the Tenant are replaced, return the existing alarm to the Tenant after removal.

Make good any areas damaged by the installation and removal work and any holes resulting from the work. Paint areas that have been made good or marked during the work to match the existing ensuring compliance with Section 20 (Fire Safety Works).

General maintenance and testing: For each individual smoke alarm and associated piece of equipment:

- check and ensure that the 240 Volt mains power indicator is ON;
- switch off the 240 Volt mains circuit to the smoke alarm(s);
- where possible, remove the smoke alarm from its mounting base. For those models with fixed wire connections that cannot be unplugged, carry out the remainder of this procedure with the smoke alarm in-situ;
- where possible, inspect the smoke alarm mounting hardware and ensure it is secure and it will reliably mount the smoke alarm. If the mounting or ceiling is damaged to the point where the smoke alarm cannot be securely and reliably fixed, reinstall the mounting hardware;
- inspect attached strobe lights/isolation switch;
- visually inspect the smoke alarm for any obvious damage, signs of wear or reason to indications of potential failure. If any such signs are present replace the smoke alarm;
- clean smoke alarm to manufactures instructions. Do not open the smoke alarm when cleaning, as exposing its components may result in damage to the smoke alarm;
- with a soft brush attachment, vacuum the smoke alarm to remove dust and other contaminants. Take particular care to remove such things as spiders' webs and lint;
- where the smoke alarm is removed, and where in-situ and with the 240 Volt circuit OFF, press the test button to ensure the back-up battery is capable of operating the smoke alarm;
- with the smoke alarm removed, and where in-situ, with the smoke alarm temporarily covered, spray the surface surrounding the smoke alarm with a (6) six months surface insect spray. Prevent surface spray from entering the sensing chamber;

- re-install the smoke alarm (if it has been removed) and restore the 240 Volt circuit;
- check and ensure the mains supply indicator is ON; and
- press the test button to ensure the smoke alarm operates correctly.

Record all details of work performed including date and time and location of the serviced smoke alarm/s when updating maintenance milestone 7 (MMU7) . Note where a new unit has been installed, include it as a "new installation" for future maintenance and testing.

General maintenance and testing for properties leased by the Principal: Where the smoke alarm contains a battery only and is not owned by the Principal, the Contractor must undertake the following at each annual visit:

- install a new battery;
- clean the detector;
- vacuum free of dust; and
- spray insect repellent around the unit.

New smoke alarm: Replace ionisation/photoelectric/Visalert strobe light smoke alarms where found to be vandalised/unserviceable, including disposal of the replaced item. Where it is suspected Visual Damage take a dated photo of the damaged alarm in situ or photo showing just wiring/damaged ceiling and report damage to the principal.

Supply and install either a new ionisation smoke alarm, photoelectric smoke alarm or strobe light smoke alarm to suit the installation or replacement of equivalent, including all wiring ducting etc. required to ensure the functionality of the alarm.

Hush button: Supply and install a hush button (fixed to wall) for smoke alarms as directed by the Principal or when replacing an existing installation, including all wiring, ducting, etc.

Electrical Re-wire

Complete rewire: Supply and install all necessary materials and labour for the renewal of all electrical wiring to completely rewire a Property including all electric and gas/electric services. Remove and dispose of existing equipment and materials. Carry out work in accordance with the current AS/NZS 3000.

Supply and fix all new electrical wiring from the point of attachment (including consumer/service mains, meter-box, switchboard and metering equipment). Supply and fix all new sub-circuits, residual current protection devices to both light circuits and power circuits (including fridges), toggle type circuit breakers, isolation switches to cooking appliances, all existing light fittings (excluding Tenant's fittings), switches and power outlets. Supply and install additional power circuits and outlets and associated work for to meet the APS. Pay all fees, charges, levies and deposits to allow to disconnect/reconnect supply, and liaison with the Supply Authority. Renew the meter box unless the box is metal and in good condition and contains no asbestos.

Renewal of meter box: Remove existing and relocate and fix a new meter box in conjunction with re-wire above if required.

Supply and install energy authority padlock for meter boxes and switch room door as the master lock key schedule in Schedule 6 (Component Requirements).

Materials

Materials and samples: Unless otherwise specified, all cables must be copper conductors insulated with V. 75 Grade PVC to suit AS/NZS 5000 and AS/NZS 3008.1.

Cables must meet Australian Standards and local Supply Authority regulations.

Conduits: Use rigid PVC conduits Cat. A U/G to AS 2053 (set) where plastic conduits are required, except where flexible types are specified.

Consumer / service mains: Except where otherwise directed by the relevant Supply Authority use the existing points of attachment. Install consumer/service mains to local Supply Authority requirements from the point of attachment to the main switchboard using tough plastic insulated and sheathed conductors installed in the roof spaces in the manner specified in the Section Wiring below.

Provide a minimum number of phases and increase the size of conductors where required by the relevant Supply Authority.

Mains connection boxes are not required. Where installed in other than roof spaces protect mains by means of plastic conduits.

Consumer meter and switchboard: Where metal meter boxes do not exist or insufficient space is available at existing positions, supply and install in the position approved by the Supply Authority an approved meter box, capable of housing a combined meter and switchboard, complying with Supply Authority's requirements.

Meter box: Must be a recess type meter box, of galvanised steel construction, with a top hinged cover complete with stay and catch, and a weather-strip (25 x 25 x 1.2mm galvanised steel) rivet fixed and welded to the sides and top, and rivet fixed to the bottom. Keep the weather-strip 70mm from the back of the meter box in timber framed walls, and 115mm in full brick or brick-veneer walls. Over flash at the top. Paint all exposed flashings to match adjoining surfaces.

Where meter boxes are renewed, ensure all affected surfaces are made good to match the existing on Completion.

Switchboard: Supply and install in the meter box an approved type self-contained switchboard with switches and circuit breakers for the circuit controls.

Service Fuse: Generally a 100 Amp fuse, located on the un-metered side of the installation for the isolation and protection of the whole current metering and customer installation.

Main switch: Provide an approved type switch to local Supply Authority requirements with a current rating 50% greater than the maximum demand of the whole installation connected.

Labelling: Label each item of equipment on switchboards using of engraved laminated plastic labels with three layers, white/black/white, equal to Traffolyte, with lettering not less than 4mm high and fixed by self-tapped stainless steel screws.

In a local metering situation the circuit breakers are to be used as main switches but separate from the other circuit breakers and labelled accordingly.

Provide main switch ratings that comply with AS3000 and the NSW Service and Installation Rules to enable the effective isolation of the electrical supply from the electrical installation. In the event of an emergency arising that requires prompt isolation.

Each domestic electrical installation must have a main switch for each separately metered supply.

Circuit breakers: Protect sub-circuits by thermal or magnetic type circuit breakers to current Wiring Rules and to capacity requirements of the Property with fault current capacity not less than 3kA. Label all SP-CB/RCD Power circuits "Protected".

The current circuit breaker ratings must comply with AS3000 and any circuit breaker, switch or contactor controlling a capacitor must be suitable for the purpose of switching capacitors and rated to ensure reactive operation in an emergency situation.

For a single phase domestic situation current ratings as a guide are as follows:

	Gas/Electric Projects	All Electric Projects
Lighting sub circuit	1 x 16A (SP-CB/RCD)	1 x 16A (SP-CB/RCD)
Power No. 1 and 2 (Protected)	2 x 20A (SP-CB/RCD)	2 x 20A (SP-CB/RCD)
Electric Range (Domestic Range)		1 x 32A (SP-CB)
Water Heater Sub Circuit (Off Peak Rate)		1 x 25A (SP-CB)
Space Heater Sub Circuit (Domestic Rates)		1 X 32A (SP-CB)

Residual current device (RCD) (safety switches): Provide RCD protection to all final sub-circuits containing socket outlets and lighting, including refrigerators/freezers. Provide a combination of RCD/circuit breaker where it is not possible to provide individual RCD for all Lighting Circuits and power circuits. Install RCDs in the meter box for detached Properties, and in a sub-board within a Unit whenever possible.

Fix directions on how to use and test RCDs in a visible location within the meter box or sub-board. Explain to the Tenants on how to use the RCDs where possible.

Where there are 2 or 3 phases provide appropriate switches and circuit breakers, and where required by the local Supply Authority, increase the rating of switches and wiring on the above to comply with requirements.

Confirm with the Supply Authority before finalising details of the requirements for consumer mains and switchboards.

Electrical installation: Re-install lighting outlets, power outlets and appliances in the existing positions. Provide and install additional light and power outlets and power circuits to meet the requirements of this specification.

Re-install the Tenant's light fittings in existing positions.

Wiring

Install single insulated cables where sub-circuit or sub-main wiring is enclosed in conduit. Elsewhere install concealed thermoplastic sheathed (TPS) cables.

Run all cabling in roof spaces where possible with loose drops to outlets and switches.

Do not install cabling below the ground floor unless written consent is first obtained. Where wiring is permitted below the ground floor level protect the conductors in Cat. 'A' PVC conduit.

Do not install cabling in eaves or the cavity of full brick or brick-veneer walls.

Except where otherwise specified, hereinafter, carry out all wiring using TPS conductors. Neatly clip wiring to the sides of ceiling members at maximum 600mm spacing's or to the side of 38mm x 23mm battens provided across the top of ceiling joists.

Carry out wiring using the "loop-in" system. Do not join conductors between terminal connections.

Do not fix conductors to the side of wall plates or other ceiling members where they are vulnerable to damage by the fixing of cornices, wall boards, etc. Use loose drops to power outlets and light switches, and loose conductors capable of easy replacement without removal of wall linings or any structural work.

Conceal conduits throughout and, where run on brickwork, chase in to permit a minimum 10mm covering of rendering. Where a conduit is embedded in concrete, use C.A.T. "B" U/G 20mm minimum conduit.

Carry out final connections of permanently connected equipment by installing a standard wall box where a rigid conduit terminates, or a wall bracket in timber-framed structures, with terminators and a blank plate. Enclose cable in a flexible PVC conduit. Take care when locating wall boxes to avoid excessive lengths of flexible conduit.

Ensure conduit enters and is securely attached to all wall boxes and the terminal enclosures of all appliances. Terminate PVC conduit to ranges and water heaters in flush mounted boxes complete with take-off angle adaptors and approximately 900mm of flexible plastic conduit.

Ensure earthing complies with the system of the local Supply Authority, where earthing is installed in roof spaces and wall framing ensure it emerges adjacent to the connection to water pipes or copper clad electrodes securely fixed to Building structures.

In areas where earthing to copper water pipe is required, make the connection with suitable copper or brass clips in the position required by the Supply Authority.

Disconnect / Reconnect Gas and Electrical Supply: Switch off power supply and lock meter box and immobilise gas supply at commencement of Vacant Work. Switch on power and unlock meter box and reinstate gas supply immediately prior to key handover.

The Contractor must ensure compliance with clause 31.5 of the General Terms when disconnecting and reconnecting gas and electrical supply.

END OF SECTION 12

Section 13 - Master Antenna Television Systems, Data Cabling and Telephony

General

Scope: This section sets out the requirements for the installation, testing and reporting on master antenna systems, data cabling and telephony. It applies to multi Low-rise and Medium-rise Buildings. It does not cover High-rise Buildings because the system designs for such Buildings is specific to the Building layout.

Refer to Component Servicing Specification for the testing and reporting on MATV Systems installed in Buildings above 7 storeys.

All equipment, materials and standards of Workmanship used must fully comply with the relevant Standards currently in use in Australia. Where no such standards exist, conformance with relevant international standards or up to date recognised standards of good practice apply.

All work must also comply with the latest applicable edition of the Building Code of Australia, the requirements of the supply authority and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 1417: TV Antenna Installation
- AS 1367: Cabled TV Signal Distribution System
- ASS009: Installation requirements for customer cabling
- AS1345: Identification of the Contents of Piping, Conduits, Ducts
- AS1768: Lightning Protection
- AS2053: Conduits and fittings for electrical installations
- AS3000; Electrical Installations
- AS5000: Electric cables – Polymeric insulated
- AS1530.4: Fire Tests
- ACMA: 'Communications Cabling Manual Electromagnetic Compatibility (EMC) Standards'

Telephone / Data Cabling: The Contractor is responsible for repairs and maintenance required to wiring, repairs and cabling for telephone services and data to the main distribution frame / Premises Connection Device (PCD) or first telephone / data socket, including pits, conduits and draw wires.

Where Broadband cabling has been installed, the Contractor is responsible for repairs and maintenance in accordance with NBN Co specifications to wiring and cabling as required for data and broadband internet services to the Network Termination Unit (NTU) or first RJ45 wall plate including conduits and draw wires.

Workmanship and Materials

Materials and spare parts: All materials utilised for the works must be the best of their respective kinds and comply with the relevant Standard. Where existing equipment is replaced, the materials used must be new and of equal dimensions, sizes, weights and quality as the materials used in the original assembly unless otherwise recommended by the manufacturer of the equipment.

The materials/spare parts used in the performance of the work must be purchased direct from the manufacturer of the equipment or the official distributor or from a supplier of replacement parts. When installed, they must meet the requirements of the Contract and perform within the limits of their capacity.

Masts Stays and Fixings: All mast stays and fixings must have a minimum 2 year written manufacturer's warranty and meet the following requirements:

- All materials and parts must comply with current Australian Standards;
- All fixings for galvanised steel must be of a similar material or separated to prevent galvanic reaction or corrosion;
- galvanised steel items must be Galvabond Z275 to at least 19 microns of galvanising (zinc) on these items;
- booms must be powder-coated with polyester through an automated electrostatic multistage pre-treatment process;
- samples must be tested and verified by an 800 hour neutral salt spray test; and
- able to withstand wind of 100km/hr.

All exposed screws used on all items of equipment must be tamper resistant security fasteners.

The screws must be flush mounted where practical and made from stainless steel for coastal areas and galvanised steel or stainless steel for all other areas

Antenna: Antennas must have a minimum 2 year written manufacturer's warranty and must:

- comply with current Australian Standards;
- standards Mark / certified digital ready;
- achieve the following minimum readings at the antenna when installed as part of a MATV system of:
  - Signal level of between 50db to 80db
  - Modulated Error Ratio (MER) of 25db or higher
  - Post Viterbi Bit Error Rate (post Viterbi BER) of less than or equal to 2X10-4
  - Noise Margin (NM) of greater than 0dB
- be designed for a 2 kg loading on boom end (furthest from mount (tested over 100 cycles);
- be fitted with clam shell insulators and flat sided boom to provide element alignment;
- have minimum 12mm extruded aluminium elements to withstand weather and wildlife;
- be tested to wind speed of 100 km/hr;
- be designed for a 1 kg loading at unsupported end of any element (tested over 100 cycles);
- be UV and corrosion resistant tested in coastal area and western NSW;
- be installed with 'F' Type connectors; and
- be able to easily connect quad shielded cable and/or mast head amplifier.

The Contractor must select the most suitable antenna for a particular installation subject to the requirements set out below.

Antennas must be Hi-gain digital TV antennas, unless signal strengths are adequate to enable the use of Low-gain digital TV antennas.

Separate Hi-Gain UHF and VHF antennas must be installed on a single mast except in good signal areas in the range of 65 to 85 dBµV, when combined UHF/VHF antennas may be used..

Antennas must be positioned to receive the best available signal, and pointed towards the most appropriate transmitter delivering the best signal.

Penetrations: All penetrations necessary for the works must be drilled and comply with the following:

- penetrations through concrete structures and masonry walls must be diamond drilled core holes. Removal of bricks or similar breeches to bounding and fire walls is not permitted;
- cutting of reinforcing steel must be avoided or minimised. Epoxy coat exposed steel;
- under and over flashing must be provided for penetrations through external elements. Restore watertight membrane where penetrated;
- all penetrations must be sealed with a fire tested method; and
- surface finishes must be restored.

Make good and seal all penetrations. Ensure all penetrations are Fire Rated in accordance with Section 20 after cabling has been installed.

Cabling: All cables must have a minimum 2 year written manufacturer's warranty and meet the following requirements:

- Flexible cables RG6 and RG11 must have a continuous dielectric such that the centre conductor is in full contact with the dielectric along the entire length of the coaxial cable

RG 11 Low Loss Quad Shield Cable must comply with the following:

- 1.63mm/14 AWG solid copper covered steel conductor;
- enclosed in polyethylene insulation;
- 2 layers of foil tape;
- 60% aluminium braid and 40% aluminium braid;
- black PVC outer casing; and
- DC requirements – current carrying capacity 5A for RG11

RG 6 Quad Shield Cable must comply with the following:

- 1.02mm/18 AWG solid copper covered steel conductor;
- enclosed in polyethylene insulation;
- 2 layers of foil tape;
- 60% aluminium braid;
- black PVC outer casing;
- DC requirements – current carrying capacity 3A for RG6;
- all cable connections to be crimped or compression with appropriate F type connectors;

Use RG6 quad core for runs of less than 50m and RG11 quad core for runs more than 50m and for backbone cabling.

All cabling and conduits/ducting must be fully concealed unless it is not physically possible. In the latter case, install an appropriate conduit type is to be installed in an alternative protected location. Install cabling in under floor spaces, ceiling spaces or wall cavities to conceal and protect the cable.

The Contractor must ensure that after any repair work is carried out that the complete installation including any reused cabling and conduits, performs at the acceptable level.

All cabling must be adequately shielded to prevent the introduction of spurious signals being generated onto adjacent cables/services.

Open wiring is permissible in enclosed under floor spaces, ceiling spaces and wall cavities or existing cable tray provided it is adequately fixed at intervals which will prevent sag. There must be minimal excess cable in these areas and the Contractor must ensure that no adverse effect will be encountered from adjacent voltage induction. 'Enclosed under floor space' means any area under a Building that can only be accessed via a lockable door. If access to the under floor space cannot be controlled, then all cabling must be installed within a conduit.

Any cabling running inside or passing through mains duct must be in conduit. No joins in are permitted in such cabling.

Where a cable is to be run underground, it must be enclosed in a minimum 25mm UPVC conduit.

Conduits and Ducting: Conduits must be 25mm to allow possible expansion for a National Broadband and installed together with a tagged polypropylene draw-cord for future use.

All conduits must be in accordance this specification and installed not to damage any fire safety measures installed within a Building.

Amplifiers: Amplifiers must have a minimum 2 year written manufacturer's warranty and meet the following requirements:

- comply with current Australian Standards;
- have a standards mark / certified digital ready;
- achieve the following minimum readings after the amplifier when installed as part of a digital ready MATV system of:
  - Signal level of between 50db to 80db
  - Modulated Error Ratio (MER) of 25db or higher
  - Post Viterbi Bit Error Rate (post Viterbi BER) of less than of equal to 2X10-4
  - Noise Margin (NM) of greater than 0dB
- have a UV stable, weatherproof housing capable of mast attachment or surface mount;
- have adjustable gain for VHF and UHF bands;
- have built in lightning / static protection; and
- be broadband or channelised headend or distribution amplifiers.

Standard of Finish

Any repair or replacement work must be finished to the same specification, standard, surface preparation and paint finish as the original construction.

Make good any areas damaged by installation or removal work. Fill any holes resulting from such work, re-paint to match existing paintwork and make good any roof damage.

Where the work affects the Buildings passive or active fire systems, the Contractor must reinstate these systems to be fully effective and protect the Building in accordance with BCA, Australian Standards and the Principal's Fire Safety Manual.

Delivery and Extent of the Work

The Contractor must achieve a performance based outcome at completion of work in any Building ensuring that each Building has a system capable of receiving and distributing:

- free to Air Television digital transmission for the MATVS to each installed wall plate in the Building;
- telephone services; and
- high speed data to each installed wall plate in the Building, up to 1000mb/s;

Connectors and wall plate: Use crimp and compression F-type connectors and wall plates to be installed when replacement is required. F-type connectors must be installed wherever possible to ensure consistency of signal.

A minimum of one wall plate must be installed per Property.

MATV Cable: Existing MATV cable may be reused so long as the acceptable benchmark level is achieved without replacement. Existing 300Ω cable must be replaced even if the acceptable benchmark level is achieved without replacement.

Data Cabling: Must be Cat6 (capable of supporting data speeds of up to 1,000 Mbps). Cat6 cable lengths must be limited to a maximum run of 500m per cable run. Cables are to be terminated at an RJ45 type wall plate.

Topology: The MATVS must be installed using a split and tap cable topology for all Buildings with more than 10 wall plates. For Buildings with 10 or less wall plates a star cable topology is acceptable.

Existing loop through cable topologies may be retained if adequate performance measures are achieved without loss from interference. Existing loop through topologies must be converted to loop and tap systems if adequate performance measures are achieved without loss from interference, up to a maximum of 8 taps per loop.

Performance Measures and Monitoring

Benchmark for measuring and monitoring: The Contractor must ensure that at Completion of any work on a MATVS, the system complies as a minimum with the 'acceptable' benchmarks for all the performance measures in the table below:

	Inadequate	Marginal	Acceptable
Signal level	< 40 dB or > 85 dB	≥ 40 db and < 50 db Or > 80 dB and ≤ 85 dB	≥ 50 dB to ≤ 80dB
Modulated Error Ratio (MER)	< 25 dB (If all MER < 25 dB in Building)	≥ 25 dB (A minimum of only 1 MER in Building < 25 dB, all others ≥ 25 dB	≥ 25 dB (All MER in Building)
Post-Viterbi Bit Error Rate (Post Viterbi BER)	> 2×10^{-4}	≤ 2×10^{-4}	≤ 2×10^{-4}
Noise Margin (NM)	< 0 dB	= 0 dB	> 0 dB

The Performance Measures are defined as:

- Signal level – the strength of the signal, measured in dB at a signal strength measurement of between 50 dB to 80dB.
- Modulated Error Ratio (MER) – the measure of the total of all signal disturbances.
- Post-Viterbi Bit Error Rate (Post Viterbi BER) – the measure of the number of errors in the signal after demodulation.
- Noise Margin (NM) – a measure of how the signal compares to the reception cliff edge.

At the completion of any work within a Building the Contractor must Test the system and ensure 'Acceptable' benchmarks are achieved.

If 'Inadequate' or 'Marginal' readings are achieved for any of the nominated performance measures upon Completion the works will be considered a Defect and it must be rectified to achieve 'Acceptable' readings.

The Principal may request the Contractor to conduct testing of the MATV system to ensure adequate readings are achieved.

Stand-alone Antenna Television Systems, Data Cabling and Telephony

Properties with stand-alone antennas (for example Cottages, Townhouse or Villas) because the separate stand-alone antennas, cabling and connections are to be maintained to ensure reception complies with the following:

Stand-alone TV antennas need to be:

- the correct type of antenna for the TV channel frequencies in the area;
- in the right position on the roof and pointing in the right direction;
- in good condition; and
- set up correctly.

Workmanship and Materials

Materials and spare parts: All materials utilised for the works must be the best of their respective kinds and comply with the relevant Standard. Where existing equipment is replaced, the materials used must be new and of equal dimensions, sizes, weights and quality as the materials used in the original assembly unless otherwise recommended by the manufacturer of the equipment.

The materials/spare parts used in the performance of the work must be purchased direct from the manufacturer of the equipment or the official distributor or from a supplier of replacement parts. When installed, they must meet the requirements of the Contract and perform within the limits of their capacity.

Masts Stays and Fixings: All mast stays and fixings must have a minimum 2 year written manufacturer's warranty and meet the following requirements:

- All materials and parts must comply with current Australian Standards;
- All fixings for galvanised steel must be of a similar material or separated to prevent galvanic reaction or corrosion;
- galvanised steel items must be Galvabond Z275 to at least 19 microns of galvanising (zinc) on these items; and
- able to withstand wind of 100km/hr.

The screws must be flush mounted where practical and made from stainless steel for coastal areas and galvanised steel or stainless steel for all other areas

Antenna: Antennas must have a minimum 2 year written manufacturer's warranty and must:

- comply with current Australian Standards;
- standards Mark / certified digital ready;
- be UV and corrosion resistant tested in coastal area and western NSW;
- be installed with 'F' Type connectors; and
- have a 4G filter installed to protect from mobile phone tower signals.

Standard of Finish

- Any repair or replacement work must be finished to the same specification, standard, surface preparation and paint finish as the original construction.
- Make good any areas damaged by installation or removal work. Fill any holes resulting from such work, re-paint to match existing paintwork and make good any roof damage.

Only one single antenna installed on the roof. Legacy or broken antennas should be removed. Get an experienced local antenna specialist to inspect, repair or replace your antenna if you think it may be the problem.

To meet Australian standards, the cable that connects your antenna to your TV should be a quad-shield coaxial cable (type RG6).

END OF SECTION 13

Section 14 - Plumbing (General Use)

General

Scope: This section sets out the work involving roof plumbing, storm water, general plumbing, sanitary fixtures, plumbing fixtures, sewer, hot water (electric), hot water (gas), hot water (solar), hot water (heat pump), gas and gas appliances.

Standards: Carry out all work in accordance with the requirements of the regulatory authorities applicable to the type of work involved, and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 3500 (all parts as nominated by the regulatory authority)
- NSW Code of Practice for Plumbing and Drainage (current edition)
- AS 1056, AS 3350, AS 1361 & AS 3498 (hot water)
- AS 4389, AS 1562, AS/NZS 2179, AS 4040,AS 3500
- Regulatory Impact Statement, Protection of the Environment Operations (Waste) Regulation 2005
- All other relevant standards, Acts, codes of practice and guidelines.
- ASNZS4020 Testing of products for use in contact with drinking water.

Regulatory Authorities: Applicable regulatory authorities include (but are not limited to) the following:

- Sydney Water Corporation
- Jemena Gas Network
- Local Government authorities
- Local electricity providers
- Local water Supply Authority
- Local gas Supply Authority

All work involving waste disposal, water supply and plumbing must be carried out by suitably qualified and licensed trades people or competent persons under the direct supervision of an appropriately qualified and licensed person.

Work Standards and Materials

All materials used must be of first quality, free from defects or blemishes. Carry out the whole of the work in accordance with good general trade practice and to match the existing in all details, where applicable. Provision of all necessary materials, finishes, equipment etc. necessary for the satisfactory completion of the work is included in the Contract, even where not specifically mentioned.

Pipe work: Pipe work within Properties is to be Copper piping, alternative materials can be used as per Schedule 6 (Component Requirements) subject to approval by the Principal.

Pipe work in BCA Class 2, 3 & 9 Properties must be metal in accordance with the Principal's Fire Safety Program. Do not replace metal pipe with flexible pipework in Class 2 and above Properties without the prior written approval of the Principal.

Lead: Where lead waste pipes are found during maintenance work, remove and replace with an approved piping material suitable for the purpose and the Building.

Earthing and bonding: Comply with Section 12 Electrical.

Certificates and test reports: Where a license is required to carry out any work under the Contract (water, sewerage, gas, LPG etc.) or accreditation (thermostatic mixing valves, backflow prevention device etc.), provide evidence of compliance before the work commences and a Certificate of Compliance, Inspection and Maintenance Report, Commissioning and Test Report and the like after Completion of the work.

Penetrations: All penetrations are to comply with relevant Standards and the Principal's Fire Risk Management Plan Implementation Manual.

Colour: To match the existing or, if no match exists, provide a near match as close as possible to the existing.

Roof Plumbing

NEW GUTTERING

Removal of Existing Guttering: Remove the whole of the existing eave gutters on all elevations that are required to be replaced. Take care during the removal of guttering to ensure that a minimum of disturbance is caused to existing fascias and roof coverings. Dispose of waste materials off the Site in accordance with Section 1.

Generally: Provide factory pre-painted type guttering materials

Components: must comply with the following:

- Size and Profile: Generally 115mm Quad type unless an alternative is required to match existing
- Thickness: 0.48mm gauge (Base Metal Thickness - BMT)
- Brackets: Concealed type at 900mm maximum spacings fixed using galvanised helical nails or proprietary clips

Joins: No joins are permitted in guttering under 10.0 metres in a single straight line. Silicone seal and pop-rivet fitted joints.

Angles: Must be factory pressed sheet metal or die-cast.

Expansion Joints: Provide in single straight lines of guttering over 30.0 metres long.

Nozzles: Must be factory pressed sheet metal, die-cast or PVC.

Installation: Grade guttering to outlets so that all roof water will completely drain off to each discharge point and keep it high enough to hide the ends of roof tiles. Water flood Test all gutters at the Completion of installation.

Relay roof tiles (or metal sheeting) removed for the renewing of gutters neatly and truly when gutter work is completed. Replace any missing or broken tiles to match the existing and re-bed capping, including over-flashing of fascias under hip starter tiles using compatible flashing (Refer to Section 5). Point up where disturbed.

Take care to ensure that gutter beads on all elevations are straight and true when completed.

VALLEYS

Material: must be 0.48 mm (Base Metal Thickness - BMT) equivalent to Zincalume steel or colourbond valley materials/finish to match existing roof colours tile or sheet

Profile: must be 450 mm wide with edges turned over

Joins: must be lapped 150 mm at joints close riveted and set in sealant.

Fixing: at top, use galvanised nail or screw to prevent valley gutter creeping downwards. At sides, use galvanised nails bent over edges.

REPAIRS TO EXISTING GUTTERING

Note: Do not use lead flashing in conjunction with pre-painted guttering. Use minimum 0.7mm thick zinc or another material if directed by the Principal.

Generally: Provide the same profile and finish as the existing guttering for repairs. For replacement guttering, use material painted externally the same colour as the existing. Use silicone sealed pop-riveted joins.

Clean out existing guttering: When cleaning downpipes, the downpipe must be removed from the shoe to prevent the obstruction being flushed down into the stormwater system. After removal of the obstruction re-attach the downpipe to the stormwater system.

GUTTER GUARD

Refer to Roofing Section 5.

NEW DOWNPIPES

Removal of Existing Downpipes and brackets: Strip the existing downpipes on all elevations of the specified Properties. Take care during the removal of downpipes to ensure that a minimum of disturbance is caused to existing guttering and stormwater connections. Dispose of removed materials off the Site in accordance with Section 1.

Generally: Provide factory pre-painted type downpipe materials, including brackets, except that downpipe bases must be as specified below.

Size and Profile: Provide 100mm x 50mm unless a different profile is required to or alternatively other profiles to suit the same as the existing.

Thickness: must be 0.48 mm (Base Metal Thickness - BMT)

Brackets: Must be purpose made factory pressed astragals spaced at maximum 1800mm intervals. Install a minimum of 2 brackets per downpipe.

Joins: Where joins are fitted, lap them in the direction of flow and pop-rivet them.

Angles: For rectangular downpipes provide rectangular angles with offsets formed with lip outside the joint, double pop riveted into position and sealed with silicone. For round downpipes, provide factory pressed sheet metal or die-cast.

Connections: Connect downpipes into gutter nozzle at top, and into earthenware or PVC stormwater at the base.

Downpipe Bases (where required): Provide hot dipped galvanised steel 1800mm high, 100mm x 75mm or 100mm round bases, fixed to the wall at the top with suitable fixings and secured at the base into the stormwater drainage pipework or, if no pipework exists, securely fixed to adjoining structure.

Installation: Supply and install new downpipes where those they are replacing were originally fitted or where they are required. Connect them at the heads with eave gutters and terminate the base into the stormwater drainage system. Seal downpipe bases into stormwater with either cement mortar (for earthenware S/W) or PVC adaptors (for PVC S/W). Secure them to wall or other vertical surfaces with astragals fixing using galvanised screws and washers. Pack out 25 mm from the surface if necessary to clear stringer courses and plinth moulds.

REPAIRS TO EXISTING DOWNPIPES

Generally: For repairs provide the same profile and finish as the existing downpipes. For replacement downpipe use material equivalent to Zincalume painted or prepainted the same colour as the existing. Where joins are fitted, they must be lapped in direction of the flow and pop-riveted.

Bases of downpipes: When repairing or replacing downpipes, ensure that the base of the downpipe is properly connected to stormwater drainage lines.

Sewerage and Stormwater Drains

General: Unless otherwise directed, specified, or required by the relevant local authority, backfill all trenches immediately after pipe laying is completed.

Reactive soil: In reactive soils, all sewer, stormwater and other subsoil piping must be PVC unless the Principal has given prior written approval to the use of alternate materials.

Make appropriate provision for reactive soils and mines subsidence where Sites are located in affected areas.

Drainage investigation – Heritage Properties: When undertaking drainage repairs on Heritage Properties the Contractor must check for leaks in drainage pipes. Where leaks have caused excessive water in the ground beneath or adjacent to the Building, or caused scouring of the foundations, the Contractor must carry out an investigation of drainage lines and pits on the Site and submit a report to the Principal. The report must describe the damage, its cause, and recommended remedial treatment, to carry out the work.

MATERIALS

Sewerage drains: Use 100/150mm UPVC to AS 1260 (DWV) and solvent cement fittings to AS 1260, all stamped and branded as conforming to Australian Standards.

Sullage/Stormwater drains: Use UPVC to AS 1260 (DWV sewer grade) and solvent cement fittings to AS/NZS 1254 except for sullage drains between gullies and waste connections, where UPVC sewer grade pipes and fittings must be used.

Stormwater drains (across driveways and footpaths): Use cast iron, malleable iron or galvanised steel in accordance with AS 3500.3.

Sullage pits: Use 1500mm x 1500mm x 450mm deep pits with two absorption trenches 2400mm x 450mm x 450 deep with the trench drain manufactured from recycled plastic in U shaped sections 1500mm long x 350mm high.

ALTERNATIVE MATERIALS

Where permitted by the relevant local authorities UPVC pipes and fittings, Type SWV for sanitary plumbing, Class "SH" to AS 1260 may be used for sewerage and sullage drainage lines other than across footpath and in driveways, subject to the following additional requirements:

- pipes must be indelibly marked approved UPVC. pipes every 450mm with the name of the material and with the manufacturers trade name; and
- fittings must be suitably marked approved UPVC fittings with the name of the material and with the manufacturers trade name.

WORKMANSHIP

Sewer drains: Comply with AS 3500.2.

Stormwater drains: Comply with AS 3500.3.

Sullage pits/drains: Use construction methods adopted from and in compliance with AS 1547.

Material for filter trenches must be clean 20mm blue metal (or a suitable approved equivalent in areas where blue metal is not available).

Photograph in detail trenches prior to backfilling. Photographs are to be made available to the Principal as required. Backfill all excavations immediately following taking photographs. Compact backfill, allowing for settlement to ensure that the filled excavations remain level with the adjacent ground level.

Pipe Lines: Excavate for and provide materials to construct pipelines.

Lay all pipelines in straight runs from each change of direction with uniform falls, solidly bedded on barrels to suit required lines and levels, with joints closely butted with inverts flush and each length swabbed. Provide cleaning eyes at each change of direction and at not more than 9 metre intervals in straight runs.

Make joints with rubber compression rings or cement mortar composed of two (2) parts clean sharp sand and one (1) part of cement, with each joint neatly splayed off.

Take care to observe all specified or required dimensions, grades, and the like. Fill any excess excavations in trenches with suitable material.

Ensure the minimum grades of sewer and stormwater lines and agricultural pipes are in accordance with the Plumbing Codes and local authority requirements.

UPVC Pipe lines: Install UPVC in accordance with AS 2032, with joints solvent welded in accordance with the manufacturers' written specification.

For the whole length of the drain line provide suitable compressive supports at 1500mm maximum centres. Where the excavation is in sand or loam free of hard objects, lay the pipes directly onto the suitably graded trench base.

Locate pipe at the centre of trench, to correct grade and alignment with true invert, with spigot ends pointing in the direction of flow. Provide suitable access or inspection openings at maximum centres and positions required by the relevant authority.

Backfill over the full width of trench and to a depth of 300mm over the pipes with selected soil, sand, loam or fine aggregate free of rock or other hard particles over 10mm. Excavated material these requirements above may be used as fill material for the first 300mm. Use the excavated material for the remainder of the backfill.

UPVC Connection to Vitrified Clay:

- UPVC to Vitrified Clay Socket: Use suitable adaptor to suit the compression required of a Vitrified Clay rubber ring. Do not use mortar joints.
- Vitrified Clay Spigot to UPVC: Use a suitable adaptor as above and connect to vitrified clay spigot through a Vitrified Clay double socket with rubber rings.

FITTINGS

Taps: Must comply with Schedule 6 (Component Requirements).

Where directed to replace existing tapware, fit equivalent new fittings. Provide chrome plated, satin chrome or powder coated brass Bib taps, Pillar taps, Washing Machine taps, Stop taps, mini Stop tap at wall outlet whenever a flexible water hose is fitted, Cistern taps, Shower Sets, Basin Sets, Bath Sets, Kitchen Hob and Wall Sets as required to suit the location. Fit matching tap handles complete with "H" and "C" or colour coded (red - hot, green or blue - cold) buttons as applicable.

If tap flow restrictor valves require maintenance, replace like with like or equivalent approved Four star WELS rated in tap flow restrictor.

Kitchen sinks, laundry tubs, basins, bath, shower bases, seats and roses, toilet pan, cistern, seat and cover: Must comply with Schedule 6 (Component Requirements).

Shower Bases: Showers must have a minimum 10 year written manufacturer's warranty for Latex (Waterborne) and a minimum 30 year written warranty for pressed metal and meet the following requirements:

Liveable Housing

- hob less step free shower with stainless steel shower grate and trough designed to ensure efficient draining;
- drainer Min 75mm wide;
- install with minimum 2 degree fall; and
- slip rating of minimum R10 and pendulum test score of X.(moderate).

Maintenance of Gas

Materials and spare parts: Must comply with Schedule 6 (Component Requirements).

Ensure all materials for the works are the best of their respective kinds and comply with the relevant standard. Where replacing existing, they must be of equal dimensions, sizes, weights and quality to the materials used in the original construction, or if this is not possible be as recommended by the relevant manufacturers unless otherwise directed.

SERVICE

Ensure service Personnel engaged for the work are fully conversant with all relevant present day repair techniques, and that the service organisation is capable of a first class work standard and is able to provide all necessary testing of equipment. Repairs required under the Contract may include repairs to services associated with equipment and appliances (water pipes, gas pipes, taps, valves, fittings, flues and flashings etc).

If required carry out equipment and appliance services in accordance with the manufacturer's written specifications and the relevant regulations.

Installation of Gas and Electrical Hot Water Heater, Gas Stoves and Room Heaters

General: Must comply with Schedule 6 (Component Requirements) with hot water heaters, gas stoves and room heaters.

Advise the Tenants prior to the power being turned off and reconnect power without delay on Completion.

Hot water service (HWS): Install water heaters and hot water services in accordance with the manufacturer's written specification and as specified hereunder. The use of flexible connectors to connect HWS is not permitted either internally or externally.

Instantaneous gas HWS must not be installed in bathrooms, toilets, bedrooms, combined living sleeping rooms or any other unventilated Room. Existing Internal gas instantaneous HWS must be replaced with an electric Instantaneous or an external gas HWS.

Make minor adjustments to factory set appliances such as gas stoves and room heaters to ensure their satisfactory operation.

Temperature limiting valves (TLV): Use tempering valves (temperature limiting valves) in all BCA Class 1, 2 and 3 Buildings. Use thermostatic mixing valves (TMV's) in BCA Class 9 Properties only.

A combination of a TLV with a TMV is not acceptable.

Gas stoves and room heaters: Install gas stoves and room heaters in accordance with manufacturer's written specification and the gas supply requirements. New gas room heaters are only permitted to be installed with approval from the Principal, when reverse cycle air conditioners are not able to be installed.

Water heater installation (generally): Use new copper pipe and suitable fittings suitable for the various outlets.

Thoroughly remove all internal rough edges from pipes after cutting, ensuring the bore is left not less than the nominal size of pipe. Keep all exposed pipework level and plumb, fitted tight to walls and set neatly around obstructions where applicable. Neatly secure pipes to walling at not more than 1350mm centres with suitable type brass or copper saddles (with brass screws) and with suitable plugs. Lay pipe runs outside Buildings or Properties in the ground to a depth that achieves at least 230mm cover. Under Buildings or Properties secure pipes to floor timbers and concrete floors in a suitable manner using brass or copper clips or brass straps (with brass screws) at 900mm centres. Ensure that runs of exposed hot water piping are minimised. Insulate with appropriate lagging and secure pipes to prevent heat loss and water hammer.

Neatly finish off all solder/welds etc., free from lumps and with all surplus flux and cleansing agents thoroughly washed off and exposed pipes left free from marks, stains and lumps. On Completion of work on any installation thoroughly flush out the whole of the new service and leave the pipes, fittings and taps in good working order, free from leaks.

Check all electrical earth clips are connected in accordance with power Supply Authority requirements.

Ensure that the electricity is turned off at the meter and test that circuits are de-energised before temporarily disconnecting the electrical earth clips.

Neatly fit tubing where passing through timber, concrete or brickwork, secure and insulate with suitable purpose made sleeves to prevent water hammer, heat loss and damage to pipes.

Entry through ventilators is not permitted.

Provide anti-theft systems (e.g. cages) to externally mounted HWS and associated pipework. Anti-theft system should be manufacturer proprietary items manufactured to suit the HWS model installed, where available. If no proprietary anti-theft system exists, construct an anti-theft cage in compliance with the requirements specified in Section 11 (Metal Work).

Where bricks have been removed for the installation of pipes, neatly re-set in cement mortar and neatly point up holes cut through walls to match existing work. Clean down walls on Completion. For Heritage properties refer Section 4 (Carpentry and Joinery – Minor Repairs – Heritage Work – Masonry).

Remove all disused pipe, fittings, hooks, plugs and the like, (except pipe fittings laid in ground) and cap off all exposed pipe ends. Make good damaged walls, etc. to match the existing.

If roof coverings, wall surfaces, roof timbers, mouldings, framings or the like are damaged, disturbed or removed to enable a service to be installed, restore to the original condition. Rectify any materials or Equipment damaged as a result of the work.

External ground models: Install weatherproof heaters externally on concrete bases to meet the requirements of AS3500.4. Level, stable and impervious Polymer bases may be used on top of an existing concrete base or path.

Connect 13mm OD copper drainpipes to combined temperature/pressure relief valves, to discharge externally clear of wall faces. Where possible discharge over a yard gully.

Internal models: Fit internal models on a proprietary polymer base that allows draining within a safe tray and safe waste drained in accordance with the relevant regulations.

Fittings: Carry out joining of copper tube in accordance with current Australian Standards.

Lay pipe work in straight runs and minimise the use of elbow fittings. Ensure tees formed in runs do not have any tube protruding into the water flow.

Only bend copper pipe or un-plated tube using a suitable mechanical pipe bender. Form all bends by a suitable method of pipe softening. Do not provide cold, sharp flattened or crimped bends, or the like, in lieu of gradual sweeps.

Cold water connections: Connect heaters to the main cold water supply using 19mm OD Type B copper tubing to a wall surface termination, and 13mm OD Type B Chrome Plate tubing (up to 2 metres in length) for connection of the heater.

Extend the 19mm OD main run from the heater with a 19mm OD branch to showers, a 13mm OD branch to basins and a 16mm OD branches to other single outlets.

Install a 13mm stop tap for the heater water supply. Provide a suitable non-return valve where required by the relevant Supply Authority.

Use approved combined stop tap/non-return valve in lieu of separate items where required as per Schedule 6 (Component Requirements).

Pressure limiting valve (Mains Pressure Only): Provide and fit to cold water inlet lines, in accessible positions, between heaters and non-return valve/stop tap, a suitable pressure limiting valve set to comply with the manufacturer's written specification, lower than the setting of the top relief valve.

Concealing of pipes: Unless otherwise specified, conceal all pipe work in walls, cupboards, and ceiling areas or under floors, except that short sections exposed to heaters and hand-wash basins within a Property may be exposed to view. Provide close fitting CP domed wall flanges where new tubing enters or emerges from wall face.

Terminate hot and cold connections to heaters at the wall face with a male thread protruding for the separate connection of heaters with CP tubing.

Securely fix all pipe work to prevent movement when taps are used.

If any materials or Equipment are damaged during removal of existing pipes, replace with matching new materials including any existing wall tiling.

Carefully remove and restore wall sheeting as necessary to conceal pipe work.

Bore neatly through top and bottom plates, noggins and timber and concrete flooring and neatly cut away small section of noggins, etc., as necessary to conceal pipe work.

When replacing electric storage HWS 100L and larger, ensure they can operate effectively on an off peak boost.

Where an existing Solar HWS or Heat Pump HWS is within the warranty period replace like with like. Where an existing Solar HWS is beyond economic repair, replace with a Heat Pump HWS.

Connection to Electricity Tariff: Do not install a separate boost switch. When installing Heat Pump HWS, connect to a continuous supply tariff.

Replacing Solar Hot Water Systems (HWS):

Where an existing Solar HWS is outside the warranty period and beyond economic repair, replace with a Heat Pump HWS. Approval from the Principal is required if an existing Solar HWS is to be replaced with a new Solar HWS.

Note: The Principal as owner of the hot water service installed is the only party entitled to Small-scale Technology Certificates (STC's) under the Australian Government's Small-scale Renewable Energy Target Scheme. Prior to the installation of a Heat Pump or Solar HWS, the Principal shall be requested to provide an Instrument of Authorisation to assign the right to create STCs, so the Principal can receive a post of sale discount on the Heat Pump or Solar HWS.

The Principal as owner of the Heat Pump or Solar HWS is the only party entitled to Energy Saving Certificates (ESC's) under the New South Wales Government's Energy Savings Scheme (ESS) and the Peak Demand Reduction Scheme (PDRS). Prior to the installation of an Heat Pump or Solar HWS, the Principal shall be requested to provide an Instrument of Authorisation to assign the right to create ESCs, so the Principal can receive a point of sale discount on the Heat Pump or Solar HWS.

This Information must be provided as part of the Contractors Payment Claim and third party warranties in accordance with clause 20 of the General Terms.

Tests: Ensure that completed hot water services are capable of withstanding hydrostatic pressure equal to that required by the Supply Authority for cold water services.

ELECTRICAL WORK

Notice and fees: Make all arrangements with the Supply Authority for the connection of supply, including the service of all notices and paying all fees and charges required by the authority. Supply all necessary electrical fittings, materials and accessories to complete the work in accordance with this specification.

GAS SERVICE

Test the gas service in accordance with the relevant authority requirements.

Extend existing services with pipes and fittings made and assembled in accordance with gas Supply Authority and manufacturer's written specification.

Install all Component parts of the extension, such as pipework and fittings, so that they are removable without damage to either piping or the Building or Property.

In Properties with timber ground floors, secure pipe work under floor framing at 1800mm max. centres with screw fixed clips of similar material to the pipe work.

For underground installations, during backfilling of service trenches, lay a warning tape above and for the full length of buried pipes. The tape must be of durable plastic

material, minimum 100mm wide, marked continuously with "GAS PIPE UNDER" and of a colour to AS 1345.

Install brass gas control taps for water heaters.

Certificate of compliance: Retain a Certificate of Compliance for all alterations and new gas work.

Inspections: Inspect and report on the condition of appliances and flues where any such work is required.

Repair / replace: Install and repair all gas appliances in accordance with manufacturer's written specification and relevant authority requirements. Test all systems and appliances after installation for correct and reliable operation.

Leave all appliances in first class condition and full working order and clean all appliances.

Instruct Tenants in the use of appliances and ensure the manufacturers operating instructions are left with the Tenants.

Flexible connections: Provide 'PLUMQUIK' or equal.

Blocked drains: Drains must be cleared to the full diameter of the pipe and for the entire length of the sewer. Clear blocked gully traps for the full diameter of the trap. Ensure that all drains operate properly after unblocking.

MATERIALS

Waste pipes: Use PVC pipe or copper.

Water service, single Property: Use 20mm copper pipe.

Gas / water pipe, copper: Use copper tube.

Hot water heaters: Comply with Schedule 6 (Component Requirements).

Cooking appliances and heaters (gas): Must comply with Schedule 6 (Component Requirements).

Valves for HWS: Provide as recommended by the hot water cylinder manufacturer.

Sealants: Provide mould inhibiting silicone sealants.

END OF SECTION 14

Section 15 - Timber and Metal Fencing

General

Scope: This section sets out the requirements for repairing and the supply and erection of new fences and gates including hardware.

Generally: Install new fencing on existing boundary lines, unless otherwise directed by the Principal.

Adjoining Transport for NSW or Roads Maritime Services (RMS) property: Where replacement of fencing is required for a Facility adjoining land owned by Transport for NSW (rail infrastructure) or RMS (Arterial Roads) the following action is be required:

- Where directed and there is existing fence to be replaced between the Rail line / Arterial Road, the Contractor is to erect a temporary 2100mm chain wire security fence, Type 1-A Railess Security Fence Plain Top with 2.5mm light duty mesh to prevent public or animal access to property owned by the other authority during replacement works and the removal of the security fence at Completion of the work.
- Where there is NO existing fencing, advise the Principal prior to any work commencing, as this work must be done under the Dividing Fences Act.

Fences and gates must comply with the requirements of Drawing Numbers MF1 to MF 6 inclusive, found in Schedule 6 (Component Requirements) (Timber Schedule and Drawing Details).

Fence heights must meet the following unless local government regulations override:

Table 1 – Fencing Heights

Front Fencing	From 900mm to 1200mm
Cut off fencing	From 1200mm to 1500mm
Side and Rear Fencing	1800mm
Gates	To match fence cladding and height where specified. Nominal widths – openings for gates of 900mm for single gates and 2750mm to 3000mm for double gates

Position of 'cut-off' fencing: Unless otherwise directed, position gates and "cut-off" fencing from front of Property to the existing dividing fence on either side of a Property. Locate of cut-off fences so that gas, electricity and water meters are on the street side of the fences.

Where gas bottles are located on "off-drive" side of the Property, provide a single gate for access to the gas bottles and keep the fence forward of the gas bottles.

Position cut-off fencing and gates on full curtain walls, wherever possible and not on piers.

Generally take fencing square off the Property to the boundary fence line, and where applicable return it along return fence lines to paling or metal clad fence.

Keep fencing and gates (closed) in a straight line square off existing fences and the Property when these are parallel. Where they are not parallel, position gates at 90^{o} to paving to give maximum effective width to the gate opening and centrally positioned gates over drive tracks. Provide nominal width openings for gates of 900mm for single gates and 2750mm to 3000mm for double gates.

Construct double gates in two equal leaves. Set them into the double gate opening, and concrete in position, using a 20mm diameter galvanised pipe 150mm long as a keeper for a drop bolt in both closed and open positions. Should the drop bolts not be able to reach the hold open in ground keepers, provide galvanised parrot-beak type holding device fixed either to a wall or a new galvanised post.

Provide new posts at either end of the "cut-off" fencing. Do not fix panels to existing timber fences or brickwork.

Where it is necessary to use a small panel of 150mm width or less, to complete a section of fencing, securely fix the panel with dynabolts or similar to brickwork, or screw fixed the panel to timber fence posts. Otherwise terminate fences adjoining Properties 25mm clear of wall cladding.

Private owner fencing: Do not carry out any work on fencing jointly owned by the Principal and a Private Owner, without prior approval in writing from the Principal.

Timber Fences

General: All timber must comply with the Timber Marketing Act. Refer to Schedule 6 (Component Requirements), Drawing No. TS1, Timber Schedule for timber species, grade of timber and standard details. Timber fences must meet the following requirements:

- End Post/Gate post/Corner Post either Hardwood/Treated pine 125x125mm or Galvanised steel 65x65x2.5mm
- Intermediate posts either Hardwood 125x50mm or treated pine 125x75mm
- Rails Hardwood/treated pine 75x50mm.
- Palings Hardwood/treated pine 100x15 either lap palings by 15mm or close butted.
- Note: All specified timber measurements ± 2mm

HARDWOOD: Provide Eastern Australian hardwood to AS 2082, with posts and ‘waling’ being minimum durability Class 1 or 2.

PINE: Provide first quality radiata pine, pressure preservative treated (PT) and/or cypress pine. Where softwoods meet minimum durability Class 1 or 2, preservative treatment is not required.

Timber Fence Posts: Only use appropriately preservative treated timber fence posts.

Where rock is encountered, sink posts to a depth of 375mm and surround with a concrete footing that extends at least 100mm beyond the post in all directions, including below.

Paling fences: Comply with the standard details in Drawing Nos. MF1 to MF4 in Schedule 6 (Component Requirements).

Sawn hardwood posts and hardwood rails: Provide angle, junction, gate and terminating posts against front, return and cut-off fencing, and the like with chamfered edges. Sink posts in the ground to a minimum depth of 600mm and surround with a concrete footing that extends at least 100mm beyond the post in all directions, including below.

Intermediate posts must be chamfered and spaced at a maximum of 2400mm centres, sunk into ground. Sink posts in the ground to a minimum depth of 600mm and surround with a concrete footing that extends at least 100mm beyond the post in all directions, including below.

Provide rails morticed through posts, splay cut to fit under and over, breaking the joint on alternate posts and well nailed.

Galvanised posts with hardwood or preservative treated pine rails: Provide angle, junction, gate, terminating and intermediate posts in galvanised square section posts, all capped. Set posts in concrete mix, as set out on Drawing No. MF2 and MF4.

Provide Hardwood or preservative treated (PT) pine rails. Neatly fix three rows of rails for lapped and/or lapped and capped fences and all 1800mm high PT pine close paling fences, and two rows of rails for hardwood closed paling fences, with breaking joints on alternate posts, well spiked and secured to each post with 10mm diameter galvanised bolt through 50mm x 50mm x 3mm galvanised washer fitted under the nut and against the rail.

Fix top rails below the top line of the fence for lapped or closed paling fences, and below the top line for lapped and capped fences as shown on the drawings. Fix bottom rails above ground level as shown on the drawings. Where fitted, centre the middle rail between the top and bottom rails.

Palings: Cut-off (dock) the corners of the tops of all palings. Keep the tops of palings to an even plane and finish bottoms maximum 50mm above ground level

Where required to meet the top of an adjacent panel or fence, rake the panel adjoining return, cut-off or front fencing.

Close palings (hardwood or preservative treated pine): Cover the rails with hardwood or preservative treated pine palings, square cut to a line at top with corners cut off and double nailed with 50 x 2.8mm galvanised flat head nails, slightly skew driven into each rail. Palings must be 13mm thick (plus or minus 2mm), and a minimum 100mm wide and not more than 125mm wide.

Preservative treated (PT) pine posts and rails: Provide angle, junction, gate and terminating posts in PT pine. Sink posts in the ground to the depth set out in Drawing No. MF4.

Provide intermediate posts in PT pine, spaced at a maximum of 2400mm centres, sunk into the ground, with waling pieces closely and vertically to faces of posts and nail them to post not less than 75mm from the top of waling pieces.

Fix three rows of rails for lapped and/or lapped and capped fences and 1800mm high PT pine for close paling fences. Fix two rows of rails for lapped hardwood (closed) fences housed or morticed through posts. Join rails with scarf joints, breaking joint on alternate posts, with rails well spiked and secured to each post with 10mm diameter galvanised bolt through 50mm x 50mm x 3mm galvanised washer fitted under the nut and against the rail. Fix top rails below the top line of the fence for lapped fences, and below the top line for lapped and capped fences as shown on the drawings. Fit bottom rails above ground level as shown on the drawings. Where fitted, centre the middle rail between the top and bottom rails.

Lapped palings (hardwood or preservative treated pine): Cover the rails with minimum 100mm wide (not more than 125mm wide) by 15mm thick (plus or minus 2mm) hardwood or preservative treated pine palings. Space the first layer of palings 70mm apart to allow for a minimum lap of 15mm on each side, and double nail then with 50mm x 2.8mm galvanised flat head nails, slightly skew driven into each rail. Double nail lapped palings (second layer) with 65mm x 2.8mm galvanised flathead nails, driven into each rail, lapping first layer palings by 15mm each side.

Square cut palings to a line at the top and cut-off the corners.

Lapped and capped palings (hardwood or preservative treated pine): As for lapped palings, except the tops of palings must protrude a maximum of 12mm above the top rail. Palings are not to be less than 100mm wide and not more than 125mm wide.

Fix a PT pine angled top capping board, 112mm x 38mm with 51mm x 12mm bottom rebate, to the top rail with 65mm x 2.8mm galvanised bullet head nails at 300mm spacings.

Gates: Comply with standard details on Drawing Nos. MF 5 and MF 6 in Schedule 6 (Component Requirements), match the fencing, and provide complete with hinges and latching devices and drop bolt with double gates.

Construct double gates in two equal leaves and provide galvanised pipe drop bolt keeper, concreted in position.

Footing mix: Refer to Section 3 (Concreting).

Metal Fences

Roll top galvanised / powder coated fencing: Construct steel mesh panelled fencing in the positions shown on layout plans and to the specified heights. Metal fences must have a 10 year written manufacturer's warranty and meet the following requirements:

- steel pre-rolled sheet – must be equivalent to Colorbond double sided steel;
- pre-painted steel complying with AS/NZS 2728: Type 3, with testing compliance to meeting performance requirements for an exposed environment for humidity, scratch resistance, impact, adhesion, cracking and corrosion. It must be zinc aluminium alloy coated steel complying with AS1397-2011, G550 (550MPa minimum yield stress), AZ150 (150g/m2 minimum coating mass) (fence panels), or zinc alloy coated steel complying with AS1397-2011, G500 (500MPa minimum yield stress), Z275 (275g/m2 minimum coating mass) (posts and rails);
- the fence panel base metal thickness must be 0.35mm;
- posts - standard channel posts must be 84 x 43mm, square corner, junction and single gate posts must be 60x60x1.6. Double gate posts must be 65x65x2.5. post must be installed with caps; and
- rails must be 60x53 with base metal thickness of 0.8mm.

Apply hot dip galvanising after fabrication is complete, and ensure no drilling, tapping or welding is undertaken after galvanising.

Powder coat all parts, panels, posts, caps, clips and bolts, gates, hinges and catches after hot dip galvanising and fabrication is complete, and ensure no drilling, tapping, raking or welding is undertaken after powder coating.

Provide 50mm O.D. x 2.9mm wall thickness galvanised pipe or 50mm x 50mm x 2.5mm galvanised steel square section for intermediate posts. Provide single gateposts in 50mm O.D. x 2.9mm wall thickness galvanised pipe. Provide double gateposts in 60.3mm O.D. x 2.9mm wall thickness galvanised pipe. All posts must be in accordance with AS1450. Crimp posts approximately 200mm from bottom of the post. Provide 1350mm long posts for 750mm high fences, 1500mm long posts for 900mm high fences and 1800mm long posts for 1200mm high fences.

Space posts generally to suit 2400mm panels, but where necessary to avoid unsightly short panels, space posts to provide even panel lengths.

Sink posts into the ground as shown on Drawing MF04

Cap the top of each post with a "Knock on" type galvanised friction cap or plastic cap. Extend posts above the infill by the height of the cap.

Infill between posts with roll top galvanised fencing panel 2.4m long x the specified heights in Table 1 – Fencing heights with ground clearance of approximately 80mm, with mesh panels made from 5mm diameter bright wire in accordance with AS1303. Wires must be electrically welded to form 50mm x 150mm mesh, with vertical wires at 50mm centres and horizontal wires at 150mm centres.

Fix panels to posts with 25mm x 25mm x 1.6mm galvanised "U" type clips, either drilled to receive and fixed with 8mm diameter hex head galvanised bolts passing through clip, post and clip of adjoining panels, or affixed with a 12 G self-drilling screw. Provide 750mm and 900mm high panels with three fixing points at each end, and 1200mm high panels with four fixing points at each end.

Where mesh infill panels are required in under floor areas, provide 100mm mesh overlap to face of brick piers and curtain walls, and fix with 25mm x 25mm x 1.6mm galvanised "H" clips drilled to receive and with 8mm "dynabolt" type fixing.

Generally, ensure fence panels and gates have a ground clearance of approximately 80mm. Where Site levels create unacceptable clearance under panels, use stepped or raked panels.

Provide tubular or square section frames for single gates as shown in the DRAWING MF05. Bend tubular pipe to provide suitable radius at corners. Clean off and match welds to 150mm x 50mm mesh properly welded to the frame.

Provide single gates to fit a nominal 900mm opening, with a "D" latch and striker catch.

Provide double gates as shown in the drawing MF06, with two equal leaves or one 1800mm and one 900mm leaf as directed, with a bow type and drop bolt catch fitted on the side of each gate, and provide 2 x 20mm diameter galvanised pipe keepers 150mm long for drop bolts, projecting as required and concreted in position to secure the gates closed. Also provide 2 x 20mm diameter galvanised pipe keepers 150mm long for drop bolts, projecting as required and concreted in position to secure the gates in the open position, if due to sloping ground level, hold open keeps are not appropriate, install a galvanised cabin hook or parrot beak type hold open device, attached to a new galvanised or hardwood post installed in a suitable position.

Screen steel panel fencing: Assemble and erect all fencing in accordance with the manufacturer's written specification.

Sheeting: Provide double sided zinc/aluminium coated steel equivalent to Colorbond prefinished, with base metal thickness 0.35mm, width 760mm, and length 890 for 900mm high fence; 1490mm for 1500mm high fence; and 1790mm for 1800mm high fence. Maximum panel length must be 2360mm.

Post: Provide posts length 1500mm long for 900mm high fence; 2100mm long for 1500mm high fence; and 2400mm long for 1800mm high fence. Post must be prefinished to match the sheeting.

Rails: Provide top and bottom rails of identical length and dimensions, but the bottom rail must be slotted to allow for the drainage of water.

Fixing: All fixing must be galvanised self-drilling, self-tapping hex head screws or equivalent, painted to match the colour of the Colorbond sheet.

Colour: Colour must be as per the approved colour scheme. When replacing a run of fence, colour is to match the existing fencing.

Gates: Provide all gates of a suitable manufacture to match existing fencing, with suitable hinge and latching devices, and drop bolts for double gates. Ensure the minimum distance between closing stiles of double gates is 25mm.

Provide gateposts fitted with suitable galvanised hinge plates and latching devices. Sink posts into the ground to a depth as per manufacturer's directions.

Erect fence panels plumb and level and in straight lines from the starting point to the end of each run. On sloping Sites provide stepped panels unless the fall of the ground exceeds 150mm per section. In the latter case, install raked panels. Maintain a maximum ground clearance to bottom rail not exceeding 50mm, and ensure the bottom rail is not in contact with the ground surface.

Provide tapered panels with tops raking from 1500mm high to 900mm where required, with rails and sheeting to suit the length of panel required.

Where a fence changes direction provide a matching metal fence post 65mm x 65mm x 2.5mm thick.

Looped Pool Type Fencing

Looped pool type fencing: tubular looped top fencing must have a minimum 3 years written manufacturer's warranty and must meet the following requirements:

- steel or aluminium tubular non climbable panels - flat or looped;
- top finish only, no spears or protruding rods;
- min 16mm x 0.9mm tubes - spacings approx. 100mm centres, looped to height of 115mm above top rail;
- rails: 39 x 25 x 1.2mm rectangular tubing or min 25mm round, or 33mm x 33mm x 1.6mm, or 36mm x 25mm x 1.6mm rectangular section (galvanised);
- intermediate posts min 50 x 50mm - 450mm round min 1.2mm thick;
- gateposts minimum 65mm x 65mm x 2.5mm square hollow section (galvanised);
- base material must have been heated to 200°c for 10 minutes;
- powder coating to AS4506; and
- safety compliance to AS1926.1 for gates, hinges and locks.

Dimensions: Panel height/width-

a) 900mm/ 2400m maximum
b) 1200mm/ 2400m maximum

Spacings: Distance between rails-

a) 735mm
b) 1035mm

Tube spacings: For both a) & b) 100mm centres (approximately)

Gate width: Single 980mm, double 2750mm and 3000mm

Materials for Steel looped fencing:

Vertical tubes: 16mm DIA x 1.2mm (galvanised) looped to height of 115mm above top rail

Welding: Silicone bronze

Powder coating: Use Four stage pre-treatment as per manufacturer's data:

a) Alkaline degreasing
b) Rinse
c) Zinc Phosphate
d) Rinse

Thickness is to be 70 - 110 microns.

Catches: "D" Latch and Striker

Hinges: Butt hinges: Black plastic (knock on type)

Fixing brackets: "L" brackets

Screws: 12 x 20 Tek Screws or equivalent

Ensure all panels are a maximum of 100mm above ground level.

Concrete all posts into the ground to a depth of 500mm in holes 250mm x 250mm x 600mm deep.

Paint/coat all fixings the same colour as the fence.

Materials for aluminium looped or flat topped fencing:

Loops: (if used) Looped to height of 115mm above top rail

Powder coating: Must comply with AS4506.

Catches: Must comply with AS1926.1.

Hinges: Must comply with AS1926.1.

Locks: Must comply with AS1926.1.

END OF SECTION 15

Section 16 - Tree Pruning

General

Scope: This section sets out the requirements for pruning and removal of tress and stump grinding.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 4373 : Pruning of amenity trees
- AS 4419 : Soils for landscaping and garden use
- Amenity Tree Industry Code of Practice (publication by Safe Work NSW currently under review).

Local authority tree preservation orders: The Principal will arrange for and provide a copy of the required local authority approval to the Contractor prior to commencement of any Planned Work. The Contractor must ensure that the conditions of any approvals are met.

Where the Principal does not provide a copy of a local authority approval and, on visiting the Site for Planned Work, the Contractor considers the pruning or tree removal work requires an approval from the local authority, the Contractor is to seek advice from the Principal prior to undertaking any works.

Qualifications: A suitably qualified Arborist, who is a member of Arboculture Australia or equivalent must be on Site at all times whilst the tree pruning or removal work is being carried out.

Access and safety: Safe pedestrian and vehicular access must be maintained for Tenants and visitors at all times, with particular attention given to the needs of children. Provision must be made for continuous use of the Facility, including parking areas and driveways. The Contractor must organise and perform the work so as to minimise inconvenience and nuisance to Tenants and residents near the Site by controlling noise, vibration, dust, mud, sawdust and any other nuisance. Precautions must be taken to protect the health and safety of persons on or in the vicinity of the Site from conditions that are or may be dangerous to their health. Erect safety barriers as necessary and provide warning to Tenants and visitors of hazards such as overhead work and machinery such as mulchers.

The Contractor must comply with all Safe Work NSW safety requirements and supply to workers all necessary safety equipment.

Workmanship

Tree pruning: All tree pruning must be carried out in strict accordance with the local tree preservation order, any required approval form the relevant local authority and in accordance with AS4373 - 1996 Pruning of amenity trees.

Stump grinding: All stumps must be ground to a level a minimum of 400mm to a maximum of 600mm below ground level. Remove all debris from grinding and backfill with soil equal to top dressing grade as specified in AS4419: Soils for landscaping and garden use.

Wood Chips / Grindings: As an alternative to disposal, where suitable, wood chips and grindings (where free from noxious weeds) may be spread on garden beds in accordance with the Principal's direction. Generally this will be in common areas of

larger Properties. Otherwise, remove all wood chips and grindings from the Site.**END OF SECTION 16**

Section 17 - Cleaning

General

Scope: This section sets out the requirements for the cleaning of the interior and exterior of Properties required for Vacant Restoration, and steam and/or dry cleaning of carpets. This section does not deal with the requirements for the regular cleaning and servicing of Properties, refer to Lawns Grounds and Cleaning Servicing Specification for specific requirements.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS/NZS 3733 Textile floor coverings – Cleaning maintenance of residential and commercial carpeting.

Materials

General: All material solutions and preparation must be appropriate for their intended use. Material Safety Data Sheets (MSDS) must be made available on request. Cleaning agents must be appropriate for the level of cleaning required to return a Property to the standard required in Section 21 (Vacant Restoration).

All cleaning materials must be accepted industry standard products and any dilution must be in accordance with the manufacturer's instructions.

On Completion of cleaning work, no residual chemicals must remain that present a risk the health of Tenants and Visitors.

Internal Cleaning

Rubbish: Remove all rubbish inside and/or under the Property, on all balconies, and in the roof area and on the roof of the Property and dispose them away from the Property.

Walls, ceiling fittings, fixtures and woodwork: Thoroughly dust and wipe clean surfaces with a damp cloth. Thoroughly wash down wall tiles with a suitable cleansing agent and leave to dry. Thoroughly clean and dust wall and ceiling vents. Remove cobwebs and marks from walls, ceilings, fittings, fixtures and woodwork using cleaning products suitable for the surface materials.

Porches: Thoroughly sweep and wash clean front and rear porches, and wipe dry. Remove all extraneous tacks, nails, staples, etc., from surfaces.

Floors – timber, concrete etc.: Sweep or vacuum clean and wash down using a suitable cleaning agent to provide a grease and dust free surface. Leave to air dry. Remove all stains and surface scuff marks.

Resilient floor covering - vinyl: for sheet vinyl and linoleum mop with a suitable cleansing agent and leave to air-dry. Remove all stains and surface scuff marks.

Sealing and polishing: for vinyl tiles seal and polish vinyl floor tiles in accordance with the manufacturer's specifications.

Ceramic floor tiles: Thoroughly wash with a suitable cleansing agent and leave to air-dry.

Carpets: Spot clean of minor stains and thoroughly vacuum using commercial quality equipment.

Carpet cleaning: When required, clean soiled carpets using either the hot water injection and extraction method, or the surface (dry) cleaning method in accordance with AS/NZS 3733 and the following methods:

Hot water injection and extraction method: Before commencing any hot water injection and extraction cleaning, the carpet is to be made ready as follows:

- remove all litter and loose surface soils by vacuuming;
- where necessary pile lift the carpet thoroughly;
- remove all marks by applying the appropriate spot or stain remover. Rinse and remove excess chemicals;
- apply a pre-spray to the whole of the area to be cleaned ensuring sufficient levels are applied to heavily soiled traffic areas. Brush the pre-spray into the pile by means of a stiff broom or carpet rake and leave for the period of time recommended by the manufacturer; and
- use a hot water injection and extraction unit filled with water, heated (50^0C to 95^0C) and add detergent, sanitising solution or deodorant as required for the type and degree of soiling.

OR,

Surface (dry) cleaning method: Before commencing dry cleaning the carpet is to be made ready as follows:

- remove all litter and loose surface soils by vacuuming;
- remove all marks by applying the appropriate spot or stain remover. Rinse and remove excess chemicals;
- apply a pre-spray to small areas at a time, approximately 2m x 2m. Clean the area and move to the next area and repeat the process. Apply the pre-spray in accordance with the manufacturer's written specification; and
- deodorise the carpets once cleaned.

Rectify any damage and/or markings to walls or any other surfaces caused by the cleaning process.

Lift and remove floor coverings: Where floor coverings are to be replaced, lift and remove existing coverings including underlays and fixings (such as battens, tacks, nails, and staples) and remove from the Site. Sweep floors on Completion of removal.

Windows and doors: Clean doors and glass inside and outside. Wash and wipe dry internal woodwork including sills. Wash clean window and door frames and/or surrounds with warm soapy water and wipe dry. Spot clean with a non-abrasive liquid cleanser where necessary to remove marks.

Mould: Clean and wash all mould covered surfaces using a solution of mould inhibiting product.

APPLIANCES AND FITTINGS:

Stove, cooktop, wall oven: Thoroughly clean both inside and out, including removing, cleaning and re-installing removable parts - burners, hotplates, oven slides and other fittings. Use a suitable cleansing agent.

Bath, shower, basin, sink, tap, tubs and pedestal pan, cistern etc.: Thoroughly clean with a suitable cleansing agent, removing all stains and grime. Where sanitary

or other fittings have heavily soiled surfaces, after cleaning, disinfect and wash clean of all residues.

Wardrobes, closets, linen cupboards, kitchen cupboards and bathroom cabinets etc.: Wash, wipe clean and remove all marks, stains and grime inside and out. Remove drawers and clean off all marks and grime from inside and out, including tracks. Clean mirrors and leave surfaces free of smears and streaks.

Kitchen bench tops and splash tiles: Wash with a suitable cleansing agent and leave to dry.

Fly screens: Wash clean.

Blinds: Thoroughly clean and dust.

Grease trap: Empty and scrub out.

NOTE: The requirement for cleaning of grease traps is confined to un-sewered areas.

Rangehoods: Remove, clean and re-install filters. Thoroughly wash unit and remove all grease. Replace filters if in poor or damaged condition.

Exhaust fan: Remove and clean grille, clean blades and re-install grill.

Light switches and GPO's and ceiling fans: Dust and thoroughly clean.

NOTE: The use of hoses for internal cleaning including washing down is not permitted.

External Cleaning:

Rubbish: Remove from Site all rubbish in the Grounds, under and on the Property (including tree and shrub loppings and garden refuse) and in meter boxes. Clean Grease traps to houses.

NOTE: The requirement for cleaning of grease traps is confined to un-sewered areas.

Carports, garages, tool sheds and store sheds (including garages to properties that are part of a Grounds, Building or Block): Remove all rubbish, sweep and thoroughly wash floors. Use a degreasing agent to remove any deposits of grease or oil.

External wash down: Use detergent and water. Completely wash down, with a soft brush, entire exterior of walls, soffits, fascias and gutters, including glazing. After washing, thoroughly rinse off with clean water and allow to dry naturally.

External weed control – walls of heritage properties: Remove weeds growing in masonry joints of walls and chimneys. Poison the weeds first and then remove by appropriately licensed operative.

Treat any organic growth present on chimneys or walls of Buildings (e.g. annuals, weeds, figs etc.) with a proven long lasting biocide. Apply the biocide with a pneumatic garden-type sprayer to saturate the affected areas without causing splashing or spray drift onto any other area. Operatives must be appropriately licensed and provided with suitable protective clothing. Do not spray in the immediate vicinity of unprotected people. After spraying, allow sufficient time for the plants to die and dry out before carefully removing, taking care to minimise any damage to the masonry. Comply with the *NSW Pesticides Act* including providing adequate notification e.g. setting up warning signs before spraying.

Eaves, soffits, porches, verandah, stairs etc.: Remove all cobwebs. Sweep clean all external hard surfaces.

Mowing: Mow front and rear lawns, including nature strips, to a neat even finish at a height of 60mm above the ground surface. Neatly trim lawn edges where they abut Buildings, footpaths, drive tracks, meters, downpipes, letterboxes, fences, slabs, street gutters, etc. Remove all grass clippings from the Site.

Cutting long grass: Where grass has reached an overall average height of 300mm or more, slash/cut grass to front and rear lawns, including nature strips, and finish to a height of 60mm above ground surface. Remove all grass clippings from the Site.

Additional Internal Cleaning

Advanced Internal Cleaning: Occasionally Properties will contain excess rubbish or other materials which will require a pre-clean to be carried out. In such cases, an advanced internal clean may be directed. For an advanced internal clean remove all general rubbish, debris, food products and other contaminated material including but not limited to animals, biological waste, syringes, faeces, blood, body fluids and chemicals etc. to allow other trades to work and before carrying out an internal clean. An advanced clean may involve lifting and removing of floor-coverings.

Clandestine Drug Laboratory Clean: Where a clandestine drug laboratory has been identified, prepare a remediation report in accordance with the Australian Government "Clandestine Drug Laboratory Remediation Guidelines". The Principal will review the remediation report and direct the required extent of cleaning.

Upon Completion of the cleaning directed provide a clearance certificate to the Principal for the Site in satisfaction of the Remediation Guidelines.

NOTE: Do not clean any clandestine drug laboratory without preparing a remediation report in accordance with the Australian Government "Clandestine Drug Laboratory Remediation Guidelines and receiving a Direction from the Principal.

Additional External Cleaning:

Advanced External Cleaning: Occasionally Properties will contain excess rubbish or other materials which will require a pre-clean to be carried out. In such cases an advanced external clean may be directed. For an advanced external clean, remove all general rubbish, debris, construction material, car parts, tyres, and any other material including but not limited to syringes, animals, plant and manufactured materials and chemicals, etc. to allow other trades to work and before carrying out an external clean.

END OF SECTION 17

Section 18 - Pest Control

General

Scope: This section sets out the requirements for the control and/or extermination of pests described in the Schedule of Pests, in and around common areas of Complexes, Building or Grounds and on vacant Properties only. This section also applies to Tenanted Properties for a period of up to 90 Days after the works. Treatment after Vacant Restoration must only be undertaken to protect the Property from damage (e.g. termites and borers etc.) and to protect public health of other residents (e.g. rats and bed bugs).

Pest control is required as identified on the Criticality Repairs Matrix and where termites have been identified as part of a Scope of Works.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended including:

- AS 3660.2: Termite management Part 2 In and around existing Buildings and structures - Guidelines
- AS 4349.1: Inspection of buildings
- AS 4349.3 Timber pest inspections
- *Pesticides Act 1999 (NSW)*
- The Safe Work NSW Code of Practice for the safe use of pesticides including herbicides in non-agricultural workplaces

Licensing of operators: Ensure that all persons using pesticides for the destruction or control of pests under the Contract hold a TAFE NSW or equivalent Certificate III in Pest Management and a Safe Work NSW Pest Management and Fumigation Certificate of Competency. All work must be carried out in accordance with the Workplace Health & Safety Regulations 2011.

Professional Indemnity Insurance: Prior to undertaking Pest Control or Property Pest Inspections, the Contractor must hold current Professional Indemnity Insurance.

Notice of pest control activities: The Contractor must give appropriate notice to interested parties in writing prior to the start of any pest control activities in accordance with legislative and NSW Environment Protection Authority requirements.

Materials

Chemical pesticides must be industry Standards appropriate for the control of the relevant pests (e.g. rodents or insects) in domestic environments and must be registered with the Australian Pesticides & Veterinary Medicine Authority (APVM).

Bait stations: Must be tamper resistant type, polypropylene with key. Bait stations must not be placed where they are accessible to children, pets or wildlife.

Bird proofing: Use continuous 12mm mesh bird wire with appropriate fixings. Lap and lace together at minimum 150mm spacing where required.

Schedule of Pests

Category	**Type**
General Pests:	Cockroaches Ants

	Spiders Wasps (including European Wasps) Bees Silverfish Carpet beetles Stored product insects
Fleas	Fleas
Rodents:	Mice Rats
Bed Bugs	All
Birds:	All
Subterranean termites and/or Borers:	All

Treatment

General pests: Treatment must eliminate all general pests from the following areas of the Property: the complete interior, including linen cupboards, built in wardrobes, bath tub recess voids, kitchen cupboards including the void to the rear of kickboards; all cracks and crevices which may harbour insect pests or through which access is gained to the interior of the Property; carpets and the edge of the carpets specifically for fleas or carpet beetles; roof voids, wall cavities, accessible sub floors, out Buildings and the exterior surrounds of a Facility where appropriate.

The Contractor must at all times use techniques for the control of the nominated pests that are consistent with good pest control practice.

Bees: Bee swarms which have established (remain in one place longer than 24 hours) in a garden or against a Building or Property should be removed by a registered bee keeper in the area if one is available otherwise by a licensed pest control operator. Bee swarms that have established themselves within a Building, or are impacting on the entry to the Property must be destroyed by a licensed pest control operator.

NOTE (Bees): Advice from NSW Primary Industries is that a bee swarm will in most cases often move on within a few hours of arriving or the next Day. Only remove a bee swarm within 24 hours after it has arrived if it is impacting the Tenants' entry point into a Property.

Fleas: Use appropriate techniques, including blanket spraying of all grassed areas around the Property and the carpet inside the Property, to eliminate all fleas and their eggs from the Property and immediate surrounds. Implement all appropriate safety procedures, in accordance with manufacturer's written specification when undertaking blanket spraying.

Rodents: All rats and mice must be eliminated from the Property and the immediate surrounds using appropriate baiting techniques. Only use rodent baits in suitably identified containers marked "POISON" and do not place baits where they are accessible by children, pets or wildlife.

Bed bugs: Bed bugs must be treated and eliminated from the Property and immediate surrounds using procedures set out in the Code of Practice for the Control of Bed Bug Infestations in Australia https://www.health.nsw.gov.au/environment/pests/parasites/Pages/bed-bugs.aspx. Implement all appropriate procedures, in accordance with the Code of Practice. Co-ordinate all work for the control of bed bugs with the Principal.

Birds: All species of bird nesting in the roof void and/or wall voids of the Property must be removed and all points of entry sealed. All nesting material must be removed and all areas treated to eliminate bird mites in the roof area and interior of a Facility.

Do not use any bird distress poisons (e.g. 4-aminopyridine) without the prior approval of the Principal.

Inspection and Treatment Subterranean Termites and Borers

Inspections: All inspections and works in relation to subterranean termites must be carried out in accordance with AS 3660.2: Termite Management Part 2 In and around building and structures – Guidelines and AS 4349.3: Inspection of buildings Part 3: Timber pest inspections.

The Contractor may be directed to carry out inspections for the presence of subterranean termites and woodborers in all Properties. Such inspections must include the sub-structure and sub-floor space, flooring, skirting boards and architraves at all levels, all accessible roofing timbers, the boundary fence lines and any out Buildings.

When carrying out inspections, ensure that the following important items are considered when inspecting and assessing Properties for potential or actual ingress by termites or borers:

Is there any evidence of mudding / tubing on the external surfaces of walls. Particular attention must be paid to the region extending upwards 100mm from the ground surface, and any areas where moisture may be present e.g. around and behind downpipes and outside taps.

Is the perimeter free of mounded soil, shrubbery, timber debris etc. This could encourage/facilitate hidden ingress of termites into the Property by allowing them to bypass the primary termite management system.

Is there any evidence of termite attack in outbuildings/sheds/fences/woodpiles? Key signs of termite attack are hollow timbers and mudding.

Is there any evidence of termite attack inside the property? Key signs of termite attack are hollow architraves, skirting and floorboards, as well as mudding.

On completion of the inspection, a written report must be submitted to the Principal as detailed in AS 3660.2.

The inspection repost must be accompanied by a recommendation and be in the format of detailed in Schedule 10 (Reporting Templates).

Treatment: In determining the treatment method on which the report is based, the Contractor must take into account the Principal's preferred options, which are as follows:

(1) Subterranean Termites:

- Wherever possible initial treatments must first be directed towards eradication of the termite colony from which the infestation is originating. This can be achieved by either direct treatment of the workings with any chemical application system approved by the Australian Pesticides and Veterinary Medicines Authority (APVM) (Also refer Australian Government, Department of Health & Aging – Office of Chemical Safety – Termite Protection:

If this is not possible direct treatment of the nest either by dusting or emulsions, all in accordance with AS3660.2, Section 5 and Appendix F. Bait boxes installed to nominated locations may also be used as a third preferred option.

- Buildings and their contents must be protected by establishing a chemical barrier, in accordance with AS 3660.2 Appendix E, around all substructure walls, and all piers, stumps, waste pipes and conduits connecting the superstructure with the soil. Horizontal and Vertical barriers must be at least 300mm and 150mm wide respectively.
- Buildings with concrete slab foundations may require the formation of chemical barriers through sub-slab injection.

(2) Borers:

- Affected architraves, skirting boards and other moulded timbers must be removed and destroyed. Replacement timber should be painted with a primer or varnish on all surfaces after cutting to fit.
- Other timber (e.g. studs, bearers) must be injected with an approved non staining chemical application system.

Should the Principal consider that the remedial treatment proposed in the Contractor's report is such that it warrants seeking advice from other contractors for that specific work, the Principal shall be free to seek such alternative advice for that work, and may enter into a contract with another contractor for the purpose of executing that specific remedial work.

On Completion of a termite treatment, the Contractor must provide to the Principal a Certification of Termite Treatment containing the information specified in Appendix D1 of AS3660.2 and affix a durable notice to the premises as detailed in Appendix D2 of AS3660.2.

General Responsibilities

Staining: The Contractor is fully responsible for protecting ceilings and walls from permanent stains arising out of liquids or powders used during pest control activities, and must at all times protect the property of both the Principal and the Tenants. The Principal reserves the right to reject the use of any liquid or powder that it considers may damage its property or that of its Tenant.

Re-infestation: If re-infestation occurs during the warranty period, the Property must be re-treated at the Contractor's own expense.

Pesticides: It is the responsibility of the Contractor to ensure that any pesticide which has been used in performing the Services is registered for the purpose under the Pesticides Act.

Completion

Remove all unused baits, containers, signs etc. from Site at the Completion of the treatment. Wash down surfaces to remove any residual chemicals. **END OF SECTION 18**

Section 19 - Reinstatement of Fire Damaged Property

General

Scope of works: This section sets out specific requirements related to the reinstatement of a fire damaged property.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended and where appropriate in accordance with the other Sections of this document.

Mains power supply: The Contractor must arrange the disconnection and re-connection of the mains power which must be undertaken by the local energy authority or a suitable licensed and qualified electrician. Prior to disconnection and re-connection of the mains power, the Contractor must obtain approval by the local energy authority.

Fixed appliances: The Contractor must disconnected and re-connected fixed appliances. Disconnection and re-connection must be undertaken by a suitable licensed and qualified tradesperson i.e.: electrician, plumber or gasfitter.

Weather protections and security: The Contractor must take all necessary precautions to protect any Building or Property from the effects of weather or lack of security cause by the fire damage. Any further damage arising from a lack of protection from weather or lack of security must be made good at no cost to the Principal.

Protection of undamaged items: Protect and screen all areas and objects undamaged by the fire from possible damage resulting from the reinstatement process.

Materials and Details

Replacement materials: New materials and details must match existing except:

- where asbestos or lead based paints are encountered, or
- where otherwise required to conform to any relevant Australian Standard or Government Regulations, or
- where the material is no longer available.

In the latter case, a recycled material is acceptable if approved by the Principal. All replacement materials must, however, comply with the performance requirements of the required material.

Material / roofing containing asbestos: Patching of existing asbestos cement sheets is not permitted. Replace with alternative roofing material in whole sheets. The extent of roofing removal and replacement due to the effects of fire will be nominated clearly within the Scope of Works and included in the Work Order.

Charred timber: All charred timber must be removed and replaced with new timber. Where timber is smoke stained it may be retained, but it must be deodorised and later covered by either sheet materials or paint.

Existing defective materials: Existing defective materials or fittings must be included in the Scope of Works for repair or replacement.

END OF SECTION 19

Section 20 - Fire Safety Works

General

Scope: This section sets out the requirements for the fire safety works identified in the Principal's Fire Safety Manual (FSM) and all repairs to fire resisting elements.

Refer to the Fire Safety Manual for the extent of work required to repair fire resisting elements.

The work must be carried out in accordance with the requirements of the Contract and all relevant Acts, Codes of Practice, Standards and/or Guidelines as amended.

Fire Rated Plasterboard and Ceiling Systems: Fire rated plasterboard must have a minimum 25 year life of product warranty and must be formulated so that when used in a ceiling system it has resistance to the incipient spread of fire for a minimum of 60 min when tested in accordance with Australian Standard AS 1530.4 – Fire Resistance Tests of Elements of Building Construction.

Any hanger, its attachments to the supporting structure and grid system shall withstand without failure a load of 1.4KN.

Fire Rated Plasterboard Shaft Systems: Fire rated plasterboard shaft systems must be formulated and installed so that they meet the requirements for a fire resistance level (FRL) for the relevant Building type as specified in the FSM when tested in accordance with Australian Standard AS 1530.4 – Fire Resistance Tests of Elements of Building Construction.

Shaft systems must meet the structural requirements for light weight construction which requires tests to the following standards:

- resistance to static pressure – ASTM E72-80;
- resistance to impact – ASTM E695-79; and
- when tested in accordance with AS 1530.3 contain a Spread of Flame index of zero (0).

Fire Rated Plasterboard Bulkhead & Separating wall construction Systems: Fire rated plasterboard bulkhead and separating wall construction systems must be formulated and installed so that they meet the requirements for a FRL for the relevant Building type as specified in the FSM when tested in accordance with Australian Standard AS 1530.4 – Fire Resistance Tests of Elements of Building Construction.

Any hanger, its attachments to the supporting structure and grid system shall withstand without failure a load of 1.4KN.

Fire Dampers: Fire dampers must have a 2 years written manufacturer's warranty and must:

- comply with relevant Australian Standards AS/NZS;
- comply with current BCA;
- be installed to manufacturers written specification;
- incorporate materials including, flanges, casing, blades, springs and linkages of stainless steel or equivalent materials that comply with the relevant Standards;
- have a FRL to comply with the relevant Standards;
- be of the required sizes and shapes;

- be tested and certified by CSIRO or NATA registered equivalent;
- achieve a FRL of 60/60/60 when tested in accordance with AS1530.4;
- meet the requirements for air leakage test specified in Clause 5.3 of AS1682.1; and
- if activated by a thermally released link, be tested to comply with AS1890.

Where intended to be used in a horizontal direction within a roof-ceiling system the fire damper must have been tested for the purpose for which it is intended.

If activated by a thermally released link, it must be tested to comply with AS 1890. For horizontally mounted fire dampers, the thermally released link must be located within the casing, in the plane normal to air flow.

Rockwool or equivalent Insulation: Any rockwool or other mineral wool used in the work must be fire resistant and achieve a FRL when installed of a minimum of -/60/60.

Fire Stopping Materials (sealants, mastics, fire pillows etc.): Fire stopping material or materials must have a minimum 2 years written manufacturer's warranty and must:

- comply with the nominated properties in accordance with AS4072.1 and AS 1530.4;
- achieve a FRL of not less than that specified in the FSM for the penetrated floor/wall or ceiling assembly; and
- be suitable for their application.

Fire Rated Doorsets: Must comply with the requirements of AS 1905.1 Fire – Resistant Doorsets.

Fire and Smoke Seals: Must have undergone tests with proprietary fire doors and/or solid core doors for their intended application.

Seals must have been tested in accordance with AS 1530.7 to be capable of limiting smoke at 200ºC for 30 minutes.

Independent tests are to be provided that demonstrate that the product does not suffer from any significant wear and tear for up to and exceeding 95,000 open and close cycles.

Repairs to products and Equipment installed as part of an alternative solution must be repaired so as to maintain the intended fire rating of the Component.

Intumescent Paint: Intumescent paint must have a minimum 10 year guarantee for internal applications and must:

- be fire rated to achieve a FRL of 60/60/60 when applied to plasterboards and/or pressed metal ceilings in accordance with AS1530.4;
- be fire rated to achieve a FRL of 60/60/60 when applied to sheetrock and lath and plaster in both wall and ceiling assemblies in accordance with AS1530.4;
- be fire rated to achieve a 1 hour fire endurance test in wall and or ceiling assemblies constructed of gypsum, fibreglass, aluminium, particle board, fibrous cement, pressed metal, plywood panels and timber in accordance with AS1530.4;
- intumescent paint to begin to expand at a temperature not exceeding 190ºC;
- not contain a flashpoint.

Independent test results must be provided for intumescent paint confirming that:

- the drying time of a single coat of intumescent paint not less than 450 microns (without mechanical aids) does not exceed 4 hours in any season assuming weather conditions are appropriate to apply to the product;
- the product is non-toxic;
- the product can be applied over existing non fire retardant paint.

Fire Collars: Fire collars must have a minimum 2 years written manufacturer's warranty and must:

- be independently tested in accordance with AS1530.4 or BS476 part 20 to seal both PVC, PP, Poly-butylenes, PE-X all sizes up to 200mm in penetrations through fire rated floor and wall components for up to 90 minutes;
- have been tested as a retrofit fire stop collar; and
- have a maximum temperature resistance (fire stop collar shall begin to activate) must not exceeding 120^{o}C.

END OF SECTION 20

Section 21 - Vacant Restoration

General

Scope: This section sets out the requirements for the work required prior to re-letting a Property. Vacant Restoration work ensures that a Property is clean and safe and that all Equipment is functioning. It involves the repair or replacement of Equipment necessary bring the property to relettable standard.

Weather protection: The Contractor must take all necessary precautions to ensure that a Property undergoing Vacant Restoration work is protected from the effects of weather.

Property security: The Principal at its discretion may request the Contractor to provide security of a vacant property either by Boarding Up the Property or requesting the Contractor to provide portable CCTV system or both. Once installed the Contractor is responsible for the security of a vacant Property and must ensure the security measures (e.g. “boarding up”) are in place and that no opening (e.g. door or window) is left unsecured when leaving the property to prevent damage or unlawful occupancy to the Property.

Any material used for security is required to allow sufficient light into the Property to enable ease of movement within, while still preventing ingress by any persons or penetration through the material by any projectiles. Such materials must be screw fixed and made good on removal.

The security measures implemented must remain in place until the Property is re-Tenanted. Removal of any security measures must be co-ordinated with the Principal.

Extent of Vacant Restoration Work

Property Utilities and Components: The Contractor must ensure the Equipment listed in the Work Order are repaired and returned to full functionality and that they contain all Component parts:

Appliances: Installation of stoves and hot water systems must take place one Day prior to the new Tenant occupying the Property and will be undertaken as part of Responsive Works. Installation must be co-ordinated with the Principal. The Principal will raise a Work Order for the Contractors for such works to be undertaken.

Visible Damage and Tenant alterations: All Visible Damage and Tenant alterations such as painting (where the Principals standards for painting have not been met), air-conditioners, shelving, floor coverings etc. as identified in the Work Order must be removed by the Contractor.

Tenant alterations that may require removal if directed as part of Vacant Restoration generally where they do not comply with Schedule 6 (Component Requirements) include but are not limited to:

- air conditioners (all types) (if directed);
- heated towel rails;
- spas;
- gas heaters;
- fireplace;
- dishwashers;
- freezers;
- garbage disposal units;
- water filters;
- fixed barbeques;
- garden lights;

- swimming pools;
- watering systems;
- satellite dishes;
- security and alarm systems;
- fixed security grills;
- surround sound systems;
- vacuum cleaner ducted;
- fabric window awnings – external; and
- window blinds and curtains. (if directed)

Illegal structures: If the Principal identifies illegal structures such as carports, sheds, verandas, decking, pergolas concrete slabs and Room additions the Principal will issue a Work Order for the removal of these items if they are assessed by the Principal to be structurally unsound.

Heating / Cooling: Any existing wood fire heater, and gas or electric space heaters that are beyond economic repair, are to replace with Split System Air Conditioners. Air conditioner sizing must meet property requirements, controller to be hard wired and fixed to wall in room. Air conditioner to meet the Principal's specifications.

Existing old heating source is to be removed (gas/electric/wood fire) and areas remediated/made good (e.g., floor coverings - replace room floor coverings if match cannot be achieved), walls - patch and paint, roofing - if tiled replace tiles / if tin replace full sheet associated to old flue position.

If wood heater is built insitu type (fire place) then decommissioning at room and chimney is required. Chimney to received colour bond capping to ensure water tight and fire place to be closed at within room.

Entry doors: The Contractor must re-key and replace cylinders to all entrance doors (including screen doors, garage doors, letter boxes, external laundry doors etc.) in accordance with Section 4 (Changing/re-keying combinations), and install door stops to all doors in Property, where they are not already present.

Window locks: The Contractor must ensure that all window locks are operational. Where window locks are not present the Contractor must install keyed window locks in accordance with Section 4 and 22 (Component Requirements).

Light Globes: The Contractor must provide where missing or remove and dispose of existing light globes that are inoperable and install energy efficient LED light globes as replacements. Where existing fluorescent light fittings are beyond economic repair, remove existing light fitting, make good, and install bayonet light fitting with energy efficient LED globe.

Cleaning: The Contractor must undertake cleaning internally and externally as specified in Section 17.

The Contractor must remove and dispose of all items from the Property, and from within the boundary and on the verge that do not form part of Equipment including all rubbish, furniture, etc.

Pests and vermin: The Contractor must leave the Property free from pests (excluding termites) and vermin and if necessary provide treatment in accordance with Section 18. If termite activity is found, the Contractor must advise the Principal.

Landscaping: The Contractor must ensure that:

- tree growth, climbers and shrubs do not have an impact on the external fabric of the Property, access or egress and are well trimmed,

- trees, shrubs, climbers, groundcover, perennial and flowering plants are pruned to reflect the natural growth, flowering and re-growth habit of the individual species.;
- where removal of trees or council approval is required and work cannot be completed within the Vacant Restoration timeframe, the Contractor must complete all other work and advise the Principal of the reason for the delay. The principal at its sole discretion may either extend the timeframe for completion or remove the item from the work order and issue an alternate order once approval has been achieved;
- garden beds and lawns are free from litter or foreign matter such as tree and lawn cuttings, stones, brick, glass, animal faeces etc.;
- edging and hedges are trimmed and left clean and tidy;
- where applicable, lawns including the verge are cut to the height specified in Section 17 immediately prior to returning the Property keys to the lock box or to the Principal.

Handover on Completion: The Contractor may use video evidence or photographic evidence as part of its Quality Management processes to record conditions of the Property (internally and externally).

Upon Completion the Contractor must return all keys to the lock box or to the Principal where no lock box is available, and notify the Principal of Completion in accordance with MMU7.

Additional Requirements for Aboriginal Housing Office (AHO) Properties

The Contractor must undertake the following additional works when undertaking Vacant Restoration on AHO Properties. AHO Properties will be indicated on the Work Order.

Heating / Cooling: Air conditioning must be installed at time of Vacant Restoration if there is no existing heating/cooling source in the Property within Isotherm 31. Split System Air conditioning sizing must meet property requirements, controller to be hard wired and fixed to wall in room. Air conditioner to meet AHO specifications.

Existing old heating source is to be removed (gas/electric/wood fire) and areas remediated/made good (e.g., floor coverings - replace room floor coverings if match cannot be achieved), walls - patch and paint, roofing - if tiled replace tiles / if tin replace full sheet associated to old flue position.

If wood heater is built insitu type (fire place) then decommissioning at room and chimney is required. Chimney to received colour bond capping to ensure water tight and fire place to be closed at within room.

Flyscreens: Regauze or replace existing flyscreens where damaged. Do not install new where missing.

Antenna and wall plate: Digital Antenna to be installed during vacant restoration if not present and an ‘F’ type wall plate must be provided in the lounge room in most appropriate position.

Ceiling Fans: Where not in place or damaged ceiling fans to be installed to Lounge room and bedrooms. Fan to meet AHO specifications (Equal to or superior to Clipsal 4HS1200AL. and fitted with 3 speed wall controller and light switch. 4 x 1200 aluminium blades. Oyster light with LED lamps - OYWHT, Luminaire Oyster Light White. Reverse switch.)

Security Flyscreen Doors: To be installed / replaced to all property entry doors (front, rear, side) where damaged and or missing.

Kitchen cupboard replacement: When kitchen cupboards are identified for replacement then Cook Top and Wall Oven are to be part of the new design eliminating free standing upright stove units. Design and size of kitchen cupboard upgrade to be in line with AHO/the Principal’s design criteria and sizing guidelines.

Stove only replacement (older kitchens): Replacement stoves must be electric single upright units with an enamel finish, four solid top heating elements, timer with separate oven and grill.

The stove must be securely fixed to the floor or wall with an approved proprietary stove clip to prevent it tipping over. An isolation switch is required to the stove at the splashback and a range hood must be installed above the stove (non flued).

Stove/Oven/cook top replacement in conjunction with kitchen cupboard replacement: New cook top and wall oven installation to be installed in conjunction with kitchen cupboard upgrade. Cook top and wall oven to meet specification and model type in accordance with AHO/the Principal's technical guidelines and product criteria.

Vacant Properties for Sale

Where a Contractor is required to perform a Vacant Restoration on a Property which the Principal identifies as being for sale, the Contractor must perform only the work identified on the Work Order: The work may include but not limited to the following:

- internal clean;
- external clean;
- lawn mowing and cleaning/trimming of garden areas;
- removal of all rubbish and abandoned furniture inside the Property and within the boundary and verge; and
- re-keying and changing cylinders to all external doors including screen doors.

No work additional to those listed above must be undertaken unless directed by the Principal via a Work Order.

END OF SECTION 21

Schedule 6 (Component Requirements)

Component Requirements

Contents

Component Requirements 325
PART 1 – ASSET MAINTENANCE AND NEW CONSTRUCTION 331
1.1 Grounds 331
1.1.1 Letter Box 331
1.1.2 Clothes Lines 332
1.2 Carpentry 333
1.2.1 Built in Wardrobes 333
1.2.2 Cupboards Kitchen 334
1.2.3 Bathroom Cabinet 335
1.2.4 Bathroom Vanity 336
1.3 Doors and Windows 337
1.3.1 Screen Doors 337
1.3.2 Doorways External 338
1.3.3 Doorways Internal 339
1.3.4 Door Locks and Latches 340
1.3.5 Windows and Glazed Doors 342
1.3.6 Window Locks 344
1.3.7 Window and Door Awnings 345
1.3.8 Garage Doors 346
1.3.9 Master Lock and Key Schedule 347
1.4 Roofing 348
1.4.1 Roof and Eave Ventilation 348
1.4.2 Gutters, Downpipes and Fascias 349
1.4.3 Roof Lights and Skylights 349
1.4.4 Ceiling Insulation 350
1.5 Plumbing 352
1.5.1 Hand Basin 352
1.5.2 Bath 352
1.5.3 Shower Base 353
1.5.4 Shower Roses 353
1.5.5 Shower Seats 354
1.5.6 Bathroom 354
1.5.7 Grab Rails 355
1.5.8 Toilet 355
1.5.9 Toilet Seat 356
1.5.10 Tap Ware 356

1.5.11 Sink Unit 359
1.5.12 Laundry Tub 360
1.5.13 Tap/Valve Tempering and Thermostatic Mixing....360
1.5.14 Plumbing System – Potable Water....361
1.5.15 Rainwater Tank 362
1.5.16 Water Heater 363
1.6 Electrical and Gas 367
1.6.1 Intercom and Access Control 367
1.6.2 Light Points....368
1.6.3 Stove 371
1.6.4 Rangehood....372
1.6.5 Heating 373
1.6.6 Washing Machine....375
1.6.7 Reverse Cycle Air Conditioning....376
1.6.8 Solar Photo-Voltaic Panels....377
1.6.9 Ceiling Fan 378
1.7 Wood Space Heater....378
1.8 Flooring 379
1.8.1 Underlay 379
1.8.2 Carpet....380
1.8.3 Resilient Sheet and Tiles....381
1.9 Signage....383
1.9.1 House and Unit Numbering....383
1.9.2 Information, Direction & Prohibition Signage 384
PART 2– FIRE SAFETY SYSTEM COMPONENTS 386
2.1 Emergency Lighting....386
2.1.1 Recessed or surface mount Emergency LED light 386
2.1.2 Circular Emergency Light....387
2.1.3 Batten Type Emergency Light....388
2.1.4 Emergency lighting circuit test switch 389
2.1.5 Emergency lighting self-test chip....390
2.1.6 Evacuation lighting luminaire for Class 1b 391
2.1.7 Remote LED indicate 392
2.1.8 Exit Luminaire....393
2.1.9 Emergency lighting circuit breaker 394
2.2 Portable Extinguishers 395
2.2.1 CO2, ABE, Water and Wet Chemical Portable Extinguishers 395
2.2.2 Fire Extinguisher cabinet....396
2.3 Fire Hose Reels 397
2.3.1 Fire Hose Reel....397
2.3.2 Fire Hose Reel Pump 398
2.3.3 Lever handled Fire Hose Reel Cabinet 399

2.4 Fire Hydrant Landing Valve 400
2.4.1 Fire Hydrant or Sprinkler Booster Cabinet 401
2.4.2 Fire Hydrant Block Plan 402
2.5 Sprinklers 403
2.5.1 Internal Sprinkler Head 403
2.5.2 Fire Sprinkler Electric Pressure Maintenance Pump 404
2.6 Drencher 405
2.7 Fire Doors 406
2.7.1 Single and double leaf fire doors 406
2.7.2 Solid Core door 407
2.7.3 Low moment door closer 408
2.7.4 Double Door Sequencer 409
2.7.5 Privacy lever latch set 410
2.7.6 Intumescent fire and smoke seals 411
2.7.7 Door bottom upgrade seal 412
2.7.8 Automatic door bottom smoke seal 413
2.7.9 Door perimeter smoke seals 414
2.8 Passive Fire Protection Systems 415
2.8.1 Retrofit fire collars 415
2.8.2 Fire Pillows 416
2.8.3 Fire rated mortar 417
2.8.4 Fire rated sealant 418
2.8.5 Fire rated expansion foam 419
2.8.6 High Density mineral fibre batts 420
2.9 Door hold open device 421
2.10 Signage 422
2.10.1 Fire door signage 422
2.10.2 Evacuation Signage 423
2.10.3 Fire Hose Reel & Extinguisher Signage 424
2.11 Dampers 425
2.11.1 Intumescent fire dampers 425
2.11.2 Mechanical fire dampers 426
2.11.3 Ceiling Fire Damper Enclosure 427
2.12 Fire Blanket 428
2.13 Fire Indicator Panel 429
2.13.1 FIP replacement components 429
2.13.2 Occupant warning amplifier 430
2.13.3 FIP / EWIS Battery 431
2.13.4 Flow switch sensor system 432
2.13.5 Occupant warning speakers 433
2.13.6 ELV Red twin cable 434
2.14 Visual Alarm Device (VAD) 435

2.15 Detectors/alarms 436
2.15.1 Smoke detector 436
2.15.2 Smoke alarm 437
2.15.3 Heat alarm 438
2.15.4 Vibrating and visual alarm device 439
2.15.5 Hush button 440
2.15.6 Heat detector 441
Part 3 Timber Schedule and Drawing Details 442

Introduction

This document outlines the performance requirements of selected components

Not all components required for the Maintenance Works are covered in this document. any components utilised by the Contractor as part of the Maintenance Works that are not covered by this document must comply with the requirements of the Contract, including the Maintenance Work Specification.

Components identified by performance criteria only, may require written certification from the manufacturer or original supplier. Certification must be provided to the Principal.

The Principal may from time to time, and in its absolute discretion, amend or add to this document, by notice in writing to the Contractor.

The components in this document are arranged in a table using the following format:

Component	The category of building component, e.g. roof
Sub-component	If required, the component can be broken down into smaller parts e.g. roof covering
Functional Statement	Describes the business interest the item needs to fulfil
Performance Requirement	Sets out the specific criteria for judging acceptability of any particular product – will usually include compliance with current Australian/NZ Standards
Warranty	Any specific warranty requirement

Definitions

"Certification" in this Schedule means one or more of the following:

A copy of a certificate of approval by a government authority e.g. Sydney Water, NSW Department of Planning and Environment, Transport for NSW, Australian Communications and Media Authority, Australia Post, Fire & Rescue NSW, NSW Rural Fire Service, NSW Health, Ausgrid, Jemena, etc., and/or

A letter certifying compliance to requirements and testing procedures outlined in specified Australian Standards, and/or A letter with certification by a practising qualified Engineer, and/or

Test reports/opinions prepared by Commonwealth Scientific and Industrial Research Organisation (CSIRO), National Association of Testing Authorities (NATA), Australian Wool Testing Authority (AWTA), Building Research Association New Zealand (BRANZ), etc.; based on Australian Standard Testing Procedures, and/or a print of a drawing with the testing authority's endorsement mark.

PART 1 – ASSET MAINTENANCE AND NEW CONSTRUCTION

1.1 Grounds

1.1.1 Letter Box

Component	**LETTERBOX**
Sub-component	
Need	To provide tenants with an Australia Post compliant receptacle for mail
Requirement	**General (all types)** • Painted zinc/aluminium alloy coated steel **or** • G2 zinc coated steel (Z450) with minimum 50 micron polyester powder coat finish • Aluminium (minimum 20 micron anodised **or** 50 micron powder coat) • Weather hood (for weather exposed areas) **Freestanding** • A4 envelope size minimum 230mm x 330mm and minimum160mm high • Minimum 30mm high letterbox slot • Elevated between 900mm to 1200mm above ground on a coated steel post • Padlock **or** key operated camlock **Built-in (brickwork or Aluminium Letter box Banks)** • Aluminium/G2 zinc coated steel/zinc-aluminium coated steel sleeve • Minimum A4 envelope size, minimum 230mm x 330mm and minimum160mm high • Minimum 30mm high letterbox slot • Access door pivot hinged on minimum 5mm diameter galvanised steel/SS rod • Key operated camlock/padlock style lock • Maximum letterbox bank of 75 boxes (15 wide x 5 high)
Warranty	Minimum 1 year written warranty

1.1.2 Clothes Lines

Component	**CLOTHES LINES**
Sub-component	
Need	To provide tenants with an easy way of drying clothes and bedding in the sunlight
Requirement	**General (all types)** Test report certifying hoist can withstand a load of 150 kg (minimum 2kg point loads evenly distributed per all lines/ at maximum 300mm centre spacing) without deformation or damage, issued by a registered Testing Laboratory based on current Australian Standards • Anodised aluminium **or** minimum 1.0mm thick galvanised steel framing to current Australian Standards • Minimum 20 micron anodised **or** 50 micron polyester powder coat finish to current Australian Standards • All bolts & fittings zinc plated • Locking mechanism on frame • Installed to manufacturers written specification **Retractable** • Minimum 4 line (2 BR or less) Maximum line extension 6.5 m • Minimum 5 line Maximum extension 6.5 m • Line material - Minimum 3.5mm UV stabilised plastic sheathed cord **or** 4mm galvanised wire **Awning** • Minimum 14 m line (for 1 BR or less) • Minimum 20 m line (for 2/3 BR Properties) • Minimum 35 m line (for 4/5 BR Properties) • Ground **or** wall mounted • With tensioning mechanism • Line material - Minimum 3.5mm UV stabilised plastic sheathed cord **or** 4mm galvanised wire **Fixed Rotary Type Adjustable (wind-up fixed head hoists)** • Minimum 39m line/4m diameter (for 2/3 BR Property with ground level Private open space • Minimum 48m line /5m diameter(for 4/5 BR Property with ground level Private open space • Line material - Minimum 4mm diameter galvanised wire
Warranty	Minimum 10 year written warranty - frame Minimum 1 year written warranty - line and components

1.2 Carpentry

1.2.1 Built in Wardrobes

Component	**BUILT IN WARDROBES**
Sub-component	
Need	To provide adequate storage for tenants' clothing
Requirement	**General** To current Australian Standards for HMR, MDF, Laminate, Melamine and Painted finishes **Doors** • Minimum 16mm thick high moisture resistant (HMR) particleboard **or** moisture resistant (MR) medium density fibreboard (MDF); laminated with low pressure melamine (LPM) decorative finish to both sides **or** vinyl film applied • Aluminium stiles acting as pull grips for sliding doors **OR** • Painted 35mm flush, hollow **or** cell cored door **Carcass** • Minimum 16mm thick high moisture resistant (HMR) particleboard with white melamine finish to both sides • 1 mm ABS or PVC plastic edge strip to all exposed edges of carcass and shelves • Concealed side wall-mounted hinges with 170° swing or sliding doors • Hanging/shelf unit to be removable/lowerable • Install to manufacturers written specification • All assemblies to carry a compliance label to current Australian Standards **Drawers** • Minimum 16mm thick fronts, bottom and sides of either high moisture resistant (HMR) particleboard **or** moisture resistant (MR) medium density fibreboard (MDF), finished with melamine both sides • 2 mm ABS or PVC plastic edge strip to drawer fronts • Completely integrated drawer slide system comprising a high quality epoxy coated white steel self closing feature runner, 30kg load capacity
Warranty	Minimum 5 year written warranty

1.2.2 Cupboards Kitchen

Component	**CUPBOARDS**
Sub-component	**Kitchen**
Need	To provide durable, waterproof, hygienic and cleanable storage and food preparation areas
Requirement	**General** To current Australian Standards for kitchen assemblies, HMR, MDF, Laminate and Melamine finishes **Benchtops** • Minimum 32 mm thick high moisture resistant (HMR) particleboard, post form round edge, laminated with high pressure decorative laminate having characteristics of high resistance to surface wear • High resistance to impact and high resistance to scratching **Doors and Drawer fronts** • Minimum 16mm thick high moisture resistant (HMR) particleboard **or** moisture resistant (MR) medium density fibreboard (MDF), laminated with low pressure melamine (LPM) decorative finish to both sides • 2 mm ABS or PVC plastic edge strip to all doors and drawer fronts • Use concealed side wall-mounted hinges with 170° swing on all doors **Drawer** • Minimum 16mm thick bottom and sides of either high moisture resistant (HMR) particleboard **or** moisture resistant (MR) medium density fibreboard (MDF), finished with white melamine both sides • 1 mm ABS or PVC plastic edge strip to all exposed edges of carcass • Completely integrated drawer slide system comprising a high quality epoxy coated white steel self closing feature runner, 30kg load capacity **Carcass** • Minimum 16mm thick high moisture resistant (HMR) particleboard with white melamine finish to both sides • 1 mm ABS or PVC plastic edge strip to all exposed edges of carcass and shelves **Kickboard** • Minimum 16mm thick high moisture resistant (HMR) particleboard or moisture resistant (MR) medium density fibreboard (MDF), with 2 mm black vinyl **or** low pressure melamine (LPM) decorative finish • 1 mm ABS or PVC plastic edge strip to all edges • Install to manufacturers written specification • Kitchen assemblies to carry a compliance label to current Australian Standards
Warranty	Minimum 5 year written warranty

1.2.3 Bathroom Cabinet

Component	**BATHROOM ACCESSORIES**
Sub-component	**Bathroom Cabinets**
Need	For storage of personal items used only in the bathroom and to allow personal grooming
Requirement	**General (All types)** • To current Australian Standards • Surface mounted **or** recessed • Cabinet fabricated in 1 mm zinc coated steel (white Acrylic baked Solvent-borne finish) **or** minimum 16 mm thick high moisture resistant (HMR) particleboard or moisture resistant (MR) medium density fibreboard (MDF); laminated with low pressure melamine (LPM) finish / polyurethane finish **or** heavy duty plastic (Plastic cabinet body minimal thickness of 5mm) • Adjustable shelving • Glass type to comply with AS1288 for location **Single Door Cabinet** • Minimum 375 mm high x 405 mm wide x 115 mm deep • 3 mm mirror fixed to self closing hinged door **or** sliding door • Minimum 1 shelf **Double Door Cabinet** • Minimum 415 mm high x 700 mm wide x 130 mm deep • 2 x 4 mm sliding mirror doors with finger slots set in recessed safety tracks (extruded PVC **or** aluminium tracks fitted to HMR laminated board) **or** 2 x 3 mm mirrors fixed to self closing hinged doors • Minimum 2 shelves
Warranty	Minimum 5 year written warranty

1.2.4 Bathroom Vanity

Component	**BATHROOM ACCESSORIES**
Sub-component	**Bathroom Vanity**
Need	For storage of personal items used only in the bathroom
Requirement	To current Australian Standards **Vanity tops** • Minimum 32 mm thick high moisture resistant (HMR) particleboard, post form round front edge, laminated with high pressure decorative laminate having characteristics of high resistance to surface wear, impact and scratching with Vitreous China Bowl (refer Basin) **OR** • Sanitary grade Acrylic (Waterborne) moulded **Door and Drawer fronts** • Minimum 16mm thick high moisture resistant (HMR) particleboard **or** moisture resistant (MR) medium density fibreboard (MDF), laminated with low pressure melamine (LPM) decorative finish to both sides • 2mm ABS or PVC plastic edge strip to all doors and drawers **OR** • Polyurethane finish **Carcass** • Minimum 750w x 450d with drawers, floor mounted on 150h tubular legs **or** with kickboard if floor not tiled underneath vanity • Minimum 16mm thick high moisture resistant (HMR) particleboard or moisture resistant (MR) medium density fibreboard (MDF); laminated with low pressure melamine (LPM) finish to both sides • 1 mm ABS or PVC plastic edge strip to all exposed edges of carcass and shelves Installation to manufacturers specification
Warranty	Minimum 5 year written warranty

1.3 Doors and Windows

1.3.1 Screen Doors

Component	**SCREEN DOORS**
Sub-component	**Heavy Duty Front and Rear**
Need	To provide a physical barrier that allows air and vision through the screen
Requirement	**Aluminium Door Framing** • Installation to current Australian Standards • Minimum 69mm x 18mm x 1.2mm wall thickness extruded aluminium frame with 10mm wide x 13.5mm deep insert frame for grille • Extruded PVC insert to bed heavy duty grille • Joints to be mitred, staked and riveted • Reinforcing corner stakes fixed to frames with SS 4mm diameter x 9.5mm rivets (minimum 4 per corner) • Door to be permanently branded on top rail with name of manufacturer • Tested to AS5039 for Dynamic Impact, Jemmy, Pull, Probe and shear **Aluminium Heavy Duty Grille** • To current Australian Standards for Type 1 doors • Minimum 7.0mm sectional thickness • Grille secured to door by pop rivets (Adequate Pop Rivets to satisfy AS5039 tests) **Aluminium Door Framing & Heavy Duty Grille Finish** • Clear anodised to current Australian Standards (20 microns thick for all regions) **OR** • Thermoset powder coatings to current Australian Standards (50 microns thick for standard conditions/ 80 microns thick for severe coastal or industrial regions) **Screen Mesh** • Powder coated Aluminium woven mesh (standard conditions) • Powder coated Stainless Steel (316 marine grade) woven mesh for bushfire areas • Mosquito proof mesh - with average aperture 1.5mm x 1.5mm • Wire diameter - minimum 0.23 woven Aluminium and minimum 0.18mm woven stainless steel • Secured to door to prevent easy removal **Hardware** • Three 75 x 30 mm hinges to current Australian Standards fixed with pop rivets • Locks, refer DOORWAYS “locks & latches” (Non fire-rated heavy duty screen door) • Fully adjustable dampened type door closer
Warranty	Minimum 10 year written warranty

1.3.2 Doorways External

Component	**DOORWAYS**
Sub-component	**External**
Need	To provide a secure mechanism for controlling access through a doorway that separates the private Property from public and common area
Requirement	**General** • To current Australian Standards & NCC • Do not use imported rainforest timber veneers • A non standard door size is a door size over 2400mm x 900mm **Entry doors (non fire rated)** • 40mm thick (or 35mm for maintenance only to suit existing door jamb. If replace jamb make to suit 40mm door) flush type solid core particleboard or blockboard cored door (type B bonded ply-wood/-hardboard face) • Door closer where nominated **Timber door frame and jamb lining (for Maintenance only)** • To current Australian Standards **Steel door frames (non fire rated)** • Minimum 18 gauge hot dipped zinc coated steel doorframe with internal architrave **Security Viewer** • Fire rated security viewer • Viewing greater than 160º **Stormproof Door Seal** • Storm seal screw fixed to base of door leaf
Warranty	Minimum 5 year written warranty - door Minimum 2 year written warranty - stormproof door seal

1.3.3 Doorways Internal

Component	DOORWAYS
Sub-component	**Internal**
Need	To provide a reliable mechanism for closing off rooms
Requirement	**General** • To current Australian Standards • Do not use imported rainforest timber veneers • A non standard door size is a door size over 2400mm x 900mm **Internal doors** • 35mm thick flush lightweight Solid block-board pine core door, solid particle-board, MDF core to current Australian Standards • 35mm thick flush hollow or cell cored door as like for like replacement (for maintenance only) • Type B bonded plywood/hardboard face **Timber door frame and jamb lining** • To current Australian Standards **Steel door frames** • Minimum 18 gauge hot dipped zinc coated steel doorframe with internal architrave
Warranty	Minimum 5 year written warranty

1.3.4 Door Locks and Latches

Component	DOORWAYS
Sub-component	**Door Locks and Latches**
Need	To provide a reliable, useable and secure device for locking doors
Requirement	**General** • To current Australian Standards • Security must be afforded to each individual property • Accredited Locksmith must be engaged to change / rekey any locks • Keying must be undertaken in such a manner as to ensure that properties across the portfolio are not keyed alike • Quality management to current Australian Standards • For fire resistant door sets doors, lock sets must form part of an approved tested door set assembly • Door locks to be a minimum 5 pin cylinder • Door lock finish: satin chrome/chrome plated/stainless steel • Keyed alike • Locks and Latches to suit semi-commercial applications (Residential care facilities etc) • To all aluminium sliding doors supply and insert aluminium blocks into the upper track of door in closed position leaving clearance for door to slide **Front and rear entry doors Cottages, villas & townhouses, units:** • Double cylinder automatic dead-latch with colour coded lock alert and a separate lever Latch set • Keyless opening from inside unless intentionally dead locked • Automatic release of dead latch when opened with a key from outside **Units/apartments (additional)** • Door closer (rack and pinion type) • Door closer low moment type cam operated where appropriate **Heavy duty screen doors** • Short backset mortice deadlock and lever with snib. Single point locking only **Common area entrance doors & community rooms** • Exterior escape dead latch (keyed lever latch from outside with quick release from the inside) • Door closer (cam operated) • Panic release fitted to all external exit fire doors only **Balcony/porch swing and sliding doors** • Keyed double deadlocks **Internal doors** • Lever passage latch set • Privacy latch set to bathroom/WC Lever set *Continues*

Component	DOORWAYS
	Continues **Common Storeroom & toilets** • Nightlatch and 'D' handle (Key to master key system) **Electric meter cupboard** • Nightlatch (fire rated) and 'D' handle (Key to master key system) **Electric meter cabinet** • Padlock (Key to master key system)
Warranty	Minimum 5 year written warranty - paint & tarnish Minimum 10 year written warranty - mechanical parts

1.3.5 Windows and Glazed Doors

Component	WINDOWS
Sub-component	**Windows and Glazed Doors**
Need	To provide natural light, ventilation and protection from the elements
Requirement	• Window and Door Locks - refer to Locks and Latches • Window & Door assemblies manufactured to comply with current Australian Standards and to carry testing authorities endorsement mark • All window types & glazed doors tested to AS2047 for deflection (positive/negative), air infiltration, water penetration, operating force and proof tests by NATA approved laboratory • Installation of new window assembly set in habitable rooms to be equal to or less than Maximum U value and within range for Solar Heat Gain Coefficient (SHGC) for appropriate climate zone • Window tests to qualify minimum 700 Pa • Minimum overall frame width 70mm for class 2 dwellings • Each window/door branded in an upper channel/stile with a permanent label indicating NATA Testing Certification, structural and water performance and manufacturers name eg. AWA labelling scheme • Installed to current Australian Standards and to manufacturers written specification • Doors toughened/laminated glass to current Australian Standards • Glass type and thickness to current Australian Standards except lower edge of all glass in windows within 500mm from floor to be only 'A' safety grade laminated or toughened glass in accordance with current Australian Standards • Issue window shop drawings with NATA testing authorities endorsement mark to the Principal if manufacturers do not qualify for AWA labelling scheme • All openable windows to include flyscreen which can be installed to external of window from inside dwelling • Sliding glazed door sets to include heavy duty sliding flyscreen door *Continues*

Component	WINDOWS
	Continues **Acid etch anodising** • AS1231-2000 for suitability to atmospheric conditions • Minimum 20 micron anodised film, 25 micron for coastal areas **Flyscreen Mesh** • All Flyscreen Mesh to include safety warning message stating that the "Screen will not stop children falling out window" • Powder Coated Stainless Steel (316 marine Grade woven mesh for bushfire areas minimum wire diameter 0.18 woven stainless steel) • Powder coated Aluminium woven mesh for all other areas (minimum wire diameter - minimum 0.23mm woven Aluminium) • Mosquito proof with average aperture of 1.5mm x 1.5mm Flyscreens with Aluminium Grille (only when Directed) **Heavy Duty Grilles (only when directed)** • Ground Floor and all accessible windows to include Aluminium Heavy Duty grille (minimum 7.0mm sectional thickness) pop riveted into screen frame with quick release (install to AS5039) • Complies AS5039 for Type 1 Class B Screens
Warranty	Minimum 7 year written warranty

1.3.6 Window Locks

Component	WINDOWS
Sub-component	**Window Locks**
Need	To provide a means of securing the Property from unauthorised entry through a window
Requirement	**Note - All openable windows must be capable of being locked in a partial open (safe ventilation) and closed position** **General** • To current Australian Standards • Fit keyed window locks to all openable windows • All windows must be capable of being locked in a closed position, and provide safe ventilating locking points 50mm and100mm from closed position • Do NOT install window locks on a consecutive code number basis but for security purposes are to be installed on a random basis, with minimum allowance for repetition of coding 1 per 100 Properties • Locks to be minimum 4 disc cylinder type - all window locks keyed alike for new construction • Fixings appropriate to window and door frame • Comply with AS5203 Fall Prevention Test *Continues*

Component	WINDOWS
	Continues **Window Restrictors (Only where specified)** • Window opening restrictor (capable of connection to all opening types) opening at 100mm and also completely opened when restrictor is released • Fixings appropriate to window and door frame • If restrictor involves steel rope or steel chain must have a minimum breaking strength of 3 KN • Approved Child proof locking device or 4 disc cylinder key lockable restrictor - all window locks keyed alike for new construction • Comply with AS5203 Fall Prevention Test
Warranty	Minimum 2 year written warranty

1.3.7 Window and Door Awnings

Component	**WINDOWS**
Sub-component	**Awnings**
Need	To protect windows and door openings from sun and rain
Requirement	**General** • Able to be fixed securely to wall • Provides effective shading • Sheds water away from window/door • Made of non combustible material **Radiant Heat Attenuating Screens** • Manufactured from stainless steel mesh • Wire diameter for screen not less than 0.8mm • Weave characteristic • Achieves and certified to AS1530.4 Fire Attenuation Test
Warranty	Minimum 5 year written warranty

1.3.8 Garage Doors

Component	**GARAGE**
Sub-component	**Garage Doors**
Need	To provide a reliable and easily operated means of securing a garage
Requirement	**Roller Doors (Domestic) Single and Double Doors** • Design to current Australian Standards for wind loading • Tested to qualify to minimum 1500 cycles of operation per year (where one cycle = closed to open to closed position) • Withstand minimum dynamic pressure of 550N/m2 applied externally/ internally normal to door • Rolled-T/box section/single **or** double angled bottom rail, steel **or** aluminium channel guides, interlocking slatted curtain • Counterbalance roller deflection not to exceed 0.3% of span • Galvanised prime painted/polyurethane/pre paint bonded finish to all metal components • Branded with manufacturers name • Key lockable central door handle **Panel Lift Door (Domestic) Single Doors only up to 2400mm Wide** • Design to current Australian Standards for wind loading • Tested to qualify to minimum 1500 cycles of operation per year (where one cycle = closed to open to closed position) • Withstand minimum dynamic pressure of 550N/m2 applied externally/ internally normal to door • Galvanised/prime painted/polyurethane/pre paint bonded finish to all metal components • Branded with manufacturers name and Installation to manufacturers specification • Key lockable central door handle
Warranty	Minimum 7 year written warranty

1.3.9 Master Lock and Key Schedule

Component	**MASTER KEY SYSTEM**
Sub-component	**Specialist key systems to secure areas**
Need	Secure access to parts of selected buildings to authorised personnel only
Requirement	• Contractors keying system operates mostly in Newcastle, Greater Sydney and Wollongong Metropolitan areas • Properties within Buildings are not to be master keyed • The system is to simplify the number of keys a Contractor has to carry to access buildings and restricted areas within buildings • Master Lock and Key Schedule to be designed and installed to meet high level of security to protect assets, work-sites, and restrict access only to authorised personnel • Key system to cover the following areas (Front/Rear and garage access (override), Building service riser access, Laundry and garbage room access (plus Tenant access key for these areas), Under stair access, Manhole, Roof access, Plant room access, Lift maintenance room access, Electrical – meter boards and service risers, Service risers general, Access control, CCTV rooms, Void areas, MATV panels. Garage door controls, Intercom panels, Security Guard log boxes, Trade toilet – cleaners store and any other areas requiring security • Capacity to expand system into electronic keying • Copy protection – Anti-duplication restricted keying • Integrated minimum 6 pin cylinder • Modular or universal steel cylinder cores • Bump, Pick penetration and Drill protected cores (where required) • Cylinders and Housings – Satin Chrome plate • To current Australian and International Standards
Warranty	Minimum 2 years manufacturers written warranty Keying system protected for life of system

1.4 Roofing

1.4.1 Roof and Eave Ventilation

Component	**ROOF**
Sub-component	**Roof and Eave Ventilation**
Need	To provide air circulation so as to reduce condensation and moisture within the roof space
Requirement	**Note – Installation of roof and eave vents must not compromise the fire safety of the building** **Under Eave Vents** • Curved air inlet holes to restrict insect entry • White Polypropylene or equivalent durable plastic • Minimum size 400 x 200 mm **Roof Ventilators** • Made from Steel, Aluminium **or** heavy duty high strength Polymer • Lubricated steel bearings • Reinforced hail resistant dome • Withstand wind velocities in excess of 200 km/hr • Withstand rain penetration • Pre painted bonded finish to match roof colour or clear plastic dome • Fixed using corrosion resistant self drilling screws or fasteners (appropriate to environment) and finished to match roof materials • Flashed and fitted correctly above and through the roof with two part flashings compatible with roof material
Warranty	Minimum 1 year written warranty - Under Eave Vents Minimum 15 year written warranty - Roof ventilators including bearings

1.4.2 Gutters, Downpipes and Fascias

Component	ROOF
Sub-component	**Gutters, Downpipes and Fascias**
Need	To effectively collect and shed water from the Property
Requirement	• Designed and installed to meet Plumbing Code of Australia • Gutters are required to comply with requirement relating to overflow • Gutter – minimum 115mm quad **or** 135mm half round • Fascia system – 185mm compatible with gutter • Downpipes minimum 100mm x 50mm **or** 75mm round • Gutter / Fascia / Downpipe material – Zincalume or equivalent 0.5mm BMT (G300) **or** 0.42mm BMT (G550) gauge factory pre painted bonded finish. • Gutter Brackets – concealed type at 900mm maximum spacing fixed using galvanised helical nails or proprietary clips and fixings • Installation to current Australian Standard and manufacturers Specification • Gutter Guards must be factory pre-painted metal roofing steel and in a colour to match guttering. Prior to installing gutter guard the Contractor is to clean out, re-fall guttering and re-seal all joints prior to installing gutter guard. • When installed in designated bush fire prone areas gutter guards must be non-combustible metal and securely fixed underneath the roof and to the gutter in accordance with AS 3959.
Warranty	Minimum 20 year written warranty - Gutters, Downpipes and Fascias

1.4.3 Roof Lights and Skylights

Component	ROOF
Sub-component	**Tubular Roof Lights/Skylights**
Need	To provide natural light to internal areas
Requirement	**Skylights Tubular** • To current Australian Standards • Achieve a test report certifying assembly can withstand wind forces to AS4055 and resist impact to AS4256 • Roof Flashings an integral part of skylight to AS/NZS2904 • Certification of greater than 95% specular reflectance from shaft • Minimum 250mm internal diameter • Achieve a WERS rating better than 5 star for heat and cooling transfer • Diffuser to reduce glare and to throw light over a broad area • Internal Fire Damper with FRL60/60/60 when directed for buildings in Bushfire areas or where required to achieve a 60 minimum fire rating
Warranty	Minimum 7 year written warranty

1.4.4 Ceiling Insulation

Component	**ROOF**
Sub-component	**Ceiling Insulation**
Need	To effectively insulate the ceiling
Requirement	**Glass Fibre (batts)** • Made of melted glass spun onto a mat of fine fibres • Pre-cut to width of ceiling joists • New construction -Thermal insulation to a Property shall meet BASIX requirements • Existing properties - Installed insulation (combined ceiling and roof insulation) to achieve a combined R value of R4.0 for climate zones 1 to 5 and R5.0 for climate zones 6 to 8 • To current Australian Standards • Sound absorption properties - achieve Noise reduction co- efficient of 0.8 or better • Product to contain at least 70% recycled glass content • To achieve a fire hazard rating (AS/NZS1530.3) of: o Ignitability Index 0 o Spread of Flame 0 o Heat Evolved 0 o Smoke Developed 0 – 1 • Rated Non Combustible on AS1530.1 • Indoor Air Quality - formaldehyde release less than 0.01 mg/ m²/24 hours • Fibreglass batts thermal insulation shall comply with the Building Regulations and relevant Australian Standards, and shall consist of not less than 95% the weight glass wool (inorganic oxides or minerals rock slag or glass) and binders *Continues*

Component	ROOF
	Continues **Glass Fibre (blankets)** • Properties same as for Glass fibre batts above • Blanket insulation with Sarking to be installed under metal roofing in strict accordance with manufacturer's specification (installed between top of the trusses and metal roofing or between raked cathedral ceiling and roofing • Glass fibre blankets shall not be installed on top of the flat ceiling to cover ceiling joists or services **Rockwool (batts)** • Made from melted volcanic rock and recycled mineral slag spun into a mat of fine fibres • Pre-cut to width of ceiling joists • To current Australian Standards • Sound absorption properties achieve a Noise reduction co- efficient of 0.8 or better • Product to contain at least 20% recycled content (mineral slag) • To achieve a fire hazard rating (AS/NZS1530.3) of: o Ignitability Index 0 o Spread of Flame 0 o Heat Evolved 0 o Smoke Developed 0 – 1 • Rated Non Combustible on AS1530.1 • Low VOC emissions less than 0.01mg/m²/24 hours • Rockwool batts thermal insulation shall comply with the Building Regulations and relevant Australian Standards and shall consist of not less than 95% the weight mineral wool (inorganic oxides or minerals, rock slag or glass) and binders **Rockwool (blankets)** • Properties same as for Rockwool Batts above • Rockwool blankets cannot be installed on top of the flat ceiling to cover ceiling joists or services **Notes** • Insulation shall be installed appropriately to avoid interference with electrical and other services and appliance and do not compromise safety • Install Fire rated covers inside ceiling as required or ensure appropriate separation • Bulk insulation that does not achieve a Non Combustible rating as per AS1530.1 is not approved • Insulation cannot be installed to cover ceiling joists or other structural beams in the ceiling
Warranty	For the life of the Property

1.5 Plumbing

1.5.1 Hand Basin

Component	BASIN
Sub-component	
Need	To provide hygienic receptacle for washing hands and face
Requirement	• To current Australian Standards • Standard Mark/Water Mark/Sydney Water certificate of approval • White (minimum bowl capacity 4 litres) Vitreous China • Wall mounted on manufacturers metal brackets with ring connector to waste outlet • Installed to manufacturers written specification • All basins to be supplied with plug and waste
Warranty	Minimum 2 year written warranty

1.5.2 Bath

Component	BATH
Sub-component	
Need	To provide a hygienic tub for bathing
Requirement	**General** • To current Australian Standards • Standard Mark (optional) /Watermark/ Water Authority certificate of approval • Installed to manufacturers written specification • Indelibly marked with manufacturers name/Trademark (visible in the installed position) • Rectangular - minimum 1500x 715mm wide x 380mm deep • Minimum 10mm high tiling bead to all baths built into adjacent walls • Fitted with plug & waste • Sanitary grade Acrylic (Waterborne) moulded from minimum 3.5mm thick sheet, glass reinforced with 10mm diameter steel rod rim reinforcement **OR** • Pressed metal manufactured from minimum 1.6mm thick steel drawn seamless from one sheet of metal, grip coated all over and finished internally with white vitreous Solvent-borne finish(non skid base) **Retrofit Existing - Acrylic (Waterborne) bath linings** • Sanitary grade Acrylic (Waterborne) moulded from minimum 3.5mm thick sheet reinforced with a fibreglass backing • Dimensions to fit over existing bath size • Grate and adaptor to suit existing waste drain • Fitted with plug and waste
Warranty	Minimum 10 years written warranty

1.5.3 Shower Base

Component	SHOWER
Sub-component	**Shower Bases**
Need	To provide a sound, waterproof base for the shower that integrates seamlessly with other shower elements
Requirement	**General** • To current Australian Standards, including installation • Standard Mark/Water Authority certificate of approval and tested to current Australian Standard • 900mm x 900mm x 70mm high hob • Pressed metal (vitreous Solvent-borne finish) **or** moulded plastic (non slip finish) • Installed to manufacturers specification • Indelibly marked with manufacturers name/-trademark
Warranty	Minimum 10 year written warranty

1.5.4 Shower Roses

Component	SHOWER
Sub-component	**Shower Rose**
Need	To provide a spray of water sufficient for washing comfortably
Requirement	**General** • Water saving '3 STAR WELS' rated not more than 9L/minimum • Chrome plated satin chrome **or** powder coated brass arm and shower rose, with brass ball joint • Tamper proof shower head **Disability Modification** • Handheld Shower Rose mounted on vertical grab rail • Minimum 600 mm - 32mm stainless steel grade 304 grab rail • Adjustable handheld shower rose cradle • Hygienic seal Flange Covers • Fixings of Grab rail to support appropriate static load • Brass wall flange with dual check non return valve • Shower hose smooth PVC hose with elastic inner strengthened by woven polyester cords • Water saving '3 STAR WELS rating
Warranty	Minimum 5 year written warranty

1.5.5 Shower Seats

Component	**SHOWER**
Sub-component	**Shower Seat**
Need	To provide support for less mobile tenants whilst using the shower where recommended for a disability modification
Requirement	• To current Australian Standards • Rounded edged foldable seats (with anti drop tension hinges) • Self draining and non slip • Frame grade 304 stainless steel • Seat high density HDPE (high density polyethylene) • Ensuring stability up to 160 kg (unless specified higher) • Installer to ensure wall construction and fixings support Shower Seat
Warranty	Minimum 5 year written warranty

1.5.6 Bathroom

Component	**BATHROOM ACCESSORIES**
Sub-component	**Bathroom Fittings**
Need	For easy access and manipulation of towels, toilet paper
Requirement	**Toilet Paper Holder** • Chrome plated brass/polished stainless steel frame, minimum 150mm x 150mm with aluminium roller **Bath Towel Rail** • Minimum 760mm overall length x 16mm-diameter chrome plated brass or stainless steel tube with stainless steel end brackets, for wall screw fixing **Robe Hooks** • 52mm x 53mm chrome plated brass
Warranty	Minimum 1 year written warranty

1.5.7 Grab Rails

Component	BATHROOM ACCESSORIES
Sub-component	**Grab Rails**
Need	Reduce risk of falls for our tenants
Requirement	• Only where prescribed by OT or where installed as part of an approved tenant disability request • To current Australian Standards • 32mm diameter (or as directed) x 1.2mm thick 304 Stainless Steel **or** powder coated aluminium x 450mm minimum overall length, secured to wall with round head C.P. brass or stainless steel screws, minimum 50mm long • Hygienic seal Flange Covers • Fixings of Grab rail to support appropriate static load
Warranty	Minimum 1 year written warranty

1.5.8 Toilet

Component	TOILET
Sub-component	**Pan and Cistern**
Need	To provide a hygienic, comfortable ablution facility
Requirement	**General** • To current Australian Standards • Standard Mark/Watermark/Water Authority certificate of approval • Pedestal pan to be white vitreous china • Cisterns to be vitreous china **or** heavy duty grade plastic with internal overflow • 4.5/3L dual flush toilet suites (minimum 4 Star WELS rating) • Toilet and Cisterns to be vandal resistant or fitted with a 'Vandal Resistant Conversion kit' • Installation to manufacturers specification **Existing Housing (Maintenance only)** • Retrofit 6/3 L dual flush cisterns if retaining existing pans (minimum 3 Star WELS rating) • Retrofit 4.5/3 L dual flush toilet suites where replacing pans (minimum 4 Star WELS rating)
Warranty	Minimum 1 year written warranty

1.5.9 Toilet Seat

Component	TOILET
Sub-component	**Toilet Seat and Cover**
Need	Toilet Seat and Covers to supplement the toilet so a reasonable level of comfort is provided
Requirement	• To current Australian Standards • Constructed of solid plastic – Vandal Resistant with vandal resistant fittings • Installation to manufacturers specification • Note AS1428.1 compliance required in common area bathrooms only
Warranty	Minimum 1 year written warranty

1.5.10 Tap Ware

Component	TAPS
Sub-component	**Bathroom, Laundry and WC**
Need	To easily control water flow reliably for efficient water usage
Requirement	**Bib tap / Pillar tap / Hob mounted set / Flick mixer** **General** • Materials, dimensions, finishes and performance tests to current Australian Standards • Water supply metal bodied taps to current Australian Standards • Standards Mark/ Water Mark/ Certificate of Approval • Basin tap set / flick mixer 4 Star WELS rating • Laundry tub tap set / flick mixer 3 Star WELS rating • Shower tap set 3 star WELS rating • All components made of brass base material, chrome plated **or** satin chrome finishes • Dezincification resistant **Standard tap set (separate taps and spout /shower rose)** • Taps to be vandal resistant • Bath, basin, shower, laundry tub - Incorporate in tap flow regulator valves equivalent to "Aqualoc" **or** pressure compensating flow control (not required if flick mixer) • Vandal proof aerator • Set complete with outlet, shower rose, spout or arm, and handles Handles to be easily changed from minimum 65mm lever for separate hot and cold taps to longer levers • Capstan **or** Lever handles length 65mm to 80mm handles *Continues*

Component	TAPS
	Continues **OR** **Flick mixer (Wash Basin or Laundry Tub only)** • Top control single lever (no gooseneck type or pull out hose) • 40mm diameter ceramic disc cartridge size • Secured to basin or laundry tub with twin stud fixing or large hand tighten nut (approx. 50mm dia) or backing nut (approx. 40mm dia) with lock screws (no metallic C plate with single stud fixing) • Connector tails flexible braided PEX with WaterMark AS/NZS3499 • Can operate to water temperature of up to 70 degrees • Install to manufacturers written specification (note, generally manufacturers stipulate isolating stop taps must be fitted to hot and cold water connection at wall outlet) **Disability Modification** • Tap handles as directed • Quarter turn taps with ceramic discs fitted to baths, shower taps, basins and laundry tubs or flick mixer tap as directed
Warranty	Minimum 2 year written warranty – standard taps Minimum 10 year written warranty – flick mixer ceramic disc cartridge

Component	**TAPS**
Sub-component	**Kitchen**
Need	To easily control water flow reliably for efficient water usage
Requirement	**Bib tap / Pillar tap / Hob mounted sink set / Wall sink set / Flick mixer** **General** • Materials, dimensions, finishes and performance tests to current Australian Standards • Water supply metal bodied taps to current Australian Standards • Standards Mark/ Water Mark/ Certificate of Approval • Tap set / flick mixer 4 Star WELS rating • All components made of brass base material, chrome plated **or** satin chrome finishes • Dezincification resistant **Standard tap set (separate taps and spout)** • Taps to be vandal resistant • Incorporate in tap flow regulator valves equivalent to "Aqualoc" **or** pressure compensating flow control (not required if flick mixer) • Vandal proof aerator • Set complete with outlet, spout or arm, and handles. Handles to be easily changed from minimum 65mm lever for separate hot and cold taps to longer levers • Capstan **or** Lever handles length 65mm to 80mm handles **OR** **Flick mixer** • Top control single lever (no gooseneck type or pull out hose) • 40mm diameter ceramic disc cartridge size • Secured to sink with twin stud fixing or large hand tighten nut (approx. 50mm dia) or backing nut (approx. 40mm dia) with lock screws (no metallic C plate with single stud fixing) • Connector tails flexible braided PEX with WaterMark AS/NZS3499 • Can operate to water temperature of up to 70 degrees • Install to manufacturers written specification (note, generally manufacturers stipulate isolating stop taps must be fitted to hot and cold water connection at wall outlet) **Disability Modification** • Tap handles as directed • Quarter turn taps with ceramic disc fitted to kitchen sinks or flick mixer tap as directed
Warranty	Minimum 2 year written warranty – standard taps Minimum 10 year written warranty – flick mixer ceramic disc cartridge

1.5.11 Sink Unit

Component	**SINK UNIT**
Sub-component	**Kitchen Sink**
Need	To provide for washing rinsing and draining of food and utensils
Requirement	**General** • To current Australian Standards • Standards Mark/Water Mark/certificate of approval • All kitchen sinks to be supplied with plug and waste • Minimum 304 polish finished stainless steel only • Indelibly marked with manufacturers trade-mark • Sinks to suit 3 tap set configurations (hot tap, cold tap and spout) or single hole for flick mixer tap **Disability Modification** Bowl depth and dimensions as directed **Studio** • Single Bowl sink with single drainer. Minimum 880mm length and minimum 13.5L bowl • Sink to suit bench top width – minimum of 450mm **1 to 2 Bedroom Properties** • One and a half bowl sink with single drainer, minimum length 1050mm, width to suit bench top width - minimum of 450mm • Main bowl to be minimum 20L **3 or more bedroom** • One and a half bowl sink with double drainers. Minimum 1380mm long x 450mm wide • Main bowl to be minimum 20L
Warranty	Minimum 25 year written warranty

1.5.12 Laundry Tub

Component	LAUNDRY TUB
Sub-component	
Need	To wash and soak clothes and bedding
Requirement	**General** • To current Australian Standards • Standards Mark/Watermark/Water Authority certificate of approval • Detachable PVC or polyolefin bypass connected at top to current Australian Standard **Tub** • Minimum 30 litre capacity (Studio) • Minimum 45 litre capacity (1 to 2 bedroom) • Minimum 68 litre capacity (3 to 6 bedroom – (for maintenance only) • Minimum 304 stainless steel • Indelibly marked with manufacturers name - trademark **Cabinet** • White enamel/ pre-painted bonded finish to steel cabinet
Warranty	Minimum 25 year written warranty - stainless steel Minimum 10 year written warranty - the cabinet

1.5.13 Tap/Valve Tempering and Thermostatic Mixing

Component	TAP/VALVE
Sub-component	**Tempering Valves/Thermostatic Mixing Valve**
Need	To ensure hot water does not scald tenants
Requirement	• Tempering Valves set to Plumbing Code standards to all NCC Class 1, 2 and 3 properties • Thermostatic Mixing Valve only required in NCC Class 9 Properties • To current Australian Standards • Standard Mark/Water Mark/Sydney Water certificate of approval • Installation to manufacturers specification
Warranty	Minimum 5 year written warranty

1.5.14 Plumbing System – Potable Water

Component	**PLUMBING SYSTEM**
Sub-component	**Potable Water**
Need	To provide safe, clean and healthy drinking water to homes
Requirement	**Prior written approval of the Principal is required to use alternate piping material in new construction and in maintenance work unless replacing like with like** Alternate piping shall meet the following requirements • To current Australian Standards • Water Mark certificate of approval • Recyclable at end of life • Satisfies tests for contaminants to comply with AS/NZS4020 including: • VOC's (Volatile Organic Compounds) • Semi-Volatile Organic Compounds • Regulated heavy metals (Cadmium, lead, arsenic, barium, beryllium, chromium, mercury, selenium, thallium etc • Any other contaminant lifecycle tests • Able to be joined using standard (non-exclusive) connectors which can withstand required pressure levels • Heat Resistance able to withstand temperatures up to 85 degree Celsius without failure • Potable water delivered through the system contains no tainting affecting taste or odour after accelerated tests representing 20 years use – AS/NZS4020 and AS2492
Warranty	Minimum 25 year written warranty

1.5.15 Rainwater Tank

Component	**WATER SUPPLY**
Sub-component	**Rainwater Tank**
Need	
Requirement	**All Rainwater Tanks above and below Ground** • To current Australian Standards • All downpipes connected to the rainwater tank must have a screened downpipe rain head • First Flush devices installed to suit system (above or below ground) • Vermin and insect screens provided on all inlets and outlets Aluminium mesh mosquito screen • All rainwater and stormwater pipes installed to eliminate ponding and stagnation of water • In accordance with the Rainwater Tank Design and Installation Handbook HB 230-2008 published by Standards Australia • All pumps, electrical, and plumbing must be located either adjacent to a building or positioned as not to cause trip hazards. Located in a vandal resistant enclosure • Installation to manufacturers specification **Above Ground Rainwater tanks** • Slimline rain water tanks • Walls minimum G300S, Z450 0.6mm BMT steel • Interior surface factory pre-painted with a food grade approved polymer (200 um thick) to AS2070 • External walls galvanised **or** factory pre painted bonded finish • Steel base minimum G300S, Z450 0.6mm BMT, with a food grade approved polymer 200um thick film to inner and outer surfaces • Installed with first flush device, strainer, overflow and hose tap • Tank stands certified by structural engineer **Below Ground Rainwater tanks** • All below ground tanks installation must have engineering certification for design loadings and hydrostatic lift • Below ground tanks cannot be installed underneath or as part of a Properties foundation. Preferred location underneath driveway or lawn • Manufactured using concrete **or** food grade polymers, and independently certified not to leach chemicals into the water • Monolithically poured or single seam free tanks with no joins of leakage points, reinforced, self supporting and engineered • Inlet covers/lids to eliminate sunlight/algae/mosquitos and marked Rainwater
Warranty	Minimum 20 year written warranty Above Ground Minimum 15 year written warranty Below Ground

1.5.16 Water Heater

Component	**WATER HEATERS**
Sub-component	**Solar Water Heaters**
Need	To reliably provide hot water
Requirement	**General** • To current Australian Standards • Water Mark/Authority Certificate of Approval including all valves • Installation to current Australian Standards and to manufacturers written specification • High energy efficiency – Eligible for Small Scale Technology Certificates • Suitable for all NSW climate zones, except Alpine Region • All Units, Valves and Piping to be frost protected to climate zone • Hard water or mineralised water areas to be glycol based using a heat exchanger (primarily NCC Climate zone 4) • Natural gas **or** electricity boosted • Solar Panels (hail resistant) appropriate to zone area and size of tank • Solar Panels to be aligned between north east to north west • Tank on ground preferred, unless ground space is limited then close coupled thermosiphon systems are allowed **Gas Boost** • Minimum 170L with 5 star Gas Boost (all bedroom categories) **Electric Boost** • Minimum 160L for (1 Bed) – close coupled for new construction • Minimum 250L for (2 Bed) • Minimum 300L for (3 to 4 Bed) • Minimum 400L with 3 panels for households with 5 or more residents • Electric Boost solar capable of off peak electricity supply operation • Capable of recovery of more than 50% of the tank capacity through boost
Warranty	Minimum 10 year written warranty - cylinder panels and heat exchanger

Component	**WATER HEATERS**
Sub-component	**Gas Water Heaters**
Need	To reliably provide hot water
Requirement	**General** • To current Australian Standards • Standards Mark/Water Mark/Water Authority Certificate of Approval • AGA approval • Minimum 5 star energy rating • All Units, Valves and Piping to be frost protected **Storage** • Mains pressure: Floor Model (outdoor only) • 1 bedroom minimum 90L • 2 bedroom minimum 110L • 3 bedroom and over, minimum 135L **Instantaneous (External installation only)** • Factory Pre-Set not to exceed 50°C in accordance with AS3498. No further mechanical tempering device required • Electronic ignition • Frost protected • Single or dual heat exchanger **1 bathroom Properties** • NCC Climate zone 6 to 8 – 16L to 26L • NCC Climate zone 2 to 5 – 16L to 20L **2 bathroom Properties** • NCC Climate zone 6 to 8 – 26L to 32L • NCC Climate zone 2 to 5 – 20L to 26L
Warranty	**Storage** Minimum 1 year written warranty - parts/labour Minimum 10 year written warranty – cylinder **Instantaneous** Minimum 3 year written warranty - parts and labour Minimum 10 year written warranty - heat exchanger

Component	**WATER HEATERS**
Sub-component	**Electric Water Heaters**
Need	To reliably provide hot water
Requirement	**General** • To current Australian Standards • Standards Mark/Water Mark/ Water Authority Certificate of Approval • All Units, Valves and piping must be frost protected **Storage** • 50 and 80 ltr capacity (for maintenance only) • Mains pressure Floor Model (indoor/outdoor) • Studio and 1 bedroom - 125L • 2 bedrooms - 250L - off peak • 3 bedrooms and over - 315L - off peak **Instantaneous** • Electrical cut-off Manufactured with inbuilt Pressure/Temperature relief valve • Minimum. 4.5 L/ minute
Warranty	**Storage** Minimum 1 year written warranty - parts/labour Minimum 10 year written warranty – cylinder **Instantaneous** Minimum 3 year written warranty - parts/labour

Component	WATER HEATERS COMMERCIAL
Sub-component	Commercial Electric Water Heaters
Need	To reliably provide hot water
Requirement	• Installed to match performance of existing • To current Australian Standards • Standards Mark / Water Mark / Water Authority Certificate of Approval • Extra Long Life tank (tank life more than 10 years – High grade Stainless Steel or similar durable material • Pressurised tank • Dual handed connections • Adjustable thermostat • Automatic Over Temperature Safety Cut off • Provide rust free water • Durable pre-painted steel casing • Commercial mains pressure storage **Storage** • Mains Pressure, Floor Model (Indoor / Outdoor) (250L to 600L)
Warranty	Minimum 10 year written warranty (Cylinder)

Component	WATER HEATERS COMMERCIAL
Sub-component	Commercial Gas Water Heaters
Need	To reliably provide hot water
Requirement	• Installed to match performance of existing • To current Australian Standards • Standards Mark / Water Mark / Water Authority Certificate of Approval • AGA Approval • Minimum 5 star energy rating • If internal in a plant room – all gas heaters must be flued to outside with minimum 0.5mm gauge galvanised steel flue • Extra Long life tank (Tank life more than 10 years – High grade Stainless steel or similar durable material) • Pressurized tank (either On Ground or Close Coupled) • Dual handed connections • Adjustable Thermostat • Automatic Over Temperature Safety Cut Off • Provide rust free water • Durable pre-painted steel casing • Commercial mains pressure storage **Storage** • Mains Pressure, Floor or Close Coupled Model (Indoor / Outdoor) (150L to 300L)
Warranty	Minimum 10 year written warranty (Cylinder)

1.6 Electrical and Gas

1.6.1 Intercom and Access Control

Component	**ACCESS CONTROL**
Sub-component	**Intercom and Door Control**
Need	To provide a reliable, useable and secure device for controlling access to buildings
Requirement	• Vandal Resistant Intercoms • Displays self explanatory user information • Minimum 2mm Stainless Steel front with toughened minimum 4mm Polycarbonate Surround • Impact resistant and fixed with anti-vandal fixings • Front plate to allow a minimum of six buttons with audio, expandable modular units for additional features • Optional space for shatterproof camera shielded by minimum 4mm clear polycarbonate • Stainless steel buttons, tamperproof and shaped to prevent foreign bodies being inserted underneath • Linked to door release switch in units and internal intercom Door Release System • Steel reinforced recessed entry panel with buttons flush to outer surface and anti-removal device. Must operate independently and not be reliant on other communication services • Installation to manufacturers specification
Warranty	Minimum 1 year written warranty

1.6.2 Light Points

Component	**LIGHT POINTS**
Sub-component	**Interior Common Area Lights**
Need	To illuminate common areas adequately for undertaking normal domestic activities and security, including internal fire stairs, stairwells, lift lobbies, corridors, car parks etc. Includes external areas with roofs/ceilings <3m, such as undercover walkways, car parks, stair wells etc
Requirement	• To provide Common Area lighting to all common areas egresses and access ways within residential complexes (entranceways, stairways, corridors, common rooms, plant rooms etc) • To current Australian Standards and relevant access standards • Installed to manufacturers written specification • Luminaires must be U.V. stabilised and IP65 rated with die cast Aluminium (minimum 20 to 25 Micron Powder coating) **or** ≥ 3mm polycarbonate housing • Product must have a recognised Australian Certificate of Approval under the Gas and Electricity Consumer Safety Act 2017 • All fixtures and components to be vandal proof, hose proof and impact resistant. Security/specialty screws required for all fixings • Energy efficient lamps to be used • Colour temperature: 4000 - 5000K • Colour rendering index: 80+ • Power Factor ≥0.9+ • Light sources / lamp preference based on luminous efficacy i.e. highest lumens per watt to be given preference. Luminous efficiency of light source / lamp must be ≥ 70 Lumens / Watt • Rated lamp life ≥ 20,000 hours • Luminaire light Output Ratio (LOR) ≥ 0.7, evidenced by NATA accredited lab reports • Lumen output of light source / lamps ≥ 70% of original output at end of the rated lifetime, evidenced by NATA accredited lab reports • Luminaires with no hanging points as directed by the Principal to meet building criteria • Luminaires must be securely fixed to the surface - no hanging fittings *Continues*

	Continues **LED Lamps/Luminaires** • All luminaires must be vandal-resistant LED luminaires with occupancy sensors that maintain a low level of lighting when areas are unoccupied • All luminaire models must have previously been used by an Accredited Certificate Provider to successfully create Energy Savings Certificates under the NSW Energy Savings Scheme • All components of the light fitting including lamps, batteries, covers etc. must be able to be purchased and replaced individually • LED rated lamp life ≥50,000 hours • LED luminous efficacy ≥70 Lumens/Watt at full light output • LED colour temperature 4000-5000K • LED colour rendering index ≥80+ • Luminaire power factor ≥0.9+ • Lumen output of LED lamps ≥70% of original output at end of the rated lamp life • Luminaire Light Output Ratio (LOR) ≥0.7 • All exposed equipment (luminaires, motion sensors, photocells, diffusers etc.) must be vandal resistant, IP65 rated, with ≥3mm thick impact-resistant polycarbonate covers **or** equivalent • All motion sensors or other parts are to be securely contained within the luminaire, or fixed to the ceiling or luminaire using vandal resistant security/specialty screws and contained within IP65 rated ≥3mm thick impact-resistant polycarbonate covers **or** equivalent • No equipment is to have leverage or hanging points • Security/specialty/tamper proof screws are required for all fixings • Luminaires must be fixed to ceilings using a drilling method – no adhesive methods will be accepted
Warranty	Minimum 2 year written warranty Minimum 3 year written warranty - all LED components

Component	LIGHT POINTS
Sub-component	**Exterior Light Fittings**
Need	To illuminate an area for safe pedestrian movement. For external areas with roofs/ceilings <3.5m, such as undercover walkways, car parks, stair wells etc, component requirements for Interior Common Area Lights apply for LED lamps/luminaires
Requirement	• Modular carriage tray with electronic starter • Weather proof IP65 rated • Lights to reduce light spill and sited to illuminate pedestrian and mixed traffic areas in common areas, forecourts of cluster housing to improve safety and reduce shadow and potential hiding locations • Meet current AS/NZS1158 Table 2.1 with selection criteria critically evaluating 'risk of crime' • Performance to type 3 or 4 Luminaire classification to AS/NZS1158.3 • Lights mounted high on posts or buildings and sited not to spill into windows or neighbouring buildings. Bollard lighting is not approved • Meet current AS/NZS1158 and achieve a 'P1' for High levels of vandalism or 'P2' for Medium levels of vandalism in accordance with AS/NZS1158.3 **All External lighting** • Vandal proof moulded base • Impact resistant moulded housing • Vandal proof opalescent cover - U.V. stabilised diffuser • Replaceable carriage tray with electronic starter • No hanging point as directed by the Principal Light to be securely fixed with all cables secure and vandal resistant to prevent access • Energy efficient Tri-phosphor globes and tubes or LED globes • Installed to manufacturers written specification • Performance to Type 3 or 4 Luminaire classification in accordance with AS/NZS1158.3 **Building and Car-Park Lighting** • Housing casing glass reinforced polyester **or** Nylon moulded plastic • Vandal resistant moulded Polycarbonate diffuser • Vandal resistant stainless steel clips • Where possible all lights are to be fixed to buildings or other structures at a preferred height of 2m to 3.4m Pole Top Lighting • All Pole top lighting to be 2m to 3.4m around pedestrian paths • All Pole top lighting to be 3.4 to 4.5m around roadways • Poles to suite 76 diameter **or** 100 diameter spigots • Poles minimum 3.6mm thick x 75mm diameter minimum. 60 micron hot dipped galvanised M.S. post **Notes** • Bollard and up-lighting types are NOT approved for new installations • Design of lighting to comply with AS/NZS4282 Control of the Obtrusive Effects of Outdoor Lighting
Warranty	Minimum 2 year written warranty

1.6.3 Stove

Component	**STOVE**
Sub-component	
Need	To cook food safely and effectively, allowing frying, grilling and baking
Requirement	**Note: In all new construction, separate wall or under bench oven and cooktop only.** **Upright - (for maintenance only)** • To current Australian Standards • Main Oven gross capacity minimum 75 litre • 540 mm wide • Combined or separate griller and oven compartments • Fan Forced **or** conventional oven – Removable oven door with cool to touch window • 4 hot plates or 4 burners : For Electric solid elements **or** ceramic glass cooktop (non induction) tested to IEC60335 For Gas - Electric **or** battery ignition, push to turn safety control, flame failure cut off for emergency • Front control **or** side control buttons only • Splashback to upright • AGA approval where appropriate **Cook Top - Electric or Gas** • To current Australian Standards • Square white enamel painted finish **or** stainless steel **or** ceramic glass hob with front **or** side controls • 4 hot plates or 4 burners; For Electric solid elements **or** ceramic glass cooktop (non induction) tested to IEC60335 For Gas - Electric **or** battery ignition, push to turn safety control, Flame failure cut off for emergency • Heat residual warning indicator for ceramic glass cooktops • AGA approval where appropriate **Wall Oven - Electric Only** • To current Australian Standards • Oven gross capacity minimum 80 litre • Combined or separate griller and oven compartments • Fan Forced **or** conventional oven – Removable oven door with cool to touch window **Disability Modification** • Cooktop and oven as directed **Boarding House/Studio** Replace like for like which may include 2 burner
Warranty	Minimum 2 year written warranty

1.6.4 Rangehood

Component	**RANGEHOOD**
Sub-component	
Need	To remove grease from cooking gases
Requirement	**General** • To current Australian Standards/Australian Gas Association/NSW Office of Energy and Climate Change • Fixed undermount or pull out undermount • Minimum 50 micron powder coating to galvanised steel casing • AS marking, brand name, serial no. date code, rated air delivery, sound power level in dB(A) at rated air delivery and wattage branded on unit • Minimum air flow rate 40L/s (144m3/hr) at maximum sound power level 55dB(A) to current Australian Standards • Minimum 2 speed convertible fan & automatic thermostat cut-off electricity or impedance protected motor (withstand "locked rotor" conditions for 72 hours without burning out) • Minimum 55 watt motor • Minimum 3 blade plastic/metal propeller • Multi layer aluminium / stainless steel filtration mesh grease filters • Wiring encased in plastic conduits, within unit • Width to match and align with cooktop or stove • Installation to manufacturers specification **Ducting** • Exhaust to outside • To be minimum of 0.5mm galvanised steel ducting **or** 'Flexi-duct' similar fire or heat resistant material)
Warranty	Minimum 2 year written warranty - parts/labour Minimum 2 year written warranty - filters

1.6.5 Heating

Component	**HEATING**
Sub-component	**Electric Space/Electric Panel Heaters**
Need	To provide efficient and effective heating of a room
Requirement	**(Replacement only as approved by principal- consider replacing with reverse cycle air conditioning as per the Principal's Heating and Cooling Policy)** • To current Australian Standards • Only space/panel heaters approved under the Certificate of Approval Scheme authorised by the appropriate government agency with authority to test and certify • Installation in accordance with Australia/New Zealand Wiring Rules (Australian Standards AS/NZS3000) and to local supply authority regulations • Fixed (including wall mounted or recessed or floor mounted) panel **or** fan assisted heaters • Minimum 2 heat settings, (LO/HI) Thermostat control on high setting • Minimum 2kW (heat up to 55 m^3) to Maximum 7kW (heat up to 160 m^3) consumption capacity • Minimum efficiency of greater than 95% • Automatic reset thermal cut-out safety feature and fusible link. Branded with manufacturers name to AS/NZS60355, supplier licensed under Standards Assoc. Certification Trademark • Child safe to touch cabinet
Warranty	Minimum 2 year written warranty

Component	HEATING
Sub-component	**Gas Space Heaters**
Need	To provide efficient and effective heating of a room
Requirement	**(Replacement only as approved by principal- consider replacing with reverse cycle air conditioning as per the Principal's Heating and Cooling Policy)** • To current Australian Standards • Natural Gas/Town only • Room sealed heater • Wall mounted convection heater, Thermostat heat control automatic electronic ignition, timer, regulated gas flow and flued combustion gases • Child safe to touch cabinet • Minimum 4.3 efficiency stars and 6.0 emissions star rating • Double lined flue within ceiling space • Heaters with flues • Gas input - minimum size : 5 MJ/hr • Gas input - maximum size : 23 MJ/hr • Labelling of appliances, specifying minimum allowable room volume and capacity of heater in MJ/hr • Installation to AGA requirements • AGA certificate of approval
Warranty	Minimum 10 years written warranty - burner Minimum 2 year written warranty - fan Minimum 1 year written warranty - other parts

Component	DRYERS
Sub-component	
Need	Dry washing efficiently and effectively
Requirement	**Common Area Laundries and NCC Class 3 and 9 Properties (replacement only)** • To current Australian Standards • Minimum 3.5kg or 5kg capacity • Auto cool down • 2.5 hour timer – 3 heat settings • Easy clean filter • Safety door switch, Safety thermostat reset switch • 2 directional air outlet and optional venting kit • Wall mountable • Minimum 2 star Energy Rating
Warranty	Minimum 2 year written warranty

1.6.6 Washing Machine

Component	**WASHING MACHINE**
Sub-component	
Need	A means of automatically washing a variety of clothes and bedding types
Requirement	**Common Area Laundries and NCC Class 3 and 9 Properties (replacement only)** • To current Australian Standards • Standards Mark/ Type Test Mark to NPADPS/ Water Authority certificate of approval • Automatic washing machine, with rotary or push button control • Stainless steel drum **NCC Class 3 and Class 9 (minimum 7 kg load capacity)** • Front loading • 4 Star WELS rating • 4 Star Energy rating **Common Area Laundries (minimum 5.5 kg or 6 kg load capacity)** • Top loading • 4 Star WELS rating • 3 Star Energy rating
Warranty	Minimum 2 year written warranty

1.6.7 Reverse Cycle Air Conditioning

Component	**AIR CONDITIONER**
Sub-component	**Reverse Cycle Split System**
Need	To provide efficient and effective heating and cooling of a room

Requirement	**NOTE: Installed only in NCC climate zones 7 and 8 and as per the Principal's Heating and Cooling Policy or as directed. (do not remove the Principal's installed air conditions in other climate zones without seeking direction)**
	
	General
	
	• To current Australian Standards
	• Wall or Floor mounted
	• Cooling capacity minimum 2.5 kw to maximum ≤ 7 kw
	• Energy star rating
	  o 2.5 kw cooling model- minimum 5 star cooling, minimum 3 star heating
	  o 3.5 kw cooling model - minimum 4.5 star cooling, minimum 3.0 star heating
	  o 5.0 kw cooling model - minimum 4.5 star cooling, minimum 2.5 star heating
	  o 6.0 kw cooling model - minimum 4 star cooling, minimum 2.5 star heating
	• Minimum number of fan speeds 4
	• Indoor noise ≤ 50 dBs
	• Outdoor noise ≤ 60 dBs
	• Single Phase 240 V
	• Controller to be hard wired. Remote controls only supplied where directed

Warranty	Minimum 2 year written warranty

1.6.8 Solar Photo-Voltaic Panels

Component	**SOLAR PHOTO -VOLTAIC PANELS**
Sub-component	**Panels and Inverter**
Need	To generate electricity coupled with a fixed voltage converter
Requirement	**Photo Voltaic Panels (all models)** • Listed on Clean Energy Council (CEC) Approved Modules Database – and to current Australian and International Standards • Efficiency > 15% • Mean measured power per panel > 250w, with Performance Ratio of ≥ 90% and/or Temperature Coefficient of ≤ 0.5% (Life cycle testing to show that performance in not significantly diminished over the power generation life of the panel • Generate Small Scale Technology Certificates (STC's) and be listed on the Clean Energy Council list of approved components • Compliant with IEC 61215, IEC 61730 and UL 70 • Anti-reflective coating • Frame post cut anodized Aluminium screw or weld fixed (tested to withstand cyclonic wind) • Operating temperature from minimum – 25°C to maximum 85°C • IP67 rated junction box on each panel • Roof mounted isolators to be side mounted **Solar Inverter (Fixed Voltage Inverter models)** • Listed on Clean Energy Council (CEC) Approved Modules Database – and to current Australian and International Standards • Optimal Efficiency > 95% DC/AC Conversion • Suit outdoor or indoor installation • Ambient operating temperature range from minimum – 25°C to > 50°C • Minimum IP65 rating
Warranty	Minimum 25 year written warranty – power generation Minimum 10 year written warranty – materials

1.6.9 Ceiling Fan

Component	Ceiling Fan -
Sub-component	
Need	To effectively circulate air in a room
Requirement	**Ceiling Fans (all models)** • To current Australian Standards • Fan with integral light • Minimum 1200mm diameter • Minimum 3 speed fan • Controller to be hard wired. Remote controls only supplied where directed • Provide control switching integrated with light switches • Fan to have reverse function • Unit suitable to fit LED globes • Installed to manufacturers specification and details
Warranty	Minimum 2 year warranty

1.7 Wood Space Heater

Component	WOOD SPACE HEATER
Sub-component	**Wood Space Heaters**
Need	To provide efficient and effective heating of a room
Requirement	**Not installed in new construction (for maintenance only)** **Not to be installed unless approved by Principal. The Principal's Heating andCooling Policy directs wood space heaters not to be replaced** **General** • To current Australian Standards • Test report prepared by registered NATA registered laboratory in compliance to AS/NZS4013. "Domestic Solid Fuel Burning appliances - Method for Determination of Flue gas emission" • Maximum allowable appliance particulate emission factor to AS/NZS4013 (i.e. maximum 5.5g/kg for appliances without catalytic combustors) • Double skin firebox convection heater • Double lined flue within ceiling space • Minimum appliance efficiency rating of 60% • Minimum size: 10kW (30MJ), Maximum size: 22kW (65MJ) • Installed by licensed installer to manufacturers written specification • Branded with manufacturers trademark, type, model and serial number, and emission report number of appliance and Standards Mark
Warranty	Minimum 5 year written warranty

1.8 Flooring

1.8.1 Underlay

Component	FLOORING
Sub-component	**Underlay**
Need	To provide safe, hygienic, hard wearing, underlay to maximize economic life from carpet
Requirement	**General** • To current Australian Standards • Meets current NCC and AS ISO9239-1 • Recyclable and or made from recycled materials • Minimum grading "Residential" as per AS4288 **Class 2 Properties** **Synthetic foam** • Rebonded polyurethane foam with stabilising laminate on top surface • 7 mm minimum thickness • 120 kg/m³ minimum foam density or rebounded polyurethane foam **Vulcanised rubber** • Heavy duty vulcanised rubber, waffle pattern • Reinforcing fabric: either Hessian, spun Nylon, or Polyester • Minimum sheet thickness: 7.5mm (+0.5) • 210kg/m² minimum product mass **Common Areas (class 2 Properties), class 3 Properties** **Synthetic foam** • Rebonded polyurethane foam with stabilising laminate on top surface • 7 mm minimum thickness • 120kg/m³ minimum foam density or rebounded polyurethane foam **Vulcanised rubber** • Heavy duty vulcanised rubber, waffle pattern • Reinforcing fabric: either Hessian, spun Nylon, or Polyester • Minimum sheet thickness: 8mm (+0.5) • 300kg/m² minimum product mass
Warranty	Minimum 10 year written warranty

1.8.2 Carpet

Component	**FLOORING**
Sub-component	**Carpet**
Need	To provide a safe, hygienic and comfortable surface for habitable areas of a Property or common area
Requirement	**General** • Installation to current Australian Standards • Fire rating to NCC (for all Building Class Types) • Treated with Anti-Bacterial and Anti-Microbial **Nylon/Wool Blend** • 100% Bulked Continuous Filament (BCF), solution dyed Nylon **or** Nylon/Wool blend (minimum 50% nylon) • Loop pile tufted carpet • Level pile surface or with slight modulation • Minimum 31.5 tufts/10cm (1/8) gauge • Minimum 678 g/m2 (20oz/yd2) total pile mass • 5mm maximum pile height • "Actionbac" or Jute backing or minimum 80% recycled stitch bond non woven polyester • A.C.C.S. rating for Residential Extra Heavy Duty (Stairs) • A.C.C.S. Registration number to appear on back at regular intervals • Colour as approved by Principal • Carpet range and quality as approved by Principal **Wool Types** • 100% wool carpet **or** wool blend (minimum 80% wool) • Loop pile tufted carpet • Level pile surface or with slight modulation • 31.5 tufts/10cm (1/8) gauge • 1356 g/m2 (40oz/yd2) total pile mass • 6mm maximum pile height • "Actionbac" or Jute backing or minimum 80% recycled stitch bond non woven polyester • ACCS (Australian Carpet Classification Scheme) rating for Residential Extra Heavy Duty including stairs • Colour as approved by NSW Land and Housing Corporation • Carpet range and quality as approved by Principal • A.C.C.S. Registration number to appear on back at regular intervals
Warranty	Minimum 10 year written warranty

1.8.3 Resilient Sheet and Tiles

Component	FLOORING
Sub-component	**Resilient Sheet and Tiles**
Need	To provide safe, hygienic, hard wearing, waterproof and cleanable surface
Requirement	**Note: These provisions apply to complete new installations. Existing spot replacement or repair use Resilient Flooring to match the existing installed product** • Manufacture, Installation and Maintenance to current Australian Standards • Use water based adhesives • All sheet, flooring seams shall be welded (either chemical or thermal) to manufacturers specification • Initial care of all installed materials shall be carried out to manufacturers specification • Floor-coverings shall conform to the physical characteristics of approved samples and shall be within the limits of any sample range or variation in colour and pattern • Products containing recycled materials are preferred **Class 1 and 2 Properties – Vinyl Composition tiles (ISO10595 Kitchens, Dining Rooms and Hallways etc)** **For properties where sound transmission from unit above may be a concern, consider using cushioned back heterogeneous** • Concrete floors laid on suitable levelling compound; Timber floors laid on Hardboard (not MDF), FC sheet underlay or other approved underlay • Vinyl thickness: 3mm (ISO24346) • Type II – through pattern tile • Minimum R9 slip resistance • Fire rating ISO9239.1 >11kW/m² **Class 1 and 2 Properties – Luxury Vinyl (LV) Tiles / Planks (ISO10582 Kitchens, Dining Rooms and Hallways etc)** **For properties where sound transmission from unit above may be a concern, consider using cushioned back heterogeneous** • Concrete floors laid on suitable levelling compound; Timber floors laid on Hardboard (not MDF), FC sheet underlay or other approved underlay • Thickness: Minimum 2mm – Maximum 3mm • Direct glue fixed (not floating floor) • Minimum 0.5mm wear layer. • Wear classification: Type 1 Wear Layer Binder content • Slip resistance minimum R9 • Fire rating ISO9239.1 ≥ 8kW/m2 *Continues*

Component	FLOORING
	Continues **Class 1 and 2 Properties – Homogenous Sheet (ISO10581 Kitchens, Dining Areas and Hallways etc)** **For properties where sound transmission from unit above may be a concern, consider using cushioned back heterogeneous** • Concrete floors laid on suitable levelling compound, Timber floors laid on Hardboard (not MDF), FC sheet underlay or other approved underlay • Thickness: Minimum 2mm – Maximum 3mm sheet vinyl • Polyurethane Reinforced • Wear classification: Type I Binder content • Minimum R9 Slip Resistance • Fire rating ISO9239.1 ≥8kW/ m² **Class 1 and 2 Properties – Heterogeneous Sheet (ISO10582 Kitchens, Dining Areas and Hallways etc)** **For properties where sound transmission from unit above may be a concern, consider using cushioned back heterogeneous** • Concrete floors laid on suitable levelling compound, Timber floors laid on Hardboard (not MDF), FC sheet underlay or other approved underlay • Thickness: Minimum 2mm – Maximum 3mm sheet vinyl • Polyurethane Reinforced • Wear classification: Type I Wear Layer Binder content • Minimum R9 Slip Resistance • Fire rating ISO9239.1 ≥8kW/m² **Class 2 and 3 Properties – Cushioned Backed Heterogeneous sheet (EN651)** • Concrete floors laid on suitable levelling compound, Timber floors laid on Hardboard (not MDF), FC sheet underlay or other approved underlay • Thickness: Minimum 3mm sheet vinyl • Polyurethane Reinforced • Minimum R10 slip resistance • Wear classification: Type I Wear Layer Binder content • Minimum 14dB sound reduction • Easy Clean top layer • Fire rating ISO9239.1 ≥8kW/m² *Continues*

Component	FLOORING
	Continues **Wet Area (Floors) – Written approval of Principal is required prior to use** • Homogenous Slip Retardant Vinyl sheet (ISO10581) • Thickness: Minimum 2mm sheet vinyl • Wear classification: Type I Binder content • Fire Rating: (ISO9239.1 ≥8kW/m²) • Slip resistance: AS4586 (B Wet/Barefoot and R10 Oil/wet ramp) • Integral 150mm high coved skirting in all wet areas, Cove skirting to be installed with capping strip to prevent water penetration • 32mm diameter cove fillet to be used where vinyl is coved • Products containing abrasive material in order to comply will not be considered **Wet Area (Walls) – Written approval of Principal is required prior to use** • Homogenous Vinyl sheet (ISO10581) • Thickness: Minimum 1.25mm • Polyurethane Reinforced • Fire Rating (AS5637.1) Group 2 or Group 1
Warranty	Minimum 7 year written warranty Minimum 10 year written warranty – Luxury Vinyl Flooring

1.9 Signage

1.9.1 House and Unit Numbering

Component	SIGNAGE
Sub-component	**Numbering (Street/Unit)**
Need	To provide legible identification of address
Requirement	• External street numerals and building block numerals to be 150mm minimum high 1.6mm thick plain brass (secured with brass screws) **or** polished cast aluminium **or** self-reflective numerals on pre-painted steel base (secured with stainless steel screws) fixed to building/structure • Unit numerals to be 50mm minimum high x 1.6mm thick plain brass **or** polished cast aluminium **or** moulded plastic screw fixed to door • Letterbox numerals to be 50mm minimum high x 1.6mm thick brass/ aluminium/plastic screw fixed to front of letterbox • Community room WC doors as for unit numerals • Project name and numerals (if required) as for external street numerals
Warranty	Minimum 1 year written warranty

1.9.2 Information, Direction & Prohibition Signage

Component	**SIGNAGE**
Sub-component	**Advisory / Information or Prohibition Signage**
Need	To provide legible information and advice for people in or around the area
Requirement	• Prohibition signs and symbols (No Smoking, Electrical hazard etc) to comply with current Australian Standards • Either 225x300 mm (approx A4) **or** 300x450 mm (approx A3) – where viewing is required at a distance of greater than 10m away • Signs and numbers to be non reflective **Low Density Polyethylene and/or Polypropylene and/or co- mingled plastic/wood (Recycled product)** • UV stabilised – to reduce surface whitening • Fading and crack resistant for indoor and outdoor use • Minimum 90% recycled product • Non-toxic hazard • Minimum thickness 1.5 mm • Rounded corners with four corner mounting holes (screw fixed) **Pre Painted Bonded finish Sheet Steel (metal)** • Suitable for outdoor use • Minimum BMT 0.5 mm thick; • Rounded corners with four corner mounting holes (screw fixed with vandal resistant screws)
Warranty	Life expectancy 5-8 years

Life Safety Plan

R	A	C	E
Remove people in immediate danger	Alert others – Raise the Alarm	Close the door	Evacuate to assembly area



Evacuation Procedure

1. Remain calm. Do not Panic.
2. Leave building. Do not use lifts.
3. Proceed to assembly areas.
4. At assembly areas call 000.
5. Remain there until otherwise directed by emergency services.
6. Always keep escape paths free of obstacles.

IN AN EMERGENCY DIAL 000

"Evacuation diagram to be inserted here"

SAMPLE ONLY

END OF COMPONENT REQUIREMENTS - PART 1

PART 2– FIRE SAFETY SYSTEM COMPONENTS

2.1 Emergency Lighting

2.1.1 Recessed or surface mount Emergency LED light

Component	**EMERGENCY LIGHTING**
Sub-component	**Recessed or surface mount Emergency LED light**
Need	Replacement or relocation of emergency lighting assembly
Requirement	**General** • To current Australian Standards • Single Recessed or Surface LED emergency light • Covers all sizes **Performance** • Compliant with the requirements of AS/NZS 60598.1 • Installed in accordance with AS2293.1 • Luminaire Classification shall be equivalent or higher than existing unit in accordance with AS2293.3 • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for circuit or supply device • Minimum life expectancy of 50,000 hrs **Material and/or Manufacture** • Housing and frame shall be either: • Powder coated steel or diecast aluminium • Polycarbonate • Water/dust ingress rating (IP) must be suitable for the installation environment • Emergency luminaires must be self-contained with a self static inverter System including battery and battery charger to be non-corrosive • Any battery compartments must be either inaccessible or accessible only via vandal resistant security/specialty screws **Fire Rating** • If installed into a fire rated ceiling, a FR downlight cover shall be installed above the light to maintain the fire integrity of the ceiling element • If surface mounted to an FR ceiling, the cable penetration must be appropriately fire sealed **Certification** • As per Work Requirements • Ensure luminaire remains energised for a minimum of 24 hours prior to conducting required battery test
Warranty	**Minimum 3 year written warranty**

2.1.2 Circular Emergency Light

Component	**EMERGENCY LIGHTING**
Sub-component	**Circular Emergency Light**
Need	Replacement or relocation of emergency lighting assembly
Requirement	**General** • To current Australian Standards • Single circular LED emergency light • Covers all sizes **Performance** • Compliant with the requirements of AS/NZS 60598.1 • Installed in accordance with AS2293.1 • Luminaire Classification shall be equivalent or higher than existing unit in accordance with AS2293.3 • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for circuit or supply device • Minimum life expectancy of 50,000 hrs **Material and/or Manufacture** • Housing and frame shall be either: o Powder coated steel or diecast aluminium o Polycarbonate • Water/dust ingress rating (IP) must be suitable for the installation environment • Emergency luminaires must be self-contained with a self static inverter. System including battery and battery charger to be non-corrosive • Any battery compartments must be either inaccessible or accessibleonly via vandal resistant security/specialty screws **Fire Rating** • If surface mounted to an FR ceiling, the cable penetration must be appropriately fire sealed **Certification** • As per Work Requirements • Ensure luminaire remains energised for a minimum of 24 hours prior to conducting required battery test
Warranty	Minimum 3 year written warranty

2.1.3 Batten Type Emergency Light

Component	**Emergency Lighting**
Sub-component	**Batten Type Emergency Light**
Need	Replacement or relocation of emergency lighting assembly
Requirement	**General** • To current Australian Standards • Batten type LED emergency light • Covers single and double batten and all lengths **Performance** • Compliant with the requirements of AS/NZS 60598.1 • Installed in accordance with AS2293.1 • Luminaire Classification shall be equivalent or higher than existing unit in accordance with AS2293.3 • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for circuit or supply device • Minimum life expectancy of 50,000 hrs **Material and/or Manufacture** • Housing and frame shall be either: o Powder coated steel or diecast aluminium o Polycarbonate • Water/dust ingress rating (IP) must be suitable for the installation environment • Where tamper proof diffuser is required, it shall be impact resistant poly carbonate with secure access screws • Emergency luminaires must be self-contained with a self static inverter. System including battery and battery charger to be non-corrosive • Any battery compartments must be either inaccessible or accessibleonly via vandal resistant security/specialty screws **Fire Rating** • If mounted to an FR ceiling, the cable penetration must be appropriately fire sealed **Certification** • As per Work Requirements • Ensure luminaire remains energised for a minimum of 24 hours prior to conducting required battery test
Warranty	Minimum 3 year written warranty

2.1.4 Emergency lighting circuit test switch

Component	**EMERGENCY LIGHTING**
Sub-component	**Emergency lighting circuit test switch**
Need	Installation or replacement of emergency lighting circuit test switch
Requirement	**General** • To current Australian Standards • Semi automate discharge testing of single point emergency lighting fittings including contractor • Covers all number of poles / circuits **Performance** • Compliant with the requirements of AS2293.2 • Installed in accordance with AS2293.1 • Ensure contactor/relay is appropriately sizes to suit number of circuits and applicable electrical loads **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment • Where installed in common areas, unit enclosure shall be tamperproof and feature key switch operation only (003 key barrel) **Certification** • As per Work Requirements
Warranty	Minimum 3 year written warranty

2.1.5 Emergency lighting self-test chip

Component	**EMERGENCY LIGHTING**
Sub-component	Emergency lighting self-test chip
Need	Installation or replacement of emergency lighting self-test chip in the existing emergency luminaire.
Requirement	**General** • To current Australian Standards • Automatic self-testing unit designed to operate with existing emergency luminaire **Performance** • Compliant with the requirements of AS2293.2 • Installed in accordance with AS2293.1 • Compatible with the model of existing luminaire • Test results reported via LED indicator without the need for additional devices or software **Certification** • As per Work Requirements • Operational test of chip to ensure correct functionality as per manufactures recommendations
Warranty	Minimum 3 year written warranty

2.1.6 Evacuation lighting luminaire for Class 1b

Component	**EMERGENCY LIGHTING**
Sub-component	Evacuation lighting/luminaire for Class 1b
Need	Replacement or relocation of Emergency lighting luminaire for Class 1b

Requirement	**General**
	• To current Australian Standards
	• Single Recessed or Surface LED emergency light
	• Covers all sizes
	Performance
	• Compliant with the requirements of AS/NZS 60598.1
	• Luminaire Classification shall be equivalent or higher than existing unit in accordance with AS2293.3
	• 24Vdc or 240Vac as applicable, ensuring current draw is suitable for circuit or supply device
	• Minimum life expectancy of 50,000 hrs
	Material and/or Manufacture
	• Housing and frame shall be either:
	  ○ Powder coated steel or diecast aluminium
	  ○ Polycarbonate
	• Water/dust ingress rating (IP) must be suitable for the installation environment
	Fire Rating
	• If installed into a fire rated ceiling, a FR downlight cover shall be installed above the light to maintain the fire integrity of the ceiling element
	• If surface mounted to an FR ceiling, the cable penetration must be appropriately fire sealed
	Certification
	• As per Work Requirements
	• Ensure luminaire remains energised for a minimum of 24 hours prior to conducting required battery test

Warranty	Minimum 3 year written warranty

2.1.7 Remote LED indicate

Component	**EMERGENY LIGHTING**
Sub-component	Remote LED indicator
Need	Remote LED indicator outside the entrance doorway of an SOU to indicate fire within SOU.
Requirement	**General** • To current Australian Standards • Remote LED indicator/ beacon **Performance** • Compliant with the requirements of AS7240.23 • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for panel or supply device • Ceiling (c), Wall (W) type device as applicable to application **Material and/or Manufacture** • Steel or plastic body • Water/dust ingress rating (IP) must be suitable for the installation environment **Certification** • As per Work Requirements
Warranty	Minimum 3 year written warranty

2.1.8 Exit Luminaire

Component	**EMERGENCY LIGHTING**
Sub-component	Exit Luminaire (Sign)
Need	Replacement or relocation of Exit luminaire
Requirement	**General** • To current Australian Standards • All types of Exit luminaires (illuminated exit signs) **Performance** • Compliant with the requirements of AS/NZS 2293.3 • Installed in accordance with AS2293.1 • Exit sign location and signage type shall be identical to exiting unit • Where exit luminaire is also used to serve an emergency lighting functionally, its luminaire classification should be at least equivalent to the existing unit • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for circuit or supply device • Minimum life expectancy of 50,000 hrs **Material and/or Manufacture** • Housing and frame shall be either: o Powder coated steel or diecast aluminium o Polycarbonate • Water/dust ingress rating (IP) must be suitable for the installation environment • Emergency exit sign must be self-contained with a self static inverter. System including battery and battery charger to be non-corrosive • Any battery compartments must be either inaccessible or accessibleonly via vandal resistant security/specialty screws **Fire Rating** • If mounted to an FR ceiling or wall, the cable penetration must be appropriately fire sealed **Certification** • As per Work Requirements • Ensure luminaire remains energised for a minimum of 24 hours prior to conducting required battery test
Warranty	Minimum 3 year written warranty

2.1.9 Emergency lighting circuit breaker

Component	**EMERGENCY LIGTHTING**
Sub-component	Emergency lighting circuit breaker
Need	Installation or replacement of emergency lighting circuit breaker
Requirement	**General** • To current Australian Standards • Covers all number of poles / circuits and amperage ratings **Performance** • Compliant with the requirements of IEC 60898-1:2015 ("household") or IEC 60947-2 ("industrial") as appropriate • Ensure breaker is appropriately sizes to suit number of circuits and applicable electrical loads • Ensure trip curve is appropriate to application **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment • Mounting type to suit switch board or enclosure **Certification** • As per Work Requirements
Warranty	Minimum 3 year written warranty

2.2 Portable Extinguishers

2.2.1 CO2, ABE, Water and Wet Chemical Portable Extinguishers

Component	**PORTABLE EXTINGUISHERS**
Sub-component	CO2, ABE, Water and Wet chemical Portable Extinguishers
Need	Replacement of existing portable fire extinguisher
Requirement	**General** • To current Australian Standards • Fit only where directed by the Principal • 1kg to 9kg portable fire extinguisher • Covers CO2, ABE, Water, Wet chemical Type **Performance** • Complies with AS/NZS 1841.5 • Location in accordance with AS2444 • Fire rating performance and sizing shall be equivalent or greater than the unit being replaced • Signage – In accordance with AS2444 – Figure 3.1, including 16mm height white lettering on red background • Wall mount bracket – Universal zinc plated wall bracket to suits relevant extinguisher size **Material and/or Manufacture** • Cylinder – Mild steel powder coated red • Handle – Stainless steel • Valve – Nickel plated brass **Installation** • Installed in accordance with manufacturing instruction • Extinguisher shall be installed in accordance with AS2444 – Section 3, including: o A maximum height not exceeding 1200mm from FFL and not below 100mm from FFL. • Signage shall be installed in accordance with AS2444 – Section 3.3, including: o Not below 2000mm from FFL o Shall be clearly visible from a distance up to 20m in all directions of approach **Certification** • As per Work Requirements • AS1851 Maintenance and testing tags
Warranty	Minimum 5 year written warranty

2.2.2 Fire Extinguisher cabinet

Component	**PORTABLE EXTINGUISHERS**
Sub-component	Fire Extinguisher cabinet
Need	Replacement of break glass type fire extinguisher cabinet
Requirement	**General** • To current Australian Standards • Break glass type fire extinguisher cabinet **Performance** • Sized to suit correct weight of required portable extinguisher • Break glass window with key to serve 003 key lock • Viewing window **Material and/or Manufacture** • Steel body with UV resistant red powder coating • Perspex "break glass" and viewing window **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty

2.3 Fire Hose Reels

2.3.1 Fire Hose Reel

Component	**FIRE HOSE REEL**
Sub-component	19mm x 36m fire hose reel and isolation valve
Need	Replacement of existing fire hose reel assembly
Requirement	**General** • To current Australian Standards • 19mm x 36m fire hose reel assembly and isolation valve • Fire Hose Reel (FHR) type should be fixed permanently to a structure (with or without cabinet) **Performance** • Compliant with the requirements of AS/NZS1221 Amendment 1 for a 19mm type hose reel system, including a minimum flow rate of 0.33 L/s **Material and/or Manufacture** • Reel constructed of mild steel and painted signal red • All values and nozzles must be constructed of brass **Hardware** • 19mm internal diameter PVC hose at 36m total length mounting bracket • 25mm brass ball type isolation valve • Galvanised steel connection pipe • Zinc plated hose guide • Brass “twist action type” nozzle • Cabinet (if required) – Wall mounted steel cabinet powder coated in signal red to suit 36m hose reel. Including o Break glass key window o 003 lock and 2 keys **Installation** • Install in accordance with manufacturing instruction • Installation standard AS2441 Amendment 1 • Fixing type o Internal installation – Zinc passivated type expansion anchor o External installation – Galvanised type expansion anchor • Identification signage – In accordance with AS2441 – Section10.4 **Certification** • As per Work Requirements • System to be commissioned in accordance with AS2441 Section 12 • Tag permanent fixed including following information: o Date of installation (m/y) o The commissioning has been carried out

Warranty	Minimum 1 year written warranty

2.3.2 Fire Hose Reel Pump

Component	**FIRE HOSE REEL**
Sub-component	Fire hose reel pump
Need	Replacement of existing fire hose reel pump
Requirement	**General** • To current Australian Standards • Electric fire hose reel pump • Includes appropriately sized pressure accumulator **Performance** • Compliant with the requirements of AS2941 • Performance requirements in accordance with AS1221 **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction • Wiring and circuit type to meet the requirements of AS3000 for fire pumps **Certification** • As per Work Requirements • Marking in accordance with AS2941 Section 6.10 • System to be commissioned in accordance with AS2441 Section 12 ensuring require pressure and flow is achieved at the required Fire Hose Reels
Warranty	Minimum 1 year written warranty

2.3.3 Lever handled Fire Hose Reel Cabinet

Component	**FIRE HOSE REEL**
Sub-component	Lever handled fire hose reel cabinet
Need	Replacement of Lever handled fire hose reel cabinet
Requirement	**General** • To current Australian Standards • Wall mounted lever handled fire hose reel cabinet **Performance** • Sized to suit correct size of hose reel system including required clearances in accordance with AS2441 • Lever handled door mechanism • Enclosure shall be marked with the words “FIRE HOSE REEL” in accordance with AS2441 **Material and/or Manufacture** • Steel body with UV resistant red powder coating. **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty

2.4 Fire Hydrant Landing Valve

Component	**FIRE HYDRANT**
Sub-component	Fire Hydrant Landing Valve
Need	Remove and replacement of existing fire hydrant landing valve
Requirement	**General** • To current Australian Standards • Replacement hydrant Landing Valve with Storz outlet **Performance** • 65mm Hydrant landing valve with Storz Outlet compliant to AS2419.2 • AS/NZS3500.1– Plumping connections • Approved to AS2345 – Dezincification test **Material and/or Manufacture** • Forged aluminium Storz adaptor • Brass body finished in signal red **Hardware** • Outlet - Forged aluminium semi-permanent female Storz adaptor • Inlet – 80mm roll groove/ 65mm BSP Female (as applicable) • Where previously fitted or if otherwise required a hydrant valve security device of similar construction shall be fitted to the hydrant landing valve **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements • System to be commissioned in accordance with AS2419.1 – Section 12 • Disc tag either metal or UV resistant not less than 20mm in diameter displaying the hydrant number in accordance with AS2149 Section 3.2.2.1
Warranty	Minimum 1 year written warranty

2.4.1 Fire Hydrant or Sprinkler Booster Cabinet

Component	**FIRE HYDRANT**
Sub-component	Fire Hydrant or Sprinkler Booster Cabinet
Need	Replacement of Fire Hydrant or Sprinkler Booster Cabinet
Requirement	**General** • To current Australian Standards • Fire Hydrant or Sprinkler Booster Cabinet **Performance** • Sized to house the required hydrant or sprinkler system with the minimum clearances in accordance with AS2419 – Section 11.2 • Lever handled door mechanism with 003 key type lock • Enclosure shall be marked with the appropriate fade and weather resistant signage" in accordance with AS2419 – Section 11.3 **Material and/or Manufacture** • Steel body with UV resistant red powder coating **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty

2.4.2 **Fire Hydrant Block Plan**

Component	**FIRE HYDRANT**
Sub-component	Fire Hydrant Block Plan
Need	Replacement or supply of fire hydrant block plan
Requirement	**General** • To current Australian Standards • Replacement of existing fire hydrant block plan • Where required development and supply of associated digital artwork file **Performance** • Design and manufactured in accordance with AS2419 – Section 11.5, including in a size not less than A3 • If require any artwork produced shall be supplied in digital format to THE PRINCIPAL'S and shall remain the sole property of THE PRINCIPAL'S **Material and/or Manufacture** • Block plan shall be appropriate fade and weather resistant signage" in accordance with AS2419 – Section 11.5. Noting that laminated paper is not considered compliant with this standard **Installation** • Install in location in accordance with AS2419 – Section 11.5 (c) • Mechanically fixed with vandal resistant non corrosive screws **Certification** • As per Work Requirements
Warranty	Life expectancy 5-8 years.

2.5 Sprinklers

2.5.1 Internal Sprinkler Head

Component	**SPRINKLERS**
Sub-component	Internal Sprinkler head
Need	Replacement sprinkler head to match existing type characteristic
Requirement	**General** • To current Australian Standards and all other associated standards • Replacement sprinkler head to match existing type characteristic • Vandal resistance **Performance** • Compliant with the requirements of AS2118.1 • Compliant with the requirements of AS4118.1.1 • The follow specification shall be equal to current unit o K factor o RTI o Temperature rating o Spray pattern o Orifice size o **Material and/or Manufacture** • Brass body and frame with the following surface finishes as applicable: o Natural brass o Chrome o White Polyester **Hardware (deemed included)** • Thread tape or soap & hemp thread sealant as appropriate to installation **Installation** • Install in accordance with manufacturing instruction • Installation standard AS2118.2 **Certification** • As per Work Requirements • System to refilled and deisolated in accordance with AS2118.1 requirements
Warranty	Minimum 1 year written warranty

2.5.2 Fire Sprinkler Electric Pressure Maintenance Pump

Component	**SPRINKLERS**
Sub-component	Fire Sprinkler Electric Pressure Maintenance Pump
Need	Replacement of Fire Sprinkler Electric Pressure Maintenance Pump
Requirement	**General** • To current Australian Standards • Electric Fire Sprinkler Pressure Maintenance Pump • Includes appropriately sized pressure accumulator **Performance** • Compliant with the requirements of AS2941 • Performance requirements in accordance with AS 2118.1 – Section 14.9 for AS 2118.1 sprinkler systems or AS 2941 Section 7 for residential type systems **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction • Wiring and circuit type to meet the requirements of AS3000 for fire pumps **Certification** • As per Work Requirements • Marking in accordance with AS2941 Section 6.10 • System to be commissioned in accordance with AS2941 – Section 12
Warranty	Minimum 1 year written warranty

2.6 Drencher

Component	**DRENCHER**
Sub-component	Drencher head
Need	Replacement drencher head to match existing type characteristic
Requirement	**General** • To current Australian Standards • Replacement drencher head to match existing type characteristic **Performance** • Compliant with the requirements of AS2118.2 • Compliant with the requirements of AS4118.1.1 • The follow specification shall be equal to current unit o K factor o RTI o Temperature rating o Spray pattern o Orifice size **Material and/or Manufacture** • Brass body and frame with the following surface finishes as applicable: o Natural brass o Chrome o White Polyester **Hardware (deemed included)** • Thread tape or soap & hemp thread sealant as appropriate to installation **Installation** • Install in accordance with manufacturing instruction • Installation standard AS2118.2:2010 **Certification** • As per Work Requirements • System to refilled and deisolated in accordance with AS2118.1:2017 requirements
Warranty	Minimum 1 year written warranty

2.7 Fire Doors

2.7.1 Single and double leaf fire doors

Component	**FIRE DOORS**
Sub-component	Single and double leaf fire doors
Need	Replacement of an existing fire door system

Requirement	**General**
	• To current Australian Standards
	• Includes both single leaf and double leaf hinges fire doors
	
	Performance
	• -/60/30 FRL AS1530.4:2014
	• AS 1905.1:2015 including but not limited to:
	  o Maximum opening force <110N
	
	Material and/or Manufacture
	Steel door frames
	• Minimum 18gauge hot dipped zinc coated steel doorframe with internal architrave
	Leaf
	• Construction as per fire tested system
	• Do not use imported rainforest timber veneers
	
	Hardware (must be tested on specific door type)
	• Door closer
	• Passage set mortice lock and handle.
	• Dead lock
	• Security viewer - Viewing greater than 160°
	• Smoke seals (Tested in accordance with AS1530.7 and capable of limiting smoke to 200° Celsius for 30 minutes)
	  o Perimeter seal fitted to head and jamb to suit required gap specification
	• Door hold open magnet
	Installation
	• Install in accordance with manufacturing instruction
	• Frame shall be core filled as per requirements of AS1905.1:2015 – Section 5
	• Threshold shall meet the requirements of AS1905.1:2015 – Section 5.5.1, and if required the following treatments shall apply:
	  o Make good of floor finish to ensure gap is less than 10mm
	  o Threshold plate
	Certification
	• As per Work Requirements
	• Tags permanent fixed to both frame and leaf including the following information:
	  o FRL
	  o Manufacture
	  o Date of installation (m/y)
	• Fire door certificate as per AS1905.1 – Appendix C to be completed and submitted to THE PRINCIPAL'S including photographic evidence of installed system and tags

Warranty	Minimum 5 year written warranty - Door Minimum 2 year written warranty – Door seals

2.7.2 Solid Core door

Component	**FIRE DOORS**
Sub-component	Single and double leaf external solid core doors
Need	Replacement of an existing solid core door to SOU or other accessway
Requirement	**General** • To current Australian Standards • Includes both single leaf and double leaf hinges external solid core doors • Includes all sizes **Performance** • 40mm thick flush type solid core particleboard or blockboard cored door (type B bonded ply-wood/-hardboard face) **Material and/or Manufacture** **Steel door frames** • Minimum 18gauge hot dipped zinc coated steel doorframe with internal architrave **Leaf** • Construction as per fire tested system • Do not use imported rainforest timber veneers **Hardware (must be tested on specific door type)** • Door closer • Passage set mortice lock and handle • Dead lock • Security viewer - Viewing greater than 160° • Smoke seals (Tested in accordance with AS1530.7 and capable of limiting smoke to 200° Celsius for 30 minutes) o Perimeter seal fitted to head and jamb to suit required gap specification **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements • Tags permanent fixed to both frame and leaf including the following information: o FRL o Manufacture o Date of installation (m/y) • Fire door certificate as per AS1905.1 – Appendix C to be completed and submitted to THE PRINCIPAL'S including photographic evidence of installed system and tags
Warranty	Minimum 5 year written warranty - Door Minimum 2 year written warranty – Door seals

2.7.3 Low moment door closer

Component	**FIRE DOORS**
Sub-component	Low moment door closer
Need	Replacement of an existing door closer requiring a low moment action to achieve door opening forces
Requirement	**General** • To current Australian Standards • "Low moment" cam action door closer **Performance** • Suits sizes 1 (20/750mm wide) to 7 (160kg/1600mm wide) in accordance with EN1154 • Where installed on a fire rated door set closers shall be tested to achieve the required FRL on the applicable doorset in accordance with AS1530.4 and compliant with AS1905.1 **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 2 year written warranty – Door Closer

2.7.4 Double Door Sequencer

Component	**FIRE DOORS**
Sub-component	Double Door Sequencer
Need	Replacement of an existing door double door sequencer
Requirement	**General** • To current Australian Standards • Controlling device for double doors with overlapping astragals/stiles to ensure inactive door closers first **Performance** • Sized to suit required door width • Where installed on a fire rated door set closers shall be compliant with the requirements of AS1905.1 **Material and/or Manufacture** • Water/dust ingress rating (IP) must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 2 year written warranty – Sequencer

2.7.5 Privacy lever latch set

Component	**FIRE DOORS**
Sub-component	Privacy lever latch set
Need	Replacement of an existing privacy style lever/latch set for non-secure fire doors
Requirement	**General** • To current Australian Standards • "Privacy Style" lever latch set, covers both single and double door applications **Performance** • Compliant with the requirements of as 1428.1-2009 • Where installed on a fire rated door set closers shall be compliant with the requirements of AS1905.1 • Backset set and rose diameter to suit door leave thickness and type **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 10 year written warranty – lockset

2.7.6 Intumescent fire and smoke seals

Component	**FIRE DOORS**
Sub-component	Intumescent fire and smoke seals
Need	Replacement of existing combined intumescent fire and smoke seals
Requirement	**General** • To current Australian Standards • Intumescent combined fire and smoke seal for retrofitting fire doors (single and double leaf) with gaps exceeding 3mm being the maximum permitted by AS1905.1 • **Performance** • Test in accordance with AS1530.4 to achieve the required FRL for the door set • To suit gaps from a minimum of 2mm to a maximum of 6mm (size of gap prior to seal being installed) • Tests are to be provided that demonstrate that the product does not suffer from any significant wear and tear for up to and exceeding 95,000 open and close cycles **Material and/or Manufacture** • Flexible PVC holder with intumescent infill • Seal colour shall be matched to be closest to the colour of the door frame **Installation** • Self-adhesive. Note: Contact surface must be clean, smooth and if painted, well cured **Certification** • As per Work Requirements
Warranty	Minimum 2 year written warranty – Seal

2.7.7 Door bottom upgrade seal

Component	**FIRE DOORS**
Sub-component	Fire door bottom upgrade seal
Need	Replaced of fire door seal to base of fire door where gaps are non-compliant
Requirement	**General** • To current Australian Standards • Intumescent fire seal for retrofitting fire doors (single and double leaf) with gaps at the threshold exceeding 10mm being the maximum permitted by AS1905.1 • Covers both seals to suit gaps up to 20mm and seals to suit gaps up to 60mm **Performance** • Test in accordance with AS1530.4 to achieve the required FRL for the door set, including both 35mm and 45mm doors • Seal model to be appropriate to required gap • Seal length to suit door leaf width, noting that multiple seals are not permitted to be "butt jointed" • Tests are to be provided that demonstrate that the product does not suffer from any significant wear and tear for up to and exceeding 95,000 open and close cycles **Material and/or Manufacture** • Clear anodised aluminium with grey gaskets **Installation** • Seal to be fixed onto door leaf using appropriate screws supplied with the seal kit **Certification** • As per Work Requirements.
Warranty	Minimum 2 year written warranty – Seal

2.7.8 Automatic door bottom smoke seal

Component	**FIRE DOORS**
Sub-component	Automatic door bottom smoke seal
Need	Replaced of automatic door bottom smoke seal to base of fire or smoke door
Requirement	**General** • To current Australian Standards • Automatic "drop down" smoke seal for retrofitting to fire or smoke doors (single and double leaf) to achieve a "tight fitting smoke seal" as per BCA requirements **Performance** • Compliant with the requirements of BCA Specification C3.4 for smoke sealing • Tested in accordance with AS1530.7 to meet the smoke leakage rates for typical single and double leaf doors as detailed in AS6905 • Seal length to suit door leaf width, noting that multiple seals are not permitted to be "butt jointed" • Tests are to be provided that demonstrate that the product does not suffer from any significant wear and tear for up to and exceeding 95,000 open and close cycles **Material and/or Manufacture** • Clear anodised aluminium with grey gaskets **Installation** • Seal to be fixed onto door leaf using appropriate screws supplied with the seal kit **Certification** • As per Work Requirements.
Warranty	Minimum 2 year written warranty – Seal

2.7.9 Door perimeter smoke seals

Component	**FIRE DOORS**
Sub-component	Door perimeter smoke seals
Need	Replacement of fire or smoke door perimeter smoke seal
Requirement	**General** • To current Australian Standards • Perimeter smoke seal for retrofitting to fire or smoke doors (single and double leaf) to achieve a "tight fitting smoke seal" as per BCA requirements **Performance** • Compliant with the requirements of BCA Specification C3.4 for smoke sealing • Tested in accordance with AS1530.7 to meet the smoke leakage rates for typical single and double leaf doors as detailed in AS6905 • To suit gaps from a minimum of 3mm to a maximum of 5.5mm (size of gap prior to seal being installed) • Tests are to be provided that demonstrate that the product does not suffer from any significant wear and tear for up to and exceeding 95,000 open and close cycles **Material and/or Manufacture** • Extruded PVC in black or white casing to match door frame colour **Installation** • Self-adhesive. Note: Contact surface must be clean, smooth and if painted, well cured **Certification** • As per Work Requirements
Warranty	Minimum 2 year written warranty – Seal

2.8 Passive Fire Protection Systems

2.8.1 Retrofit fire collars

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	Retrofit fire collars
Need	Replacement of existing fire collar to plastic pipe or conduit.
Requirement	**General** • To current Australian Standards • Intumescent fire stopping retrofit collar for plastic pipes, conduits and air-conditioning bundle penetrations • Covers collar sizes from 32mm to 150mm **Performance** • Required Fire Resistance Level to match of existing collar in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping **Material and/or Manufacture** • Plastic or metal construction as appropriate to tested system • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate as per manufactures fire test approval • Seal any resulting annual gaps between services and collar using applicable fire rated sealant for the collar type **Certification** • As per Work Requirements • Penetration sticker installed adjacent to the collar including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum 2 year written warranty – Penetration seal system.

2.8.2 Fire Pillows

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	Fire Pillow / cushion
Need	Sealing of penetrations in walls and ceilings
Requirement	**General** • To current Australian Standards • Pillow or block style fire penetration barrier for temporary or permanent fire sealing of penetrations in wall or floor **Performance** • Required Fire Resistance Level to match wall or floor specification in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping **Installation** • Install in accordance with manufacturing instruction including any additional requirements to suit the substrate as per manufactures fire test approval • Seal any resulting annual gaps between services and the pillows, and the pillows themselves using applicable fire rated sealant for the pillow type **Certification** • As per Work Requirements • Penetration sticker installed adjacent to the penetration including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum 7 year written warranty – Penetration seal system.

2.8.3 Fire rated mortar

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	Fire rated mortar
Need	Infill of floor penetration with lightweight fire rated mortar.
Requirement	**General** • To current Australian Standards • Lightweight fire penetration mortar for fire sealing of penetrations in existing floors **Performance** • Required Fire Resistance Level to match floor specification in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping **Installation** • Install in accordance with manufacturing instruction including any additional requirements to suit the substrate as per manufactures fire test approva. • Noting that fire rated mortars are not load bearing, appropriate provision must be made to prevent foot traffic or loading of all penetrations **Certification** • As per Work Requirements • Penetration sticker installed adjacent to the penetration including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum N/A year written warranty – Penetration seal system.

2.8.4 Fire rated sealant

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	Fire rated sealant
Need	Fire sealing of penetrations in walls or floors to suit penetration size and type.
Requirement	**General** • To current Australian Standards • Mastic type fire sealant for sealing of penetrations in walls or floors to suit penetration size and type • Covers both standard and high performance/pressure type sealants as appropriate to penetration type **Performance** • Required Fire Resistance Level to match floor or wall specification in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping **Installation** • Install in accordance with manufacturing instruction including any additional requirements to suit the substrate as per manufactures fire test approval • Where possible sealant colour must be appropriately match to substrate colour **Certification** • As per Work Requirements • Penetration sticker installed adjacent to the penetration including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum 2 year written warranty – Penetration seal system.

2.8.5 Fire rated expansion foam

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	Fire rated expanding foam
Need	Fire sealing of penetrations in walls or floors to suit penetration size and type.
Requirement	**General** • To current Australian Standards • Fire rated expanding foam for sealing of penetrations in walls or floors to suit penetration size and type **Performance** • Required Fire Resistance Level to match floor or wall specification in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping. Note, fire rated expanding foams have very limited fire testing approvals with respect to penetration types and attention must be paid to ensure foam is only used to seal tested penetration types **Installation** • Install in accordance with manufacturing instruction including any additional requirements to suit the substrate as per manufactures fire test approval **Certification** • As per Work Requirements. • Penetration sticker installed adjacent to the penetration including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum 2 year written warranty – Penetration seal system.

2.8.6 High Density mineral fibre batts

Component	**PASSIVE FIRE PROTECTION SYSTEMS**
Sub-component	High Density mineral fibre batts
Need	Sealing of penetrations in walls and ceilings.
Requirement	**General** • To current Australian Standards • High density mineral fibre batt as a penetration barrier for temporary or permanent fire sealing of penetrations in wall or floor **Performance** • Required Fire Resistance Level to match wall or floor specification in accordance with AS1530.4 with reference to AS4072.1 • Installed system must be compliant to BCA Clause C3.15(a) for the service type and size being protected. Where required for compliance with this clause, the service shall be wrapped with an appropriate or tested insulating wrapping **Installation** • Install in accordance with manufacturing instruction including any additional requirements to suit the substrate as per manufactures fire test approval • Seal any resulting annual gaps between services and the batt, and the batts themselves using applicable fire rated sealant for the pillow type **Certification** • As per Work Requirements • Penetration sticker installed adjacent to the penetration including following information: o Installation Company o Installer o Date of installation (m/y) o FRL o ID number o Report No. • Certificate of compliance
Warranty	Minimum 1 year written warranty – Penetration seal system.

2.9 Door hold open device

Component	**DOOR HOLD OPEN DEVICE**
Sub-component	Electromagnetic door hold open device
Need	Replacement of existing electromagnetic hold open device
Requirement	**General** • To current Australian Standards • Electromagnetic hold open device and associated smoke detector to serve fire or smoke door in accordance with BCA Clause C3.5 **Performance** • Holding force equal or greater than original unit • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for panel or supply device • Smoke detector shall meet the requirements applicable technical specification including AS1670.1 **Material and/or Manufacture** • Steel or plastic body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements • Baseline data/modification to THE PRINCIPAL'S inventory records including modification to AS1670.1 – Section A.4 • Functional check to be conducted in accordance with AS1670.1 – Section A.3
Warranty	Minimum 1 year written warranty

2.10 Signage

2.10.1 Fire door signage

Component	**SIGNAGE**
Sub-component	Signage for fire door
Need	Replacement of existing fire door signage as required by BCA
Requirement	**General** • To current Australian Standards • Fire Door Signage as required by BCA Clause D2.23 **Performance** • Meets the requirement of BCA Clause D2.23, including: o Location o Wording appropriate to application o Font size minimum 20mm o Colour **Material and/or Manufacture** • Construction as suitable to application: o Vinyl sticker o PVC plastic o Colourbond metal • Fixings must be suitable for the installation environment • PVC plastic and metal signs mechanically fixed with vandal resistant non corrosive screws **Installation** • Permanent fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements
Warranty	Minimum N/A year written warranty – Sign

2.10.2 Evacuation Signage

Component	**SIGNAGE**
Sub-component	Occupant Evacuation Signage
Need	Replacement of existing occupant evacuation signage
Requirement	**General** • To current Australian Standards • Occupant evacuation signage for installation on the inside of the SOU entry door or in common areas as applicable **Performance** • Shall meet the requirements of the Principal's Fire Safety Manual and shall include at a minimum the following information: o R.A.C.E acronym and pictorial representation o Evacuation procedure o In an emergency dial 000 o Block plan showing location of assembly area **Material and/or Manufacture** • Construction as suitable to application: o Vinyl sticker o PVC plastic o Colourbond metal • Where vinyl or PVC are used in common areas they shall be provided with a minimum 2mm sheet of Perspex • Fixings must be suitable for the installation environment • PVC plastic and metal signs mechanically fixed with vandal resistant non corrosive screws **Installation** • Permanent fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements
Warranty	Minimum N/A year written warranty – Sign

2.10.3 Fire Hose Reel & Extinguisher Signage

Component	**SIGNAGE**
Sub-component	Fire hose reel & Extinguisher signage
Need	Replacement of existing Fire hose reel & Extinguisher signage

Requirement	**General**
	• To current Australian Standards
	• Fire hose reel & Extinguisher signage required by relevant standards
	Performance
	• Identification signage for Fire Hose Reel systems – In accordance with AS2441 – Section 10.4
	• Identification signage for Portable extinguisher systems – In accordance with AS2444 – Section 10.4
	Material and/or Manufacture
	• Height and location of signage in accordance with applicable standard
	• Construction as suitable to application:
	  ○ PVC plastic
	  ○ Colourbond metal
	• Fixings must be suitable for the installation environment
	• PVC plastic and metal signs mechanically fixed with vandal resistant non corrosive screws
	Installation
	• Permanent fixing detail appropriate to the installation substrate
	Certification
	• As per Work Requirements

Warranty	Minimum N/A year written warranty – Sign

2.11 Dampers

2.11.1 Intumescent fire dampers

Component	**DAMPERS**
Sub-component	Intumescent fire dampers
Need	To prevent transmission of smoke and fire across fire compartments
Requirement	**General** • To current Australian Standards • Wall, floor or shaft mounted intumescent fire damper • Covers square sizes up to 200mm x 200mm **Performance** • Required Fire Resistance Level to match existing fire damper and substrate in accordance with AS1530.4 • System shall meet the requirements of AS1682.1 **Material and/or Manufacture** • Galvanised steel construction suitable for internal or external applications • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction and AS1530.4 requirements including required fixing detail appropriate to the installation substrate • Installation standard AS1682.1 – Section 3.2.2.2 including but not limited to: o Breakaway joints (if required) o Fixing angles **Certification** • As per Work Requirements • Permanent label shall be installed adjacent to the damper in according with AS1682.1 Section 1.7 and including following information: o Manufacture's name or trademark o Model number including FRL. o Orientation (vertical, horizontal or both) o Direction of airflow o Installer • Certificate of compliance
Warranty	Minimum 1 year written warranty – Damper

2.11.2 Mechanical fire dampers

Component	**DAMPERS**
Sub-component	Mechanical fire dampers
Need	To prevent transmission of smoke and fire across fire compartments
Requirement	**General** • To current Australian Standards • Wall, floor or shaft mounted mechanical fire damper • Curtain or blade type as per required application **Performance** • Required Fire Resistance Level to match existing fire damper and substrate in accordance with AS1530.4 • System shall meet the requirements of AS1682.1 **Material and/or Manufacture** • Galvanised steel construction suitable for internal or external applications • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction and AS1530.4 requirements including required fixing detail and expansion tolerances appropriate to the installation substrate • Installation standard AS1682.1 – Section 3.2.2.2 including but not limited to: o Breakaway joints (if required). o Fixing angles. **Certification** • As per Work Requirements • Permanent label shall be installed adjacent to the damper in according with AS1682.1 Section 1.7 and including following information: o Manufacture's name or trademark o Model number including FRL. o Orientation (vertical, horizontal or both) o Direction of airflow o Installer • Certificate of compliance
Warranty	Minimum 2 year written warranty – Damper

2.11.3 Ceiling Fire Damper Enclosure

Component	**DAMPERS**
Sub-component	Ceiling Fire Damper Enclosure
Need	Protection of exhaust fan/grill in FR ceiling.
Requirement	**General** • To current Australian Standards • Ceiling fire damper enclosure to allow air movement through fire rated ceilings • Plenum type (open grill) or Spigot type (duct connect) as applicable to application **Performance** • Required Fire Resistance Level to match the ceiling including incipient rating in accordance with AS1530.4 **Material and/or Manufacture** • Fixings must be suitable for the installation environment • Spigot connection (if require) to match exhaust duct diameter **Installation** • Install in accordance with manufacturing instruction and AS1530.4 requirements including required fixing detail and four sided framing appropriate to the ceiling construction **Certification** • As per Work Requirements • Permanent label shall be installed adjacent to the damper in according with AS1682.1 Section 1.7 and including following information: o Manufacture's name or trademark o Model number including FRL. o Direction of airflow o Installer • Certificate of compliance
Warranty	Minimum 2 year written warranty – Damper

2.12 Fire Blanket

Component	**FIRE BLANKET**
Sub-component	Fire Blanket
Need	Remove and replacement with new fire blanket
Requirement	**General** • To current Australian Standards • Fit only where directed by Principal • Fixed permanently into the common area room kitchen wall only • Fire blanket with dimensions 1.2m x 1.8m **Performance** • Complies with AS/NZS 3504 • Location in accordance with AS2444 **Material and/or Manufacture** • Container – Signal red in colour • Fixings must be suitable for the installation environment • Signage shall be in accordance with technical specification for signage and the requirements of AS2444 – Section 6.4.4 **Installation** • Installed in accordance with manufacturing instruction and in accordance with AS2444 – Section 6 • Signage shall be installed in accordance with AS2444 – Section 6.4.2, including: o Not below 2000mm from FFL **Certification** • As per Work Requirements
Warranty	Minimum 5 year written warranty

2.13 Fire Indicator Panel

2.13.1 FIP replacement components

Component	**FIRE INDICATOR PANEL**
Sub-component	FIP replacement components
Need	Replacement of components in existing FIP system
Requirement	**General** • To current Australian Standards • Covers the replacement of the following items on an existing Fire Indicator Panel: o Vandal resistant panel door o Power supply o Single and double loop cards o LCD screen o Conventional zone card o Fan Control interface module **Performance** • All items must be of a type to match the currently installed Fire Indicator Panel • Power supply, must be of appropriate voltage and current to match panel and device requirements **Material and/or Manufacture** • Panel door o Steel body o Perspex viewing window o 003 key type lock **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty – System

2.13.2 Occupant warning amplifier

Component	**FIRE INDICATOR PANEL**
Sub-component	Occupant warning amplifier
Need	Replacement of existing occupant warning amplifier
Requirement	**General** • To current Australian Standards • Covers occupant warning amplifiers from 25w to 150w **Performance** • Amplifier must be of appropriate voltage and current to match panel and device requirements **Material and/or Manufacture** • Where required module to be installed in appropriate 19 inch rack mount to suit panel enclosure **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty – System

2.13.3 FIP / EWIS Battery

Component	FIRE INDICATOR PANEL
	FIP/EWIS batteries
Need	Replacement of existing batteries in FIP or EWIS panel
Requirement	**General** • To current Australian Standards • 12v valve regulated lead acid battery • Covers amp hour rating from 15 to 130Ah **Performance** • Must comply with the requirements of AS4029.2 **Material and/or Manufacture** • Body made of ABS • Battery terminals to be appropriate to panel type: o Male spade connections o Female threaded terminals **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty

2.13.4 Flow switch sensor system

Component	**FIRE INDICATOR PANEL**
Sub-component	Flow switch system
Need	Replacement of existing Flow switch sensor system where solenoid is damaged
Requirement	**General** • To current Australian Standards • Waterflow alarm switch for sprinkler system • Covers all sizes of pipe **Performance** • Must comply with the performance requirements of AS2118.1 • Relay contact rating and configuration to match existing unit **Material and/or Manufacture** • Body made of valve set to be brass or galvanised steel • External relay/termination casing to be red ABS or similar plastic housing with an IP rating suitable for the required installation environment **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 2 year written warranty – System

2.13.5 Occupant warning speakers

Component	**FIRE INDICATOR PANEL**
Sub-component	Occupant Warning Speakers
Need	Speaker system to provide occupant warning system notification

Requirement	**General**
	• To current Australian Standards
	• Occupant warning sounder, covering the following types:
	  ○ Surface mount
	  ○ Flush mount
	  ○ Surface mount horn speaker
	Performance
	• Compliant with the requirements of AS1670.4
	• 24Vdc ensuring current draw is suitable for panel or supply device
	Material and/or Manufacture
	• Polycarbonate body
	• Water/dust ingress rating (IP) must be suitable for the installation environment
	• Fixings must be suitable for the installation environment
	• Wire guard/cage shall be either
	  ○ Mild steel with corrosion resistant polyester coating (internal)
	  ○ Stainless steel (external)
	Installation
	• Install in accordance with manufacturing instruction
	Certification
	• As per Work Requirements
	• Baseline data/modification to THE PRINCIPAL'S inventory records including modification to AS1670.1 – Section A.4
	• Functional check to be conducted in accordance with AS1670.1 – Section A.3

Warranty	Minimum 2 year written warranty – detector

2.13.6 ELV Red twin cable

Component	**FIRE INDICATOR PANEL**
Sub-component	Red twin
Need	Speaker system to provide occupant warning system notification
Requirement	**General** • To current Australian Standards • Red twin "TPS" extra low voltage cabling to suit fire systems applications **Performance** • Compliant with the requirements of AS1670.1 • Cable size or gauge to be sufficient suit application • Where utilised for addressable fire panels, detectors and devices cabling shall be twisted pair type • Mechanical protection WSX1 **Material and/or Manufacture** • PVC best practise certified **Installation** • Where required installation shall be to WS 51W specification on fire rated support specification **Certification** • As per Work Requirements.
Warranty	Minimum 2 year written warranty

2.14 Visual Alarm Device (VAD)

Component	**VISUAL ALARM DEVICE (VAD)**
Sub-component	Warning lights
Need	Remove existing fire warning strobe light and replace with new visual alarm device (VAD) to common area
Requirement	**General** • To current Australian Standards • Visual alarm device (VAD) **Performance** • Compliant with the requirements of AS7240.23 • 24Vdc or 240Vac as applicable, ensuring current draw is suitable for panel or supply device • Ceiling (c), Wall (W) or Open (O) type device as applicable to application • If VAD forms part of Building Occupant Warning System (BOWS) coverage shall be at least equal to existing unit and in according to manufactures data and AS1670.1 – Section 3.22 **Material and/or Manufacture** • Steel or plastic body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements • Baseline data/modification to THE PRINCIPAL'S inventory records including modification to AS1670.1 – Section A.4 • Functional check to be conducted in accordance with AS1670.1 – Section A.3
Warranty	Minimum 1 year written warranty

2.15 Detectors/alarms

2.15.1 Smoke detector

Component	**Detector / Alarms**
Sub-component	Smoke detector
Need	Replace with new interconnected photoelectric detector
Requirement	**General** • To current Australian Standards • Photoelectric type smoke detector with matching base and wire guard • Includes wire guard where required **Performance** • Compliant with the requirements of AS7240.7 and AS1670.1 • 24Vdc ensuring current draw is suitable for panel or supply device • Conventional or analogue addressable to match existing unit • Sensitivity (Obscuration) to match existing unit **Material and/or Manufacture** • Polycarbonate body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment • Wire guard/cage shall be either o Mild steel with corrosion resistant polyester coating (internal) o Stainless steel (external) **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements • Baseline data/modification to THE PRINCIPAL'S inventory records including modification to AS1670.1 – Section A.4 • Functional check to be conducted in accordance with AS1670.1 – Section A.3
Warranty	Minimum 5 year written warranty – detector

2.15.2 Smoke alarm

Component	**Detector / Alarms**
Sub-component	Smoke alarm
Need	Replace with new interconnected photoelectric smoke alarm
Requirement	**General** • To current Australian Standards • Photoelectric type smoke alarm • Product listed in CSIRO's Activfire Register of Fire Protection Equipment • Surface mounted (not recessed) • Inter-linkable features • Branded with manufacturers trademark to AS3786Includes hardwired and wireless interconnection alarms • Includes wire guard where required **Performance** • Compliant with the requirements of AS3786 • Where multiple smoke alarms exist, they should be interconnected as per BCA Specification E2.2a or BCA 3.7.5.2 requirements • Dual supply including 240Vac hardwired to mains power with fixed rechargeable (Lithium) battery backup (10 years battery life expectancy) – with minimum 2 months battery standby • Where wireless interconnection is used it shall be of a type approved by a Codemark or other BCA recognised accreditation body and compliant with AS/NZS 4268:2012 **Material and/or Manufacture** • Polycarbonate body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment • Wire guard/cage shall be either o Mild steel with corrosion resistant polyester coating (internal) o Stainless steel (external) **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements
Warranty	Minimum 10 year written warranty – Alarm

2.15.3 Heat alarm

Component	**Detector / Alarms**
Sub-component	Heat alarm
Need	Replace with new interconnected heat alarm
Requirement	**General** • To current Australian Standards • Heat alarm • Includes wire guard where required **Performance** • Compliant with the requirements of AS1603.3 • Where multiple smoke or heat alarms exist, they should be interconnected as per BCA Specification E2.2a or BCA 3.7.5.2 requirements • Dual supply including 240Vac hardwired to mains power and battery backup **Material and/or Manufacture** • Polycarbonate body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment • Wire guard/cage shall be either o Mild steel with corrosion resistant polyester coating (internal) o Stainless steel (external) **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements
Warranty	Minimum 5 year written warranty Alarm

2.15.4 Vibrating and visual alarm device

Component	**Detector / Alarms**
Sub-component	Vibrating and visual alarm device
Need	Smoke alarm notification for occupants with hearing impairment
Requirement	**General** • To current Australian Standards • Vibrating and visual alarm device to alarm occupants with hearing impairment • Covers both hardwire and wireless units **Performance** • Compliant with the requirements of AS1603.17 • Dual supply including 240Vac hardwired to mains power and battery backup • Where wireless interconnection is used it shall be of a type approved by a Codemark or other BCA recognised accreditation body and compliant with AS/NZS 4268:2012 **Material and/or Manufacture** • Polycarbonate body • Water/dust ingress rating (IP) must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction **Certification** • As per Work Requirements
Warranty	Minimum 1 year written warranty – Alarm

2.15.5 Hush button

Component	**Detector / Alarms**
Sub-component	"hush button"
Need	Hush button to temporarily delay SOU smoke alarm.
Requirement	**General** • To current Australian Standards • Hush button to temporarily delay ("Silence") SOU smoke alarm. • Includes all cabling and cable ducting required for installation **Performance** • Activation of the "hush" button shall temporarily desensitise the alarm unit for a period of approximately 5 min to allow an occupant to clear smoke in the event of a nuisance event **Material and/or Manufacture** • Polycarbonate body • Water/dust ingress rating (IP) must be suitable for the installation environment • Fixings must be suitable for the installation environment **Installation** • Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate **Certification** • As per Work Requirements
Warranty	Minimum 5 year written warranty

2.15.6 Heat detector

Component	**Detector / Alarms**
Sub-component	Heat detector
Need	Replace with new heat detector to suit kitchen or other applicable area

Requirement	**General**
	• To current Australian Standards
	• Heat detector with matching base and wire guard.
	• Includes wire guard where required
	Performance
	• Compliant with the requirements of AS7240.5 and AS1670.1
	• 24Vdc ensuring current draw is suitable for panel or supply device
	• Conventional or analogue addressable to match existing unit
	• Activation temperature and activation rise in rate (if applicable) to match existing unit
	Material and/or Manufacture
	• Polycarbonate body
	• Water/dust ingress rating (IP) must be suitable for the installation environment
	• Fixings must be suitable for the installation environment
	• Wire guard/cage shall be either
	  ○ Mild steel with corrosion resistant polyester coating (internal)
	  ○ Stainless steel (external)
	Installation
	• Install in accordance with manufacturing instruction including required fixing detail appropriate to the installation substrate
	Certification
	• As per Work Requirements
	• Baseline data/modification to THE PRINCIPAL'S inventory records including modification to AS1670.1 – Section A.4
	• Functional check to be conducted in accordance with AS1670.1 – Section A.3

Warranty	Minimum 5 year written warranty – detector

END OF COMPONENT REQUIREMENTS - PART 2

Part 3 Timber Schedule and Drawing Details

To be used as a guide only

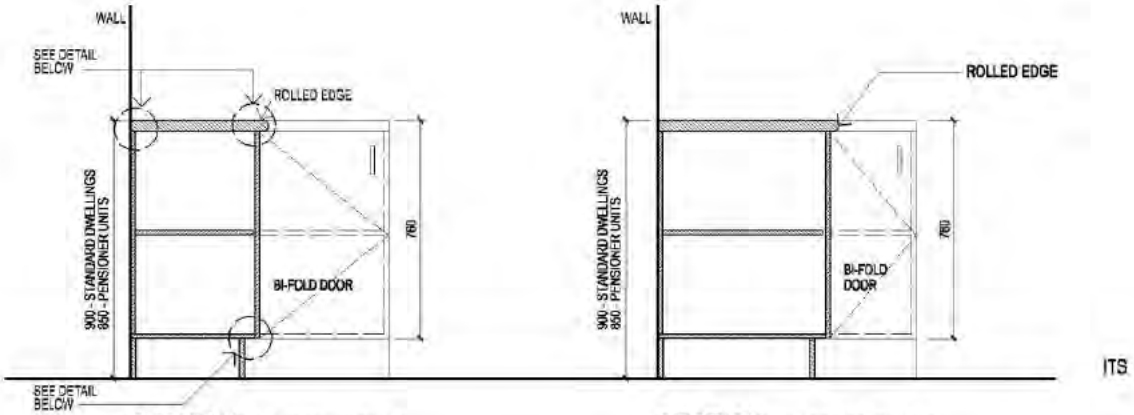
	Drawing No.	Title
1	TS01	Schedule of Timber Species, Durability Ratings
3	KD02	Kitchen Fitments, Floor Units 'E', 'F', 'O'
4	KD03	Kitchen Fitments, Corner Unit 'T'
5	KD04	Kitchen Fitments, Servery Unit
6	KD05	Kitchen Fitments, Wall Unit 'C', 'D', 'S'
7	KD06	Kitchen Fitments, Pantry and Broom Cupboards 'G' & 'H'
8	KD07	Kitchen Fitments, Breakfast Bar Unit 'N'
9	KD08	Kitchen Fitments, Medicine Cabinet Wall Unit Type 'C'
10	KD09	Kitchen Fitments, Microwave Cupboard
11	KD10	Kitchen Fitments, Cupboard over Refrigerator
12	KD11	Kitchen Fitments, Floor Unit including Wall Oven Shelf
13	MF01	Lapped Paling Fence
14	MF02	Closed Paling Fence
15	MF03	Frame Types
16	MF04	Footings
17	MF05	Steel Gate Frames
18	MF06	Vehicular Gate Frames (Back Fences)
19	HER01	Conservation Trade Practices – Masonry Joint Repair

TS01 – SCHEDULE OR TIMBER SPECIES, DURABILITY RATINGS

Application	Timber species or minimum Durability class (AS5604.2005)	Timber Finish	Relevant Australian Standards	Preservative Treatment rating For softwood where Specified
Structural timbers Exposed to weather	Class 1 or 2 (Where softwoods meet durability class 1 or 2 preservative treatment is not required)	Sawn		H3
Sub-floor framing exposed to ground	Class 3 or better	Sawn		H4
Structural timbers not exposed to weather	Class 4 or better	Sawn		N/A
Fascias, barges	Oregon Ash type eucalypts (Immunised and reconditioned)	Select dressing Select	2858 2796	N/A
Weatherboards	Radiata Pine Cypress Western Red Cedar Hardwood Brush Box	Select " " " "	1495 (1973) O93 - 2796 "	H3
Mouldings	Sitka Spruce	Select dressing	2796	

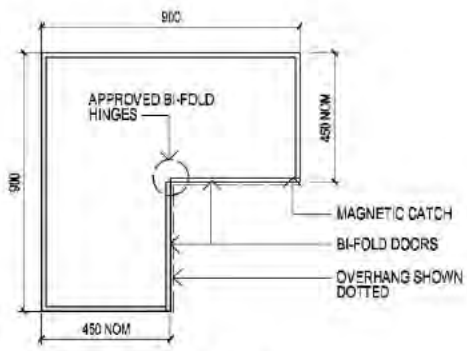
(Reveals)	Oregon	"	2858	
	Western Red Cedar	Select	-	H1 (int) H3 (ext)
	Radiata Pine	"	1498 (1973)	
	Hoop Pine			
	Slash Pine			
	MDF			
Sills	Tallowwood	Select	2796	N/A
	Blackbutt	"	"	
	Red Mahogany	"	"	
	Crow's Ash	"	"	
	Western Red Cedar	"	"	
Window and door	Western Red Cedar	Select	-	N/A
	Oregon	Select dressing	2858	
Frames	Ash type eucalypts (Immunised and reconditioned)	Select	2796	
Strip flooring	Radiata Pine	Standard	1492 (1973)	H3
	Mixed Hardwood	"	2796	
	Cypress Pine	"	1810	
	Murray Red Gum	"	2796	
Internal joinery, Cupboard framing	Oregon	Select dressing	2858	N/A
	Ash type eucalypts (Immunised and reconditioned)	Select	2796	
	Sitka Spruce	Select dressing	2796	
	Radiata Pine	Select	1497 (1973),	
	MR Particleboard		1498 (1973)	
	MR Medium Density Fibreboard			
Paling fence posts	Class 2 or better	Struct. Grade 1	2082	H4 or H5) See
	Class 1	Struct. Grade 1	2082	H4 or H5) Note
Other fence posts	Eastern Australian hardwoods	Struct. Grade 3	2082	H3
Fence rails and palings	Radiata Pine (treated)			
	Cypress Pine			

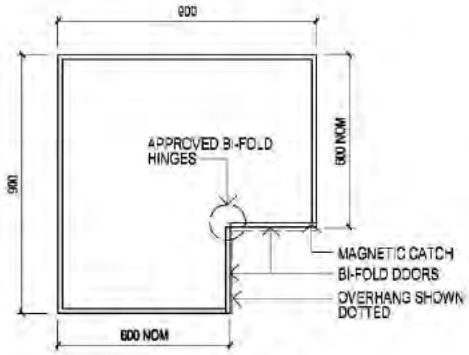
NOTE: Where H4 or H5 is specified as an alternative, the required hazard rating will depend on the specific existing site conditions.



SECTION CORNER UNIT 'T-450'

SECTION CORNER UNIT 'T-600'



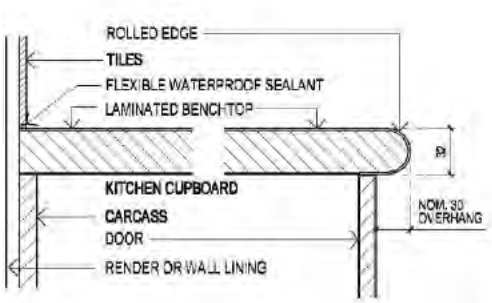


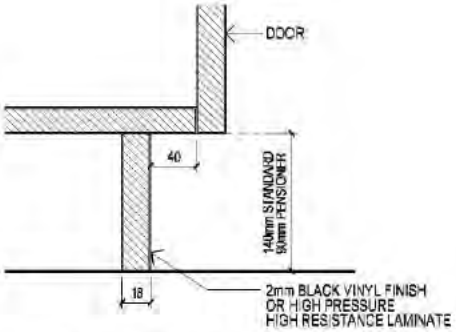
PLAN CORNER UNIT 'T-450'

NOTE: CENTRE LINE MEASUREMENT 1350MM

PLAN CORNER UNIT 'T-600'

NOTE: CENTRE LINE MEASUREMENT 1200MM





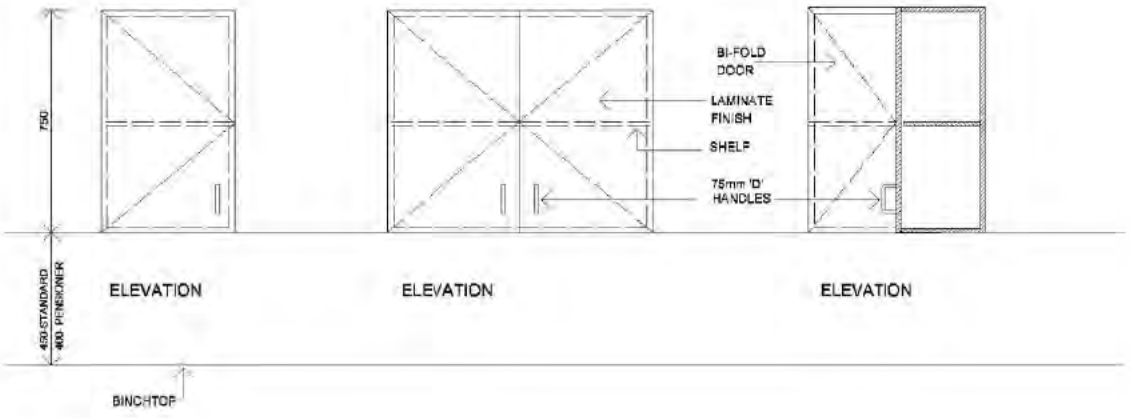
BENCHTOP DETAIL

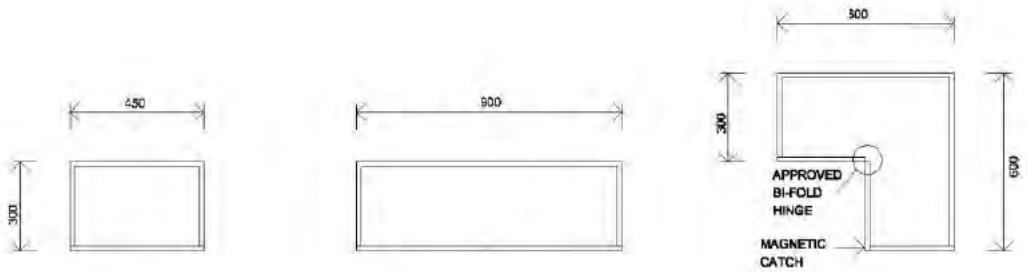
BASE DETAIL

KITCHEN DETAILS : KITCHEN FITMENTS
CORNER UNIT 'T'

KD 03

SCALE: NTS
DATE: 16.11.05





PLAN
UNIT 'C'

PLAN
UNIT 'D'

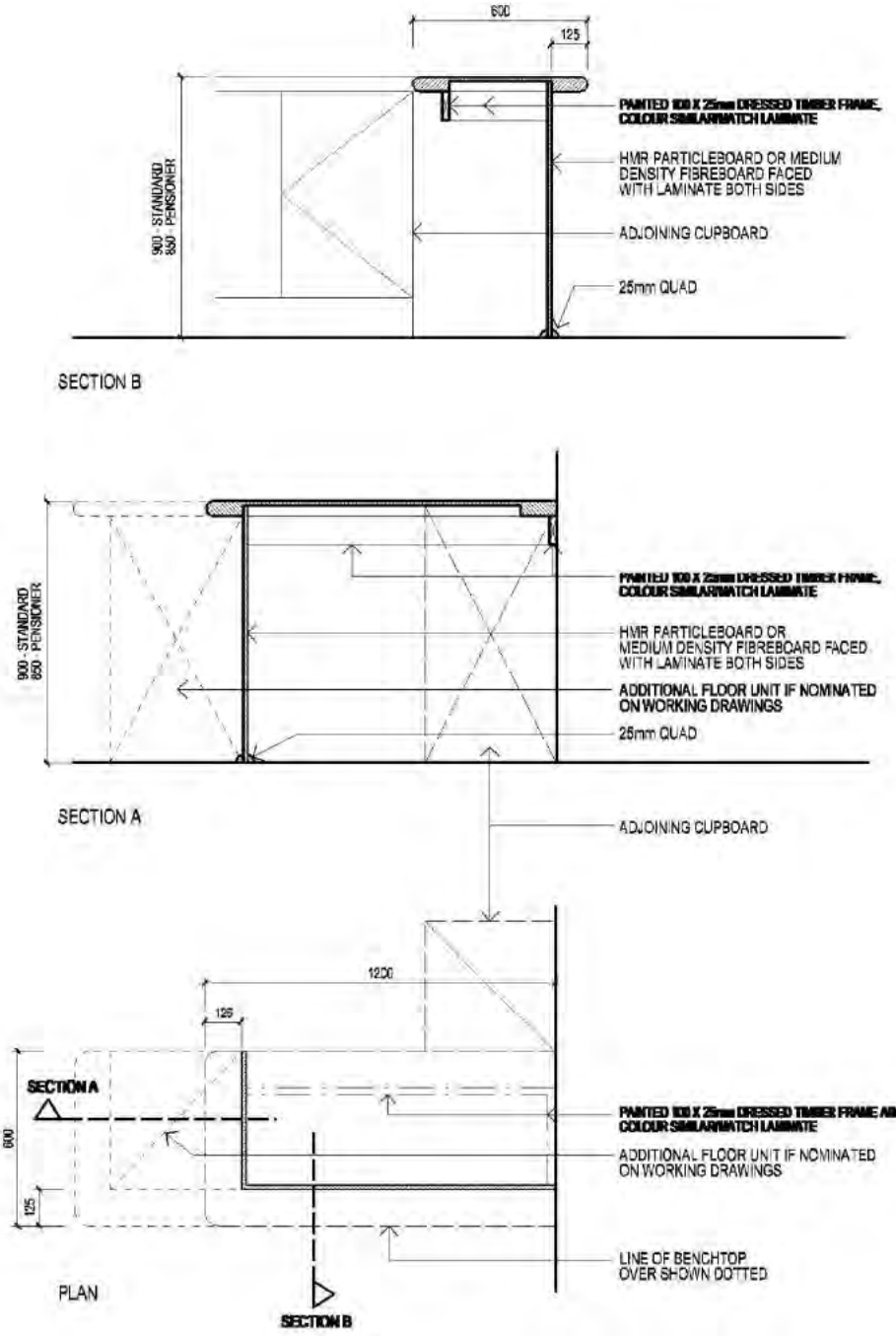
PLAN
UNIT 'S'
CORNER

NOTE: CENTRE LINE MEASUREMENT 900MM

KITCHEN DETAILS : KITCHEN FITMENTS
WALL UNIT 'C', 'D', 'S'

KD 05

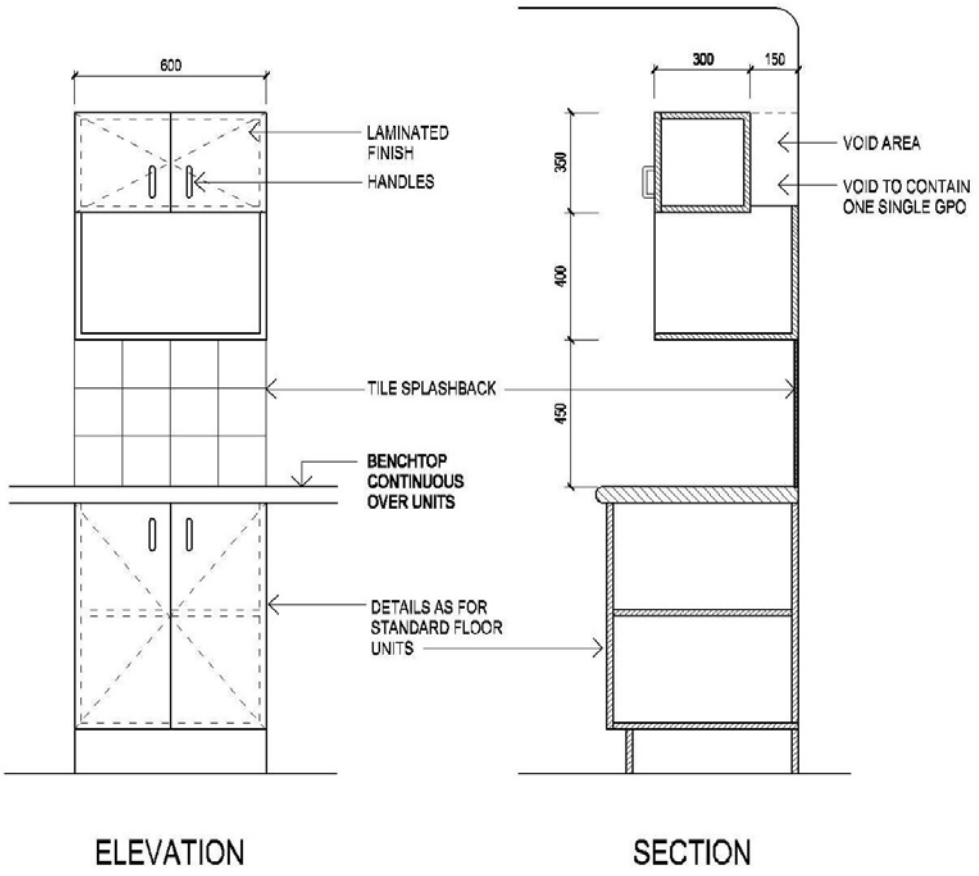
SCALE: NTS
DATE: 18.11.05



KITCHEN DETAILS : KITCHEN FITMENTS
BREAKFAST BAR UNIT 'N'

KD 07

SCALE: NTS
DATE: 18.11.05



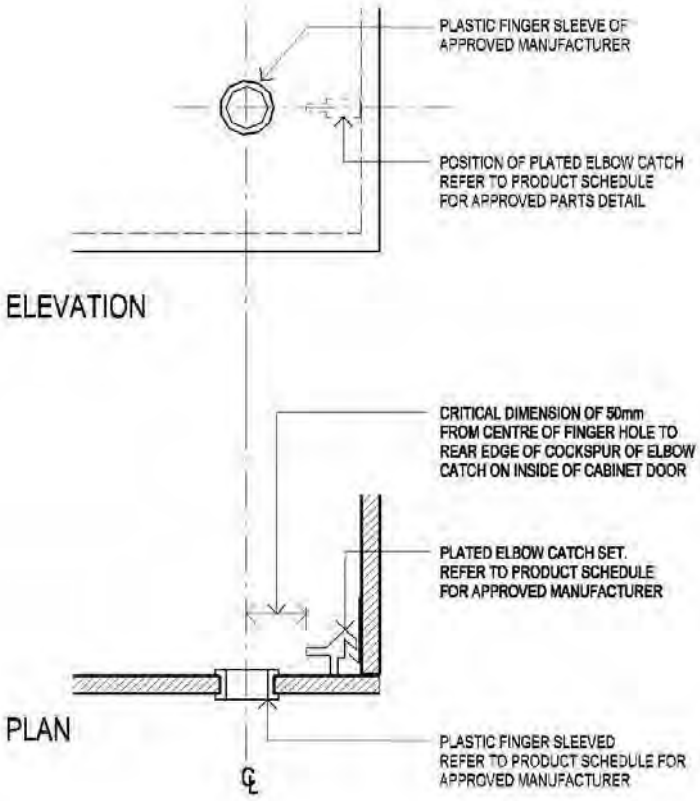
KITCHEN DETAILS : KITCHEN FITMENTS
STANDARD FLOOR UNIT & MICROWAVE CUPBOARD

KD 09

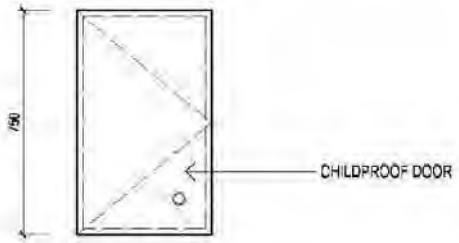
SCALE: NTS
DATE: 16.11.05



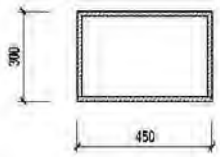
ELBOW CATCH



DETAIL OF LOCKING SYSTEM TO MEDICINE CABINET



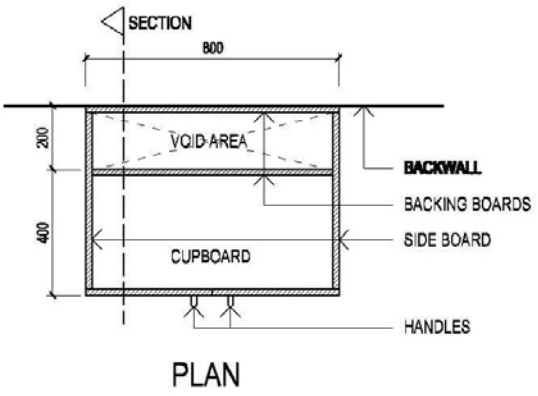
ELEVATION



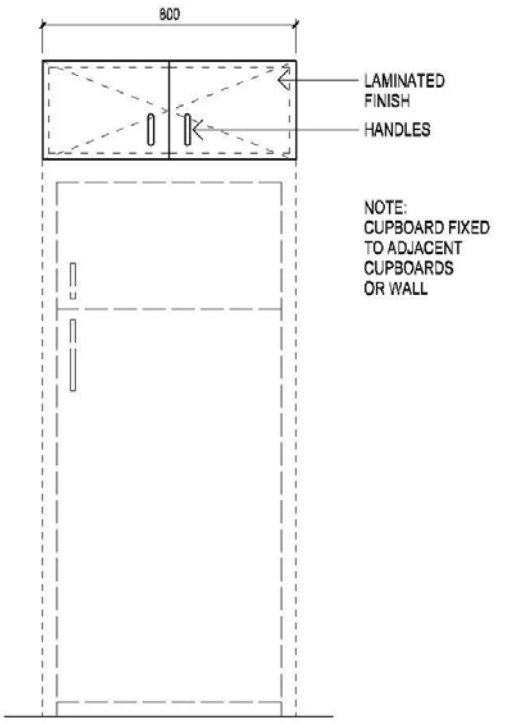
PLAN

KITCHEN DETAILS : KITCHEN FITMENTS
CHILDPROOF MEDICINE CABINET WALL UNIT TYPE 'C'

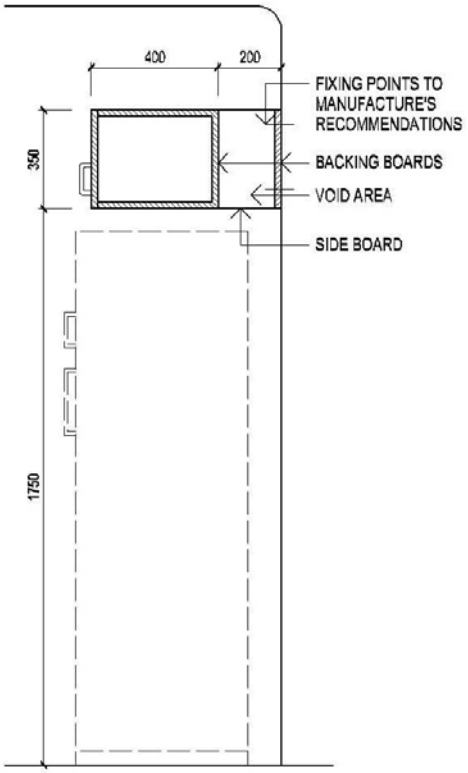
KD 08
SCALE: NTS
DATE: 16.11.05



PLAN



ELEVATION

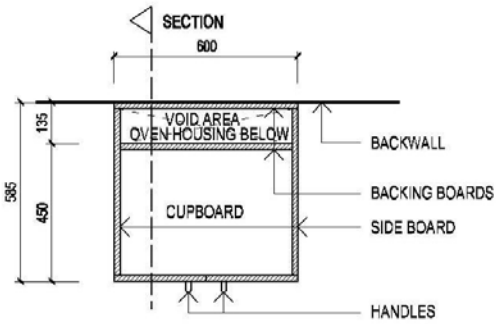


SECTION

KITCHEN DETAILS : KITCHEN FITMENTS
CUPBOARD OVER REFRIGERATOR

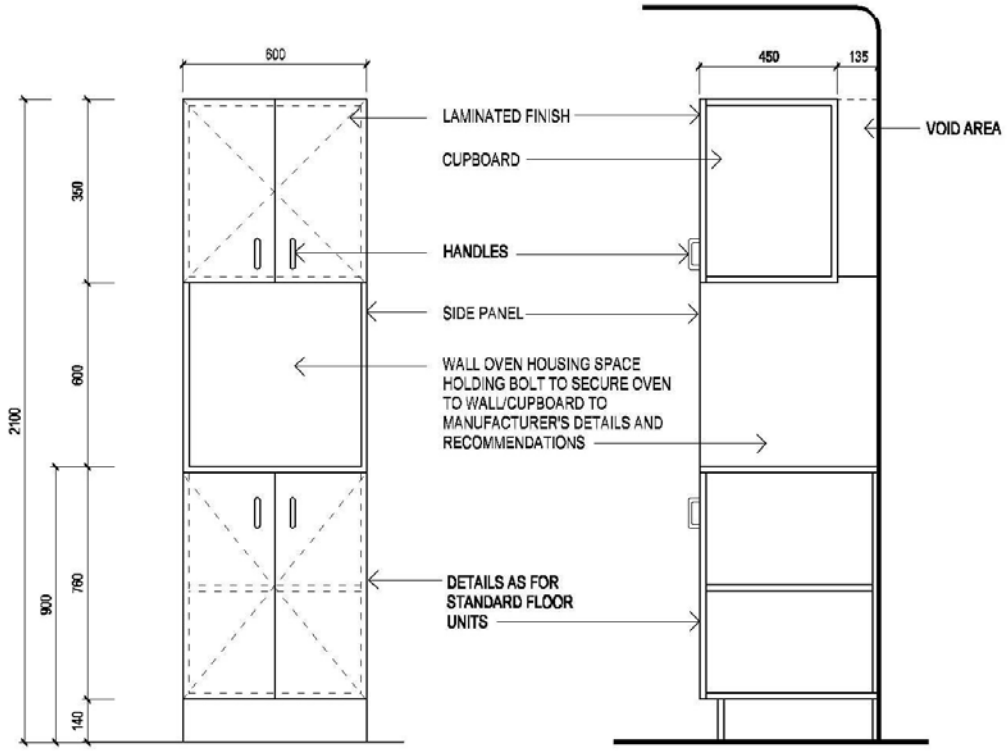
KD 10

SCALE: NTS
DATE: MARCH 2004



PLAN

NOTE: REFER TO SPECIFICATION
SECTION 4: ELECTRICAL WORKS



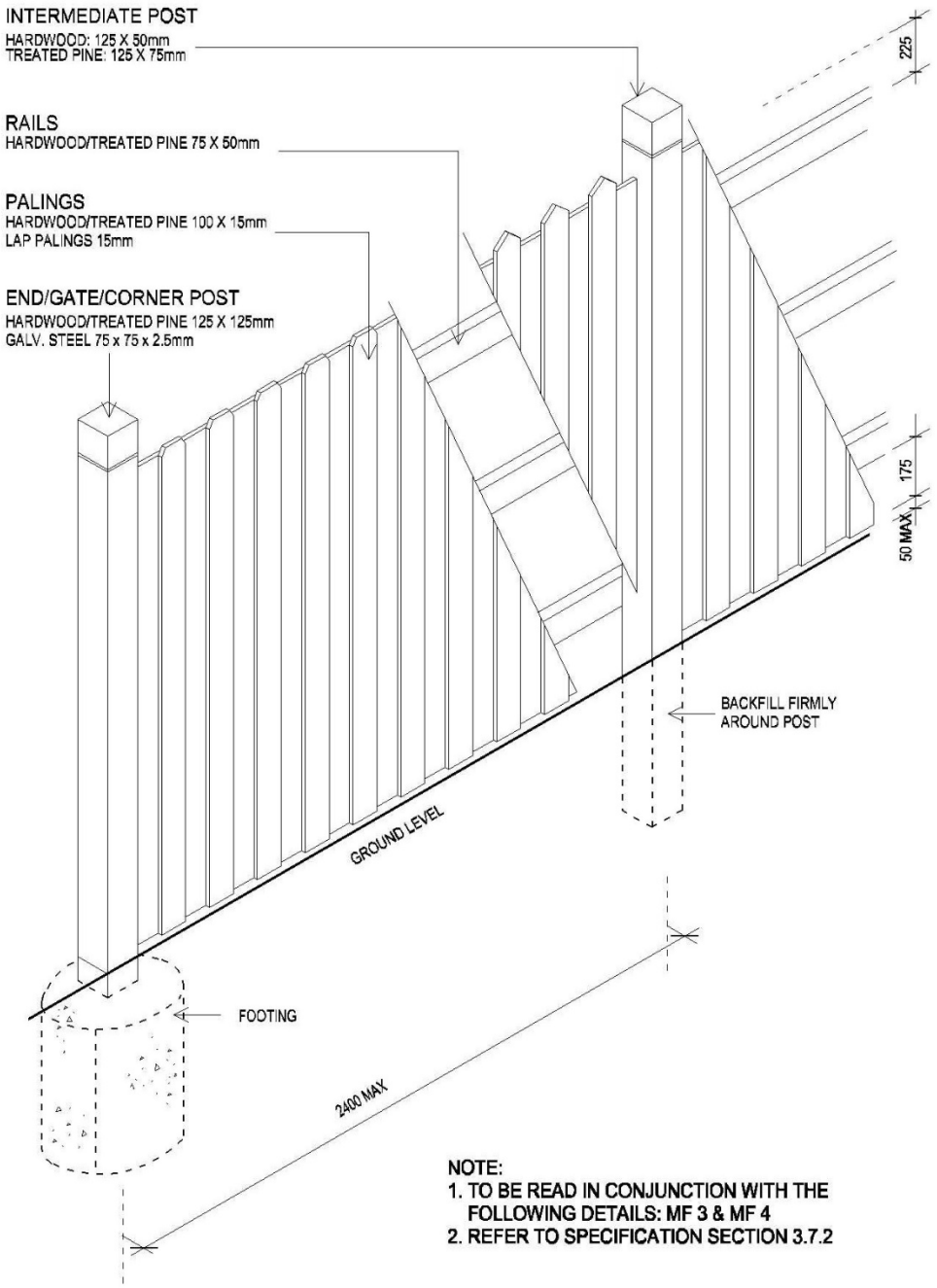
ELEVATION

SECTION

KITCHEN DETAILS : KITCHEN FITMENTS
FLOOR UNIT INCLUDING WALL OVEN SHELF

KD 11

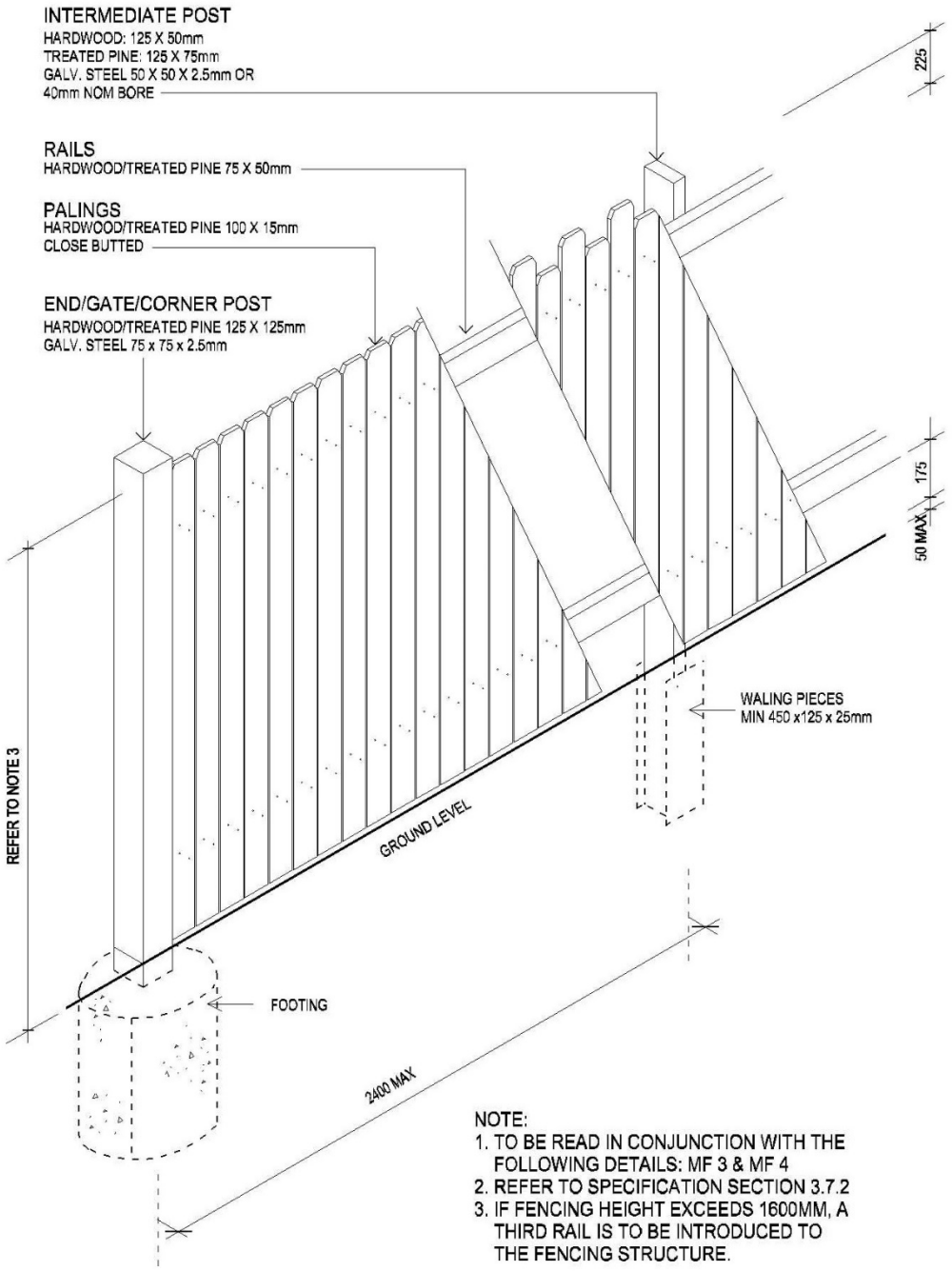
SCALE: NTS
DATE: 12.12.05



LAPPED PALING FENCE

MF 01

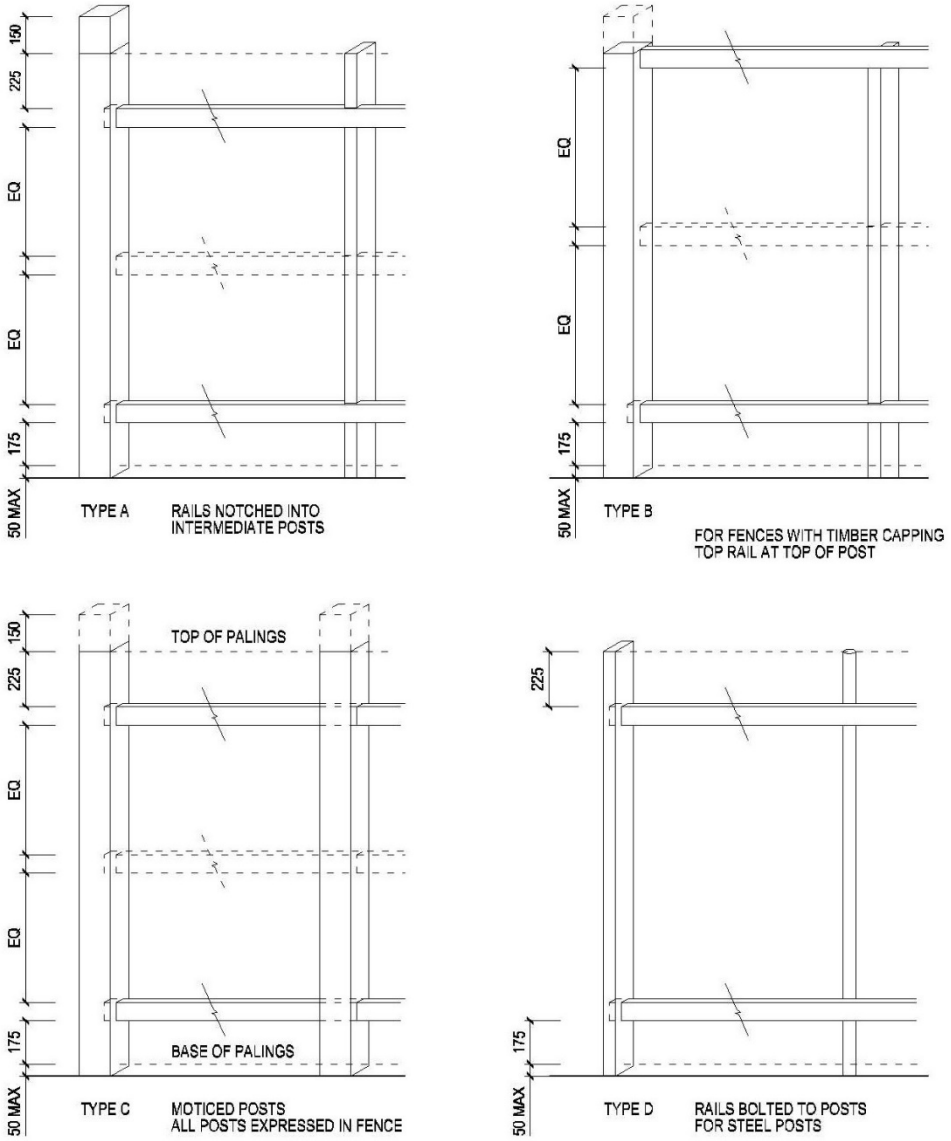
SCALE: NTS
DATE: 16.11.05



CLOSED PALING ENCE

MF02

SCALE: NTS
DATE: 16.11.05



NOTES:
SPACING - 2400mm MAXIMUM BETWEEN POSTS.
POST
- SET VERTICALLY, WEATHERCUT TOPS OF TIMBER POSTS WITHOUT DECORATIVE TOPS.
- INSTALL POSTS AS DETAILED ON FOOTINGS SHEET NO MF 4
- PAINT IN-GROUND HARDWOOD WITH TYPE A CREOSOTE TO A.S. K55 TO 100mm ABOVE GROUND
- CAP GALVANISED STEEL POSTS WITH PURPOSE MADE PUSH ON FRICTION CAPS.
RAILS
- STOP MORTICE RAILS MIN. 38mm INTO TIMBER CORNER, END AND GATE POSTS
- JOIN AT ALTERNATE POSTS. TAPER AND SPLICE TOGETHER AND NAIL IN MORTICES
- FIX TO GALVANISED STEEL POSTS AND NOTCHED TIMBER POSTS USING 10mm DIAM. GALV BOLT & WASHER
- USE THREE RAILS WHERE SPACING BETWEEN RAILS IS GREATER THAN 1100mm AND FOR ALL LAPPED PALING FENCES
- FOR TIMBER CAPPED FENCES PLACE TOP RAIL AT TOP OF POST

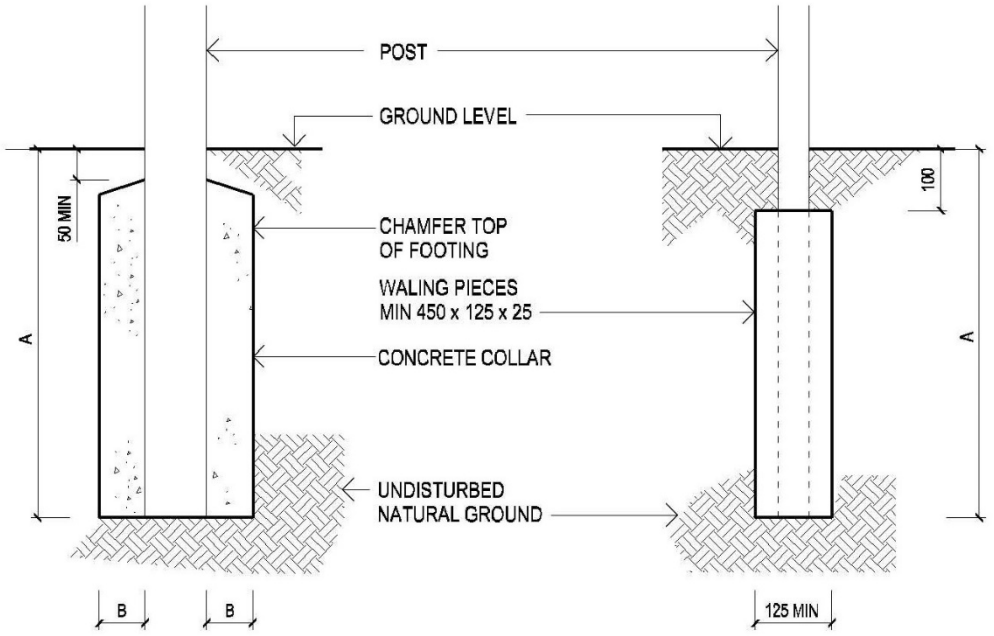
FRAME TYPES

MF03

SCALE: NTS
DATE: 16.11.05

CONCRETE FOOTING

WALING PIECES



SOIL TYPE/FOOTING SIZE	A DEPTH (mm)	B COLLAR WIDTH (mm) ALL ROUND
A. SAND OR HIGH WIND	1000	300 MINIMUM
B. CLAY/LOAM	600	100 MINIMUM
C. ROCK	375	PACK HOLE WITH CONCRETE

NOTES:

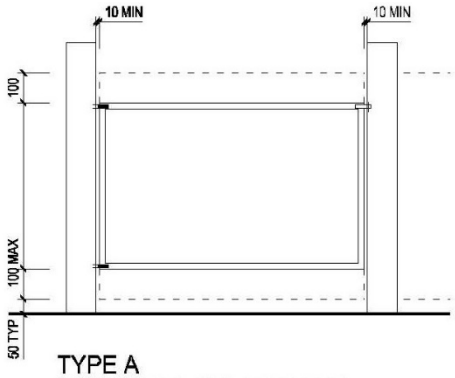
CONCRETE FOOTINGS
- REFER TO SPEC SECTION 3.5
- EXCAVATE HOLE TO DIMENSIONS REQUIRED
- SURFACE OF POST IN-GROUND IS TO BE CLEANED TO ENSURE ADEQUATE BONDING WITH CONCRETE
- IN-GROUND SECTION OF ALL POSTS TO BE FULL DEPTH OF FOOTING NOTED IN TABLE
- CONCRETE TO BE 4:2:1 AGGREGATE, SAND, CEMENT MIX OF 15MPa STRENGTH, PACKED INTO HOLE
- CHAMFER TOP OF FOOTING, FINISH MAX. 50mm BELOW GROUND LEVEL
- FOOTINGS TO BE PROVIDED FOR ALL GALVANISED STEEL POSTS
- INSTALL FOOTINGS TO TIMBER CORNER, GATE AND END POSTS
- FOR PICKET, LATTICE AND SHEET STEEL FENCES INSTALL FOOTINGS TO ALL POSTS
- IN SOLID ROCK POST TO BE MIN. 375mm INTO GROUND PACKED AROUND WITH CONCRETE

WALING PIECES
- INSTALL 2 OFF 450(MIN) x 125 x 25mm TIMBER WALING PIECES, ONE TO EITHER SIDE OF 50 x 125mm INTERMEDIATE TIMBER POSTS WITHOUT FOOTING TO FINISH 100mm BELOW GROUND LEVEL. DOUBLE NAIL TO POST

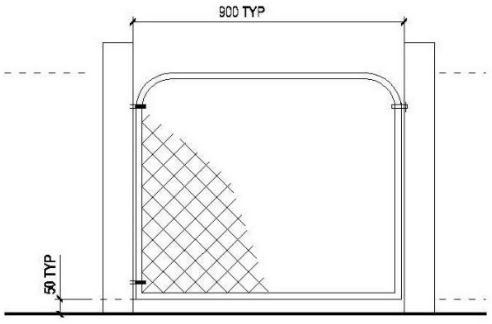
FOOTINGS

MF04

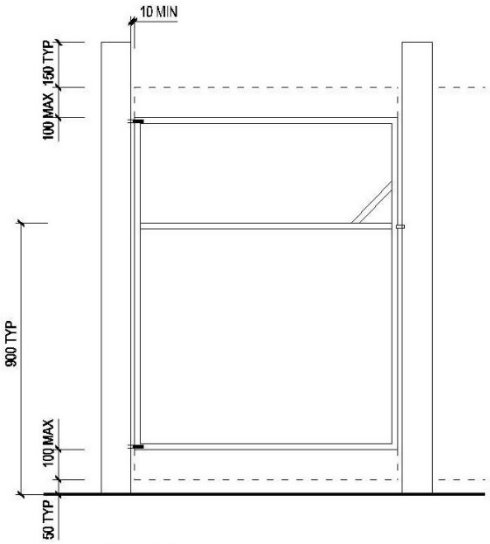
SCALE: NTS
DATE: 16.11.05



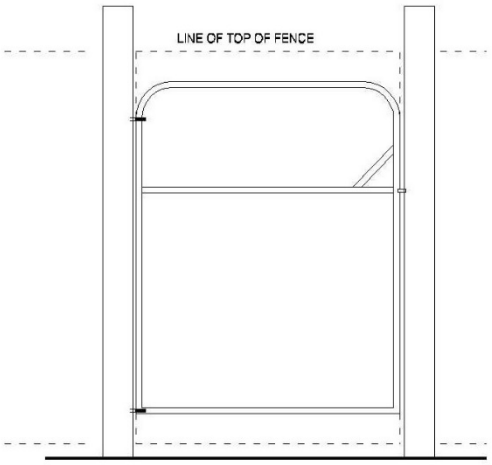
TYPE A
LOW STEEL GATE FRAME
SQUARE SECTION



TYPE B
LOW STEEL GATE FRAME
TUBULAR SECTION



TYPE C
HIGH STEEL GATE FRAME
SQUARE SECTION



TYPE D
HIGH STEEL GATE FRAME
TUBULAR SECTION

NOTES:

LOW GATES 900 - 1200mm
- SQUARE SECTION FRAME 25 x 25mm RHS GALV STEEL WITH WELDED JOINTS
- TUBULAR SECTION FRAME 25mm NOM BORE GALV STEEL WITH WELDED JOINTS
- OR USE STANDARD GALVANISED STEEL GATE FRAME IN COMPLIANCE TO SPECIFICATION.

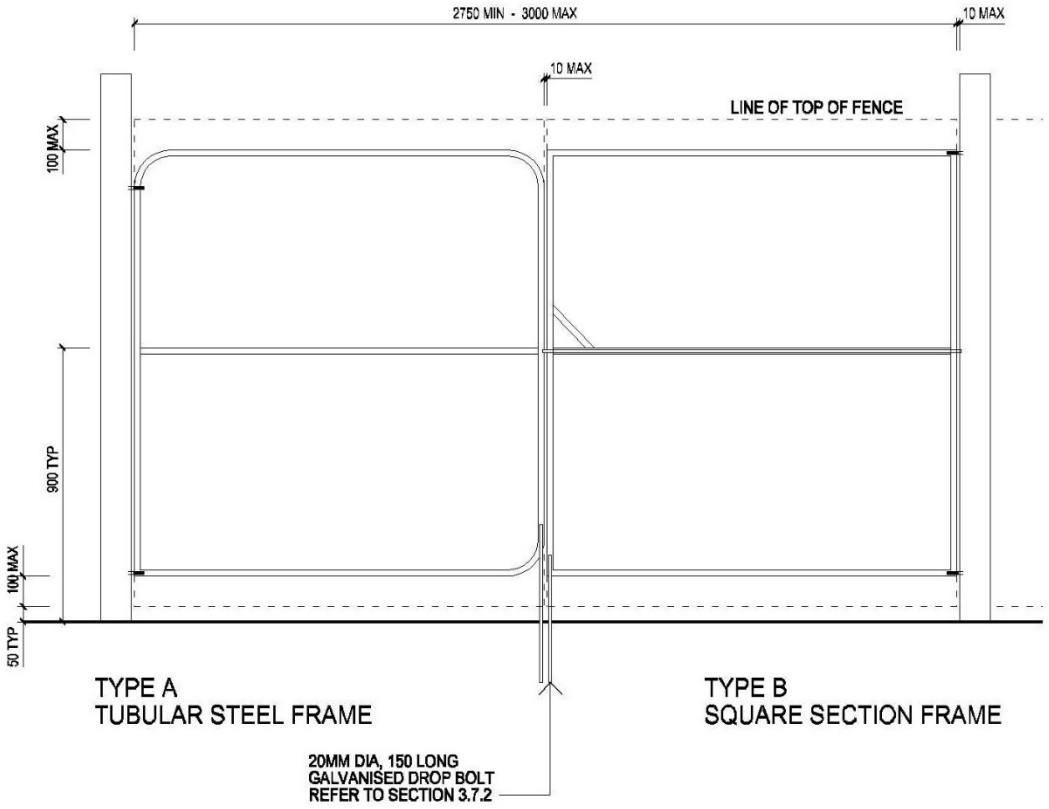
HIGH GATES 1500 - 1800mm
- SQUARE SECTION FRAME 32 x 32mm RHS GALV STEEL WITH FRAME JOINTS
- TUBULAR SECTION FRAME 32mm NOM BORE GALV STEEL WITH WELDED JOINTS
- OR USE STANDARD GALVANISED STEEL GATE FRAME IN COMPLIANCE TO SPECIFICATION.

FIXING AND HARDWARE
- ALL FIXINGS AND HARDWARE TO BE HOT DIPPED GALVANISED
- SQUARE SECTION, HINGES TO BE 'TUFF' BALL BEARING HINGE OR EQUIVALENT
- TUBULAR SECTION, HINGES TO BE 'DOWNEE' G20 GATE HINGE OR EQUIVALENT
- LATCH TO BE GALV D-TYPE LATCH AND STRIKER
- FIX HINGE TO POSTS USING GALV BOLT, WELD HINGE AND LATCH TO GATE FRAME
- FOR SHEET METAL GATES FRAME TO BE AT EDGE OF GATE WITH CAPPING ALL ROUND

STEEL GATE FRAMES

MF05

SCALE: NTS
DATE: 16.11.05



NOTES:

- PROVIDE HOLD-OPEN KEEPERS WHERE REQUIRED (DROP BOLT HOUSING OR PARROT-BEAK HOLD OPEN DEVICE FIXED TO WALL AND/OR NEW/EXISTING POST)
- REFER TO SPECIFICATION SECTION 3.7.2 AND SECTION 3.7.3
- FINISHED HEIGHT OF GATE TO EQUAL HEIGHT OF FENCE
- TUBULAR FRAME TO BE 32mm NOM BORE GALV STEEL WITH WELDED JOINTS
- SQUARE SECTION FRAME USE 32 x 32 x 3.2 RHS GALVANISED STEEL WITH WELDED JOINTS

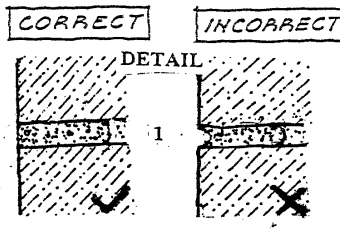
FIXING AND HARDWARE
- ALL FIXINGS AND HARDWARE TO BE HOT DIPPED GALVANISED
- TUBULAR SECTION FRAMES, HINGES TO BE IN COMPLIANCE TO SPECIFICATION
- SQUARE SECTION FRAMES, HINGES TO BE IN COMPLIANCE TO SPECIFICATION
- LATCH TO BE GALV D-TYPE LATCH AND STRIKER
- WELD BARREL BOLT TO BASE OF EACH GATE
- WELD HINGES AND LATCH TO GATE FRAME
- FIX HINGE TO POST USING GALV BOLT, SCREW FIX D-LATCH TO OPPOSITE POST

VEHICULAR GATE FRAMES (BACK FENCES)

MF06

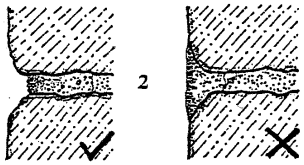
SCALE: NTS
DATE: 16.11.05

HER 01 - CONSERVATION TRADE PRACTICES – MASONRY JOINT REPAIR

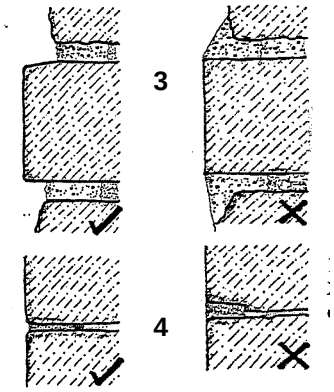


NOTES

DETAIL 1. STANDARD JOINT POINTING AND REPOINTING
Point and repoint all open, loose and defective joints as specified, and where indicated. Maintain the original joint width using standard details as specified for pointing and repointing. Flush fill joints to the original face line.



DETAIL 2. ERODED ARRIS JOINT PATCHING
Maintain original joint width by not filling these joints out to the original face line. Use mortar and work procedures as before stated Detail 1. Fill joints out only to where the eroded arrases begin to widen in the joint. Avoid thickening the joint appearance. Avoid mortar being feathered on the outside of the stone where water traps may be created.



DETAIL 3. PROJECTING STONE OR BRICK JOINT REPOINTING
Point and repoint all open and defective joints as before stated Detail 2. Allow to slightly chamfer or round the top bed of the projecting stone or brick to throw off water. Do not change the thickness or appearance of the joint by using weather struck mortar fillets which may also trap water.

DETAIL 4. THIN JOINT REPOINTING
Point and repoint all open and defective joints as before stated Detail 1. Maintain original joint width.

(Not to scale)

Details and information from: "Conservation of Building & Decorative Stone", Vol. 2. John Ashurst & Francis G. Dimes, p87.

Schedule 10 (Reporting Templates)

1 Index

This Schedule contains the following reporting templates:

(a) LAHC Internal Annual Fire Safety Statement.

(b) Monthly Common Area Inspection Report.

(c) Means of Egress Report.

(d) Yearly Condition Report.

(e) Contractor Monthly Report Template.

(f) Contractor Quarterly Report Template.

(g) Contractor Annual Report Template.

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

LAHC Internal Annual Fire Safety Statement (LIAFSS)

NSW Land and Housing Corporation

Important: This statement is for LAHC Internal use only and is **not** a Statutory Fire Safety Statement for submission to any Regulatory Authority

1. Type of Statement

☐ **Annual Fire Safety Statement**
☐ **Supplementary Fire Safety Assessment**

2. Property Details

This statement applies to: ☐ **the whole building** ☐ **part of the building**

Address:				
Site #	**Street No**	**Street**	**Suburb**	**Post Code**

Provide a brief description of the building (building use, number of storeys, construction type etc.)

3. Building Ownership

Name:
NSW Land and Housing Corporation
Address:
Locked Bag 5022. Parramatta NSW 2124

4. Fire Safety Measures

Fire Safety Measure	Minimum Standard of Performance	Date Assessed	APFS

5. Fire Exits and Paths of Travel to Fire Exits (Part 15 – EPA (Development Certification and Fire Safety) Reg 2021)

Part of Building Inspected	Date Inspected	APFS

6. Name and contact details of each APFS

Full Name	Phone	Email	Accreditation No	Signature

7. Name and Contact details of person issuing this statement

Full Name:	
Organisation (if applicable)	**Title/Position (if applicable)**
Phone	**Email**

8. Declaration

I declare that:

(a) each essential fire safety measure specified in this statement has been assessed by an accredited practitioner (fire safety) as capable of performing:

i. for an essential fire safety measure specified in the fire safety schedule, to a standard not less than the specified in the schedule, or

ii. for an essential fire safety measure applicable to the building but not specified in the fire safety schedule, to a standard no less than that to which it was originally designed and implements, and

(b) the building has been inspected by accredited practitioner (fire safety) and was found, when it was inspected, to be in a condition that did not disclose any grounds for a prosecution under Part 15 the Regulation.

Full name		**Company Name:**	
Signature		**Date:**	

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Monthly Common Area - Inspection Report

NSW Land and Housing Corporation

NSW GOVERNMENT

1. Property Details				
Address:				
Site #	**Street No**	**Street**	**Suburb**	**Post Code**

2. Monthly – Common Area Inspections				
Date Inspection Conducted:				
Item No.	**Item** Note2	**Action required and pass/fail requirement**	**Records**	
			Pass/Fail	Comment Note1
1.1	Entry lobby	VISUALLY inspect entry lobby for damage or impairment to fire safety systems		
1.2	Stairs (Internal, external, Fire isolated & Non-fire isolated)	VISUALLY inspect all required stairs and associated systems for damage or impairment to fire safety systems		
1.3	Carpark	VISUALLY inspect carpark area for damage or impairment to fire safety systems		
1.4	Carpark Garbage room	VISUALLY inspect garbage room for damage or impairment to fire safety systems including garbage chute system		
1.5	Auxiliary use area (use as required)	VISUALLY inspect auxiliary use areas for damage or impairment to fire safety systems. Detail inspected areas below:		
		a)		
		b)		
		c)		
1.6	General – "housekeeping"	During the visual inspection (item 1.1 to 1.5), is there any items that have been identified, related to "housekeeping" which		

		pose a threat to fire safety of the Property or occupants.		
1.7	General – Other safety concerns	During the visual inspection (item 1.1 to 1.5), is there any items that have been identified, related to general safety concerns which pose a threat to life safety of the Property or occupants. Note 3 Note 4		

3. Additional comments

7. Name and contact details of person who conducted the inspection	
Full Name:	
Organisation (if applicable):	**Title/Position (if applicable):**
Phone:	**Email:**
Signature:	**Date:**

Note 1: Where repairs or replacement are required as a result of damage being identified, the details of the required parts or labour shall be detailed in the comments.

Note 2: Where a Property or Properties is served by an automatic sprinkler, hydrant, smoke detection system or mechanical systems, the inspection and check of these systems shall be conducted as part of the standard AS1851 methodology.

Note 3: Should an issue be identified which poses an immediate threat it shall be reported directly to the relevant emergency service and the Principal.

Note 4: Where 'means of egress or escape' from a Property is compromised, the Contractor shall complete a Means of Egress Report and submit to the Principal as reasonably soon as possible.

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Means of Egress Report

NSW Land and Housing Corporation

1. Report No:	

2. Property Details

Address:

Site #	Street No	Street	Suburb	Post Code

3. Date of witness	

4. Details where egress is compromised including relevant photos.

5. Name and Contact details of person preparing this report

Full Name:			
Organisation		Title/Position (if applicable)	
Phone		Email	
Date		Signature	

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Yearly Condition Report

NSW Land and Housing Corporation

NSW GOVERNMENT

1. Report No:	

2. Property Details

Address:

Site #	Street No	Street	Suburb	Post Code

3. Period Covered by Report	
4. System type	
5. Design standard at the time of installation	

6. Statement

"I confirm that the system referred to above has been regularly inspected, tested, maintained and surveyed, where applicable, to Section XX of (AS 1851/AS2293.2/LAHC Servicing Requirements Section 1.2.4) as per attached system activity reports for the period XX/XX/XXXX. If defects have been identified they are noted in Section 7 below, with the exception of any defects (if noted), the system has been found to be functioning correctly and is generally in accordance with the approved design and installation standard."

7. System Defects and non-conformances

Item description	Relevant SOR and Base Price or Estimated cost if no applicable SOR	Responsive	Programmed	Timeframe for completion
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

8. General comments on condition

9. Items nearing end of life*

Item description	Expect life left (years)*	Relevant SOR and Base Price or Estimated cost if no applicable SOR

*Note only applicable if system or component has less than 2 years expect life remaining.

10. Name and Contact details of person preparing this report

Full Name:			
Organisation		Title/Position (if applicable)	
Phone		Email	
Date		Signature	

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Contractor Monthly Report

The purpose of this report is to provide LAHC with an accurate account of the Contractor's Monthly performance against the Key Performance Indicators (KPI's), delivery of the services, key activities, risks and Contractor strategies to address any performance issues

Authority and Declaration

To be completed by the Nominated and Authorised Representative

To the best of my knowledge the enclosed report has been accurately prepared and is a fair and reasonable representation of performance prescribed by the RAPM Contract for the applicable reporting period as stated below.

Name:			**Position:**			
Signature:			**Date:**			
Contract Area:		**Period of Report**	**From:**		**To:**	

Distribution

Name	Position	Organisation

Executive Notes

1. Executive Summary

Executive Summary to be 2 pages maximum

1.1 Risk to Overall Service Delivery – any significant risk to the delivery of the contract

1.2 Key Issues - significant issues and compliance matters, and any improvement actions to be taken

1.3 Significant Achievements - key achievements for the reporting period

1.4 Significant Performance Shortfalls - key performance shortfalls by KPI and associated KPI measures

1.5 Committed Actions and Timeframes - key improvement strategies

2. Works Performance

This section is to include current performance against KPI's for specific work programs in a format prescribed by LAHC

2.1 Responsive Maintenance Works

2.1 (i) – Repair Priority (RP Priority 4hr, 24hr, 5 day, 10 day, 18 day)

2.1 (ii) – Responsive Accessible Modifications (RAM Priority 5 day)

2.2 Programmed Maintenance Works

2.2 (i) – Vacant Restoration Program

2.2 (ii) – Programmed Accessibility Modifications

2.2 (iii) – Capital Upgrade Program (CUP) Works

2.2 (iv) – Lawns, Grounds and Cleaning (LGC)

2.2 (v) – Component Servicing Program

2.2 (vi) – Building Upgrade Works

2.2 (vii) – Termite, Fire Restoration and Structural Works

2.2 (viii) – Environmental Upgrade Works

2.3 Supplementary Works

3. Monthly KPI Report - Content and scope to be advised by LAHC

Insert Performance report data and statistics against the Management Framework – in approved format (e.g. Excel Report) Examples:		
• Performance against KPI's • KPI Performance Shortfalls • Issues Management • Quality of Work • Root Cause • Corrective Actions	• Product/Supply Issues • Social Obligations • Innovation	• Key Activities & Improvements Completed this Month **Resolution** • Key Activities & Improvements Planned for Next Month

4. Attachments – this section is for any prescribed information to support the performance in the specific reporting period

Please include any additional attachments (in approved format) to support this overall report.

No.	Attachment Name	Attachment Description
1.	Organisation Structure	Current Organisation Structure – highlighting an changes
2.	Contractor Resources	Evidence Contractor resources adequately support the contract
3.	Sub-Contractor Resources	Evidence Sub-Contractor resources adequately support the contract
4.		

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Contractor Quarterly Report

The purpose of this report is to provide LAHC with an accurate account of the Contractor's Quarterly performance against the Key Performance Indicators (KPI's), delivery of the services, key activities, risks and Contractor strategies to address any performance issues

Authority and Declaration

To be completed by the Nominated and Authorised Representative

To the best of my knowledge the enclosed report has been accurately prepared and is a fair and reasonable representation of performance prescribed by the RAPM Contract for the applicable reporting period as stated below.

Name:			**Position:**			
Signature:			**Date:**			
Contract Area:		**Period of Report**	**From:**		**To:**	

Distribution

Name	Position	Organisation

Executive Notes

1. Executive Summary

Executive Summary to be 2 pages maximum

1.1 Performance Evaluation

1.2 Management of Services

2. Quarterly KPI Report - Content and scope to be advised by LAHC

Insert Performance report data and statistics against the Management Framework – in approved format (e.g. Excel Report)
Examples:

• Management of Defect Notices for each Work Program	• Management of Overdue Work Orders	• Aboriginal Participation • Tenant Employment

3. Attachments – this section is for any prescribed information to support the performance in the specific reporting period

Please include any additional attachments (in approved format) to support this overall report.

No.	Attachment Name	Attachment Description
5.	Organisation Structure	Current Organisation Structure – highlighting an changes
6.	KPI Improvement Plan	Improvement Plan where Performance Benchmark is not met
7.		
8.		

[COMPANY LOGO]

Company Address:
Company Suburb:
Company Contact No:

Contractor Annual Report

The purpose of this report is to provide LAHC with an accurate account of the Contractor's Annual performance against the Key Performance Indicators (KPI's), delivery of the services, key activities, risks and Contractor strategies to address any performance issues

Authority and Declaration

To be completed by the Nominated and Authorised Representative

To the best of my knowledge the enclosed report has been accurately prepared and is a fair and reasonable representation of performance prescribed by the RAPM Contract for the applicable reporting period as stated below.

Name:			**Position:**			
Signature:			**Date:**			
Contract Area:		**Period of Report**	**From:**		**To:**	

Distribution

Name	Position	Organisation

Executive Summary

Executive Summary to be 2 pages maximum

1. Key Issues and actions Summary

***

2. Summary of Performance Evaluation for the Period

***

3. Improvement and Action Plans for the Period

***

4. Contractor Initiatives for the Period

***

5. Audit Summary Results

***

6. Social Obligations (including Aboriginal Participation & Tenant Employment outcomes)

***

7. Contractor / LAHC Relationship Management

***

8. Program Review and Forward Planning

***

9. Key Strategies and Planning Proposals for the next Period

***

3. Annual KPI Report - Content and scope to be advised by LAHC

Insert Performance report data and statistics against the Management Framework – in approved format (e.g. Excel Report)
Examples:

•	•	•

4. Attachments – this section is for any prescribed information to support the performance in the specific reporting period

Please include any additional attachments (in approved format) to support this overall report.

No.	Attachment Name	Attachment Description
9.	Organisation Structure	Current Organisation Structure – highlighting an changes
10.		
11.		
12.		

Schedule 11 (Communication Requirements)

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
Continuous Improvement	Continuous Improvement	General Terms	2.2	Written report of continuous improvement activities	☐	☒
Transition-In	Transition In Period	General Terms	3.1	Draft Transition In Plan and subsequent exchanges between the parties	☐	☒
	Access Keys	General Terms	3.2(a)	Principal's provision of key registers	☐	☒
		General Terms	3.2(c)	Contractor's notice of missing keys	☐	☒
	Building Inspections	General Terms	3.3(a)	Contractor's program of inspections and subsequent exchanges between the parties regarding the same	☐	☒
		General Terms	3.3(d)	Contractor's request to inspect one or more SOUs during the Transition In Period, and subsequent exchanges between the parties regarding appointment details and or directions to make notations in draft documents	☐	☒
	Component Register, Fire Safety Schedules and Programmed Works Plan	General Terms	3.4	Contractor's draft Programmed Works Plan and draft Component Register, and subsequent exchanges between the parties regarding the same (including any Fire Safety Schedule).	☐	☒
		General Terms	3.4(d)	Contractor's notification that the number of SOUs in a Property	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
				does not match the Contract Area Property List		
	Transition In Period	General Terms	3.1	Weekly progress reports detailing progress of Transition Activities	☐	☒
	Failure to comply with the Transition In Plan	General Terms	3.6	Principal's notice of termination	☐	☒
Contract Extension	Extension to Term	General Terms	5.3	Notice from the Principal of extension of Contract Term	☐	☒
Contract Areas	Removal or Addition of Properties	General Terms	3.4(d) and 7.6	Principal's issuance of an updated Contract Area Property List	☒	☒
	Updates to Component Register	General Terms	6.3	Contractor's update of the Component Register	☒	☐
	Annual Update to Programmed Works Plan	General Terms	6.5	Contractor's annual submission of the Programmed Works Plan, and subsequent exchanges between the parties in relation to the same	☒	☐
	Update to Fire Safety Schedule	General Terms	6.6	Principal's request for submission by the Contractor of a Fire Safety Schedule, and subsequent exchanges between the parties in relation to the same	☒	☐
	Fire Safety Statement, Fire Safety Statement Work Orders and Interactions with	General Terms	6.7, 6.8 and 6.9	Submission by the Contractor of a Fire Safety Statement, and subsequent exchanges between the parties in relation to the same	☒	☐
		General Terms	6.9	Contractor's notification to the Principal of potential delay to the	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Responsible Authority			completion of a Fire Safety Schedule		
		General Terms	6.8	Contractor's notification that it has not received a Work Order for the preparation of a Fire Safety Statement	☐	☒
	Recovery of cost	General Terms	6.10	Recovery by the Principal of costs incurred in connection with a Fire Safety Statement	☒	☐
	Changes to Contract Area Property List	General Terms	6.11(a)	Principal's direction to Contractor to inspect Property and provide updated draft Component Register or Programmed Works Plan	☒	☐
	Removal or Addition of Properties	General Terms	7.6	Principal's notice of addition or removal of one or more Properties from any Contract Area	☒	☒
	Rectification of defective or incomplete works	General Terms	7.5	Direction to the Contractor to rectify a defect or incomplete works in an Alternative Contract Area	☒	☐
	Step-in to Alternative Contract Areas	General Terms	7.7	Direction for the Contractor to step-in to an Alternative Contract Area on 6 months' notice	☒	☒
Work Orders	Monthly Walkthrough	General Terms	6.2(a)(ii)	Contractor's identification and notification of aspects of Property that may require Maintenance Works not already included in Work Order	☒	☐
	Issuing Work Orders	General Terms	8.2(a), 8.2(b)	Issuance by the Principal of a Work Order	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
		General Terms	8.2(f)	The Principal cancelling or varying any aspect of a Work Order	☒	☐
	[redacted]					
Time	Work Order Extension	General Terms	8.4(a)	Contractor's notice of delay and extension of time claim	☒	☐
		General Terms	8.4(c)	The Principal's determination of, and exercise of discretion to, an extension of time claim for a Work Order	☒	☐
		General Terms	8.4(c)	The Principal exercising its discretion to extend time for a Work Order	☒	☐
	Late completion of Work Order or rectification work	General Terms	8.5	The Principal's demand for the payment of liquidated damages	☒	☐
Supplementary Works	Type 1 Supplementary Works Threshold	General Terms	8.6	The Principal's notice amending the Type 1 Supplementary Works Threshold	☐	☒
	Type 1 Supplementary Works Procedure	Schedule 3 (Operational Requirements)	S 1.10	Contractor's documentation evidencing the need for, and execution of, Type 1 Supplementary Works	☒	☐
	Type 2 Supplementary Works Procedure	Schedule 3 (Operational Requirements)	S 1.11	Contractor's documentation evidencing the need for, and execution of, Type 2 Supplementary Works	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
SoR	Amendment of SoR	General Terms	8.8(a)	Contractor's notice that Maintenance Works are required, but not covered in any SoR Item	☒	☐
		General Terms	8.8(c)	The Principal's notice that it wishes to add a SoR Item	☐	☒
Additional Maintenance Works	Additional Maintenance Works	General Terms	8.9(a)	The Principal's request to the Contractor to provide a quotation to perform Additional Maintenance Works	☒	☐
		General Terms	8.9(b)	Contractor's quotation to perform Additional Maintenance Works	☒	☐
Principal Plans, Policies and Procedures	Amendment of Principal Plans, Policies and Procedures	General Terms	8.10(a)	Principal's notice of amendment to Principal Plans, Policies and Procedures	☐	☒
		General Terms	8.10(b)(ii)	Contractor's notice of material increase in cost due to amendment to Principal Plans, Policies and Procedures	☐	☒
Communication and Information Technology Requirements	Single User Interface (SUI) and IT Requirements	General Terms	9.1(c)	Contractor's notice of change in IT configuration option, and subsequent exchanges between the parties	☐	☒
	Communication	General Terms	9.2	Notice by the Principal of a change to Schedule 11 (Communication Requirements)	☐	☒
Payment Process	Invoicing Methodology	General Terms	11.2(c)	Principal's notice of invoicing methodology selection change	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Contractor Invoices	General Terms	11.3(a)	Contractor Invoices for Work Orders, the Management Fee or the Transition In Payment	☒	☐
		General Terms	11.3(c)	Request by the Principal for further information regarding any Contractor Invoice	☒	☐
		General Terms	11.3(c)	Provision of further information by the Contractor in response to a request by the Principal	☒	☐
	Payment of Contractor Invoices	General Terms	11.4(a)	The Principal's rejection of Contractor Invoices	☒	☐
		General Terms	11.4(b)	Contractor's resubmission of a previously rejected invoice	☒	☐
	RCTIs	General Terms	11.5(a), 11.5(b)	Contractor's provision of information to enable Principal to raise RCTI	☒	☒
		General Terms	11.5(b)	Principal's request for further information in relation to RCTI	☒	☒
		General Terms	11.5(d)	Principal's issuance of RCTI	☒	☒
	Payment on Account	General Terms	11.7(c)	Principal's notice to recover amounts from Contractor	☒	☒
	Set off	General Terms	11.8	Notice of set off	☒	☐
	Security of Payment Act	General Terms	11.9	Contractor providing a copy of any notice it receives from a Subcontractor under the Security of Payment Act	☒	☐
	Statutory Declaration	General Terms	11.10	Contractor's statutory declaration (provided once per month)	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Bank Guarantee Replacement	General Terms	12.3	The Contractor's notification regarding a replacement bank guarantee	☐	☒
	Principal GST warranties	General Terms	34.5(a), 34.5(d)	Principal's notification that it is no longer Registered, or if it is of the view that requirements of GST Law, the Determination, or the Ruling have not been complied with	☐	☒
Non-conformance Notices	Non-conformance Notices	General Terms	14.1(a)	The Principal issuing a Non-conformance Notice	☒	☐
		General Terms	14.1(c)	Contractor's notification that it has remedied an NCN and Contractor's notice demonstrating how Contractor will comply with an NCN and ensure that the Contractor will not commit the same non-conformance moving forward	☒	☐
Audits and Investigations	Audits	General Terms	14.3	The Principal's notice requiring an audit	☒	☒
		General Terms	14.3(b)(vii)	Provision by the Contractor of a cure plan	☒	☒
	Other investigations	General Terms	14.4	The Principal's notice requiring the Contractor to assist with or provide information relevant to an investigation	☒	☒
		General Terms	14.4	Provision by the Contractor of documents and information relevant to an investigation	☒	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Records Retention	General Terms	14.6	Principal's notice for Contractor to dispose of or hand over documents/records	☐	☒
Plans, Reports and Meetings	Organisation	General Terms	15.1(d)	Principal's direction regarding meetings of the Contract Governance Committee	☒	☐
	Meetings	General Terms	15.3	Provision by the Contractor of minutes of the Contract Governance Committee Meetings	☐	☒
		General Terms	16.6(a)	Principal's direction to attend ad hoc or regular meetings	☒	☐
	General	General Terms	16.1(a)	Provision by the Contractor of Deliverables and other plans and reports requested	☒	☒
	Reports	General Terms	16.2	Contractor's provision of regular reports (as directed by the Principal)	☒	☐
	Contractor Plans, Policies and Procedures	General Terms	16.3	Contractor's Plans, Policies and Procedures (including ongoing updated whenever such documents are revised and updated)	☒	☐
Subcontractors and Personnel	Subcontractors	General Terms	17.3	Contractor's evidence that a Subcontractor holds appropriate and required licences and accreditations	☒	☐
	Contractor's Representative	General Terms	18.1(g)	Notification of substitute Contractor's Representative by Contractor	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Organisation and Personnel	General Terms	19.2	Contractor's organisational chart for the Principal's approval and notices from the Contractor seeking approval for amendments to the organisational chart	☒	☐
	Key Personnel	General Terms	19.4	Contractor's notice, and Principal response, in relation to the proposed removal of any Key Personnel	☒	☒
	Replacement of persons	General Terms	19.5	The Principal's direction to remove any person engaged in the performance of the Maintenance Works	☒	☒
Warranties and standards of Maintenance Works	Disclosure	General Terms	20.3	Contractor's notice that it is aware of an event or circumstances which is inconsistent with any warranties provided	☒	☒
	Warranty of Equipment and Workmanship	General Terms	20.6	Contractor's provision of warranties in relation to the Maintenance Works and any Equipment	☒	☐
	Interface with Tenants	General Terms	20.7	Contractor's notice of breach of potential breach of Tenant interface requirements in clause 20.7(a)	☐	☒
Defects	Contractor to rectify	General Terms	21.1	The Principal's Defect Notice	☒	☐
	Performance	Schedule 3 (Operational Requirements)	S 7.1	Contractor's notice of completion of Maintenance Works following receipt of a Defect Notice or Follow Up Notice	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
Indemnities and Insurance	Indemnification procedures	General Terms	23.3(a)	The Principal's notice of enforcement of an indemnity	☒	☒
	Obligation on Contractor	General Terms	24.3(b)	Contractor's provision of evidence of currency of required insurances and clause 24 compliance	☐	☒
	General Obligations	General Terms	24.7(a)(iii)	Contractor's notice to Principal of any event that may prejudice any insurance the Principal has taken out	☐	☒
		General Terms	24.7(b)(v)	Contractor's notice to Principal of any event that may result in Contractor's insurance lapsing or being cancelled	☒	☒
Force Majeure and Suspension	Notification of Event of Force Majeure	General Terms	25.2	Either party's notice that it is affected by an Event of Force Majeure	☐	☒
	Suspension by the Principal	General Terms	26.1(a)	The Principal's notice of suspension	☐	☒
	Resumption of Maintenance Works	General Terms	26.2(a)	The Principal's notice of resumption of Maintenance Works following a suspension	☐	☒
Privacy, publicity and GIPA	Publicity and media release	General Terms	28.3	Contractor's draft media release and publicity communication	☐	☒
	General Privacy Obligations	General Terms	29.2(e)	Contractor's notification regarding Personal Information	☐	☒
		General Terms	29.2(f), 29.2(g)	The Principal's directions regarding collection and use of Personal Information	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Consents	General Terms	29.3(b)(ii)	Contractor's provision of its privacy policy and associated collection statements	☒	☐
	Access to Information	General Terms	30.2(a)	The Principal's direction requiring access to Contractor's information	☐	☒
	Consultation	General Terms	30.3(b)	Contractor's provision of any objection to disclosure under the GIPA Act	☐	☒
		General Terms	30.3(e)	Principal's notice of its decision to release information and of the Contractor's right to review the decision	☐	☒
Statutory Requirements	Permits	General Terms	31.2(a)(iv)	Contractor's notice of non-compliance with a Permit	☐	☒
	Change in Law	General Terms	31.3(b)	Contractor's notice of a Qualifying Change in Law	☐	☒
		General Terms	31.3(c)	The Principal's notice of agreement to a change in Fee due to Qualifying Change in Law	☐	☒
		General Terms	31.3(d)	The Principal's direction regarding Qualifying Change in Law	☐	☒
	Industrial Relations	General Terms	31.4(b)	Contractor's notification of its awareness of Industrial Matter and any corresponding Principal direction in relation to that Industrial Matter	☒	☒
	Work, health, safety and the Environment	General Terms	31.5	Contractor's notification of an incident, Contractor's provision of information in relation to an	☒	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
				incident, and the Principal's directions in relation to an incident		
	Hazardous Substances	General Terms	31.7	Contractor's notification in connection with any event relating to the Environment (including incidents and potential breaches)	☒	☒
	Notification	General Terms	31.8	Contractor's notification of any breach, infringement or event regarding Work Health and Safety Requirements	☒	☒
	Conflicts of Interest	General Terms	31.10(b)	Contractor's notification regarding potential conflict of interest and Principal's direction in relation to such conflict of interest	☐	☒
Social Obligations	Social Obligations Plan	General Terms	32.5	Contractor's provision of its Social Obligations Plan	☐	☒
	Changes to Targets	General Terms	32.8	Principal's notice of change in any targets regarding Contractor's social obligations	☐	☒
Termination and Show Cause	Termination	General Terms	35	• The Principal's termination notices (whether for breach or for convenience) • The Principal's notice removing a Contact Area (whether for breach or convenience) • The Principal's 'show cause' notice • Contractor's response to a show cause notice	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
				• Contactor's termination notice (for the Principal's breach)		
Transition Out	Transition Out	General Terms	35.13	• The Principal's direction for the Contractor to provide a Transition Out Plan • Contractor's provision of the Transition Out Plan	☒	☐
Work Order Procedure and Specified Steps	Performance	Schedule 3 (Operational Requirements)	S 7.1(a)	Contractor's confirmation of Tenant appointment time	☒	☐
	Performance and Specified Steps	Schedule 3 (Operational Requirements)	S 1.1 (d)(ii)(B)	Contractor's Confirmation Notification	☒	☐
		Schedule 3 (Operational Requirements)	S 1.1(d)(iii)	Contractor's notification that it has not been able to make an appointment with the Tenant	☒	☐
		Schedule 3 (Operational Requirements)	S 1.1(h)(iii)	Contractor's notice that Works Completion has been achieved	☒	☐
		Schedule 3 (Operational Requirements)	S 1.1(h)(v)	Submission by the Contractor of the documentation and evidence of its completion of the Work Order	☒	☐
	Expertise	Schedule 3 (Operational Requirements)	S 1.3	Contractor's notification that the relevant Maintenance Works could contravene regulation, codes, or Good Industry Practices	☐	☒
		Schedule 3 (Operational Requirements)	S 1.3	Contractor's notification that the Maintenance Works or that additional Maintenance works could produce a better off overall outcome	☐	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	SoR Item Quantities	Schedule 3 (Operational Requirements)	S 1.4	Contractor's notification that the quantities of the SoR Items included in a Work Order are greater than those required	☒	☐
	Utility Outages	Schedule 3 (Operational Requirements)	S 1.16(a)	Contractor's notification that the Maintenance Works will require disconnection of power, gas, sewerage or water	☒	☒
		Schedule 3 (Operational Requirements)	S 1.16(c)	Contractor's notification of intention to disconnect a Properties fire system	☒	☒
		Schedule 3 (Operational Requirements)	S 1.16(a)(iv)	Contractor's notification of the objection of a Tenant to the disconnection of any power, gas, sewerage or water	☐	☒
		Schedule 3 (Operational Requirements)	S 1.16(d)	The Principal's direction for the Contractor to provide temporary facilities to one or Tenants or a Property	☒	☐
	Contractor's Equipment	Schedule 3 (Operational Requirements)	S 1.18(b)(i)	Contractor's provision of work methodologies describing how specialist equipment will be used	☒	☒
		Schedule 3 (Operational Requirements)	S 1.18(b)(ii)	Contractor's provision of a risk assessment and any associated documentation	☒	☐
		Schedule 3 (Operational Requirements)	S 1.18(b)(iii)	Contractor's provision of SWMS and SWIs	☒	☒
		Schedule 3 (Operational Requirements)	S 1.18(b)(iv)	Contractor's provision of operator licences and qualifications	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
		Schedule 3 (Operational Requirements)	S 1.18(b)(v)	Contractor's notification of other requirements under SafeWork NSW	☒	☒
	Replacement	Schedule 3 (Operational Requirements)	S 1.19	Provision by the Contractor of a beyond economic repair report	☒	☒
	Message Cards	Schedule 3 (Operational Requirements)	S 3.1	Provision by the Contractor of an attempted visit (including evidence of Message Cards)	☒	☐
	Unattended SOU	Schedule 3 (Operational Requirements)	S 3.2	Contractor's notification to the Principal that the Contractor has departed the Site due to the Tenant departing the Property during the performance of Maintenance Works	☒	☒
	No Obstruction	Schedule 3 (Operational Requirements)	S 3.9	Contractor's notification that it cannot perform the Maintenance Works without blocking property access for Tenants or vehicles	☒	☐
	Cause of Maintenance Works	Schedule 3 (Operational Requirements)	S 3.10	Contractor's notification to the Principal that the underlying cause of Maintenance Works may be attributable to a third party	☒	☐
	Additional Work Order Information	Schedule 3 (Operational Requirements)	S 2.2	Provision by the Principal of additional information in connection with a Work Order	☒	☐
Modifications	Work Order Modification	Schedule 3 (Operational Requirements)	S 1.8	The Principal's notice of variation, amendment or cancellation of a Work Order	☒	☐
	Work Priority Code Modification	Schedule 3 (Operational Requirements)	S 1.9	The Principal's notice of addition, amendment, variation or omission	☒	☐

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
				of Work Priority Codes from Attachment A		
	Type 2 Supplementary Works Procedure	Schedule 3 (Operational Requirements)	S 1.11	The provision of documents, photos, videos and other media evidencing the need for Type 2 Supplementary Works	☒	☐
	Identifying other Maintenance Works (other than Supplementary Works)	Schedule 3 (Operational Requirements)	S 1.14	Provision of information by the Contractor regarding the need for additional Maintenance Works on a Property	☒	☐
	Custom or Specialised components	Schedule 3 (Operational Requirements)	S 1.17	Notice by the Contractor that it is unable to source certain components	☒	☐
	Identification of other issues	Schedule 3 (Operational Requirements)	S 3.11	Provision of information by the Contractor regarding other issues at the Property	☒	☐
	Notification	Schedule 3 (Operational Requirements)	S 4.1	Notification by the Contractor of any incident at a Site and provision of subsequent documents	☒	☐
	Investigation	Schedule 3 (Operational Requirements)	S 4.2(d)	Contractor's provision of documents produced during an investigation	☒	☐
	Record of Interactions	Schedule 3 (Operational Requirements)	S 5.1	Notification and provision of information by the Contractor following any contact or attempted contact with a Tenant	☒	☐
	Observation Notice	Schedule 3 (Operational Requirements)	S 6.3	Principal's Observation Notice	☒	☒

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
	Participation during Principal's Inspections	Schedule 3 (Operational Requirements)	S 6.4	Direction by the Principal to attend an inspection of a Property	☒	☐

[redacted]

Topic	Clause Name	Contract Document	Clause / Section	Type of Communication	SUI	Email
[redacted]						
Other	General	NA	NA	All other notices not specifically referred to above	☒	☒

Schedule 13 (Contract Areas)

Contract Area	Suburbs Associated with that Contract Area
CA1	AUBURN, BANKSTOWN, BASS HILL, BERALA, BIRRONG, CHESTER HILL, CONDELL PARK, FAIRFIELD EAST, GEORGES HALL, GRANVILLE, GUILDFORD, GUILDFORD WEST, LIDCOMBE, MERRYLANDS, MERRYLANDS WEST, OLD GUILDFORD, PADSTOW, REGENTS PARK, REVESBY, SEFTON, SOUTH GRANVILLE, SOUTH WENTWORTHVILLE, VILLAWOOD, WOODPARK, YAGOONA, YENNORA.
CA2	ASHCROFT, BONNYRIGG, BONNYRIGG HEIGHTS, BOSSLEY PARK, BUSBY, CABRAMATTA, CABRAMATTA WEST, CANLEY HEIGHTS, CANLEY VALE, CARRAMAR, CARTWRIGHT, CASULA, CHIPPING NORTON, EAST HILLS, EDENSOR PARK, FAIRFIELD, FAIRFIELD HEIGHTS, FAIRFIELD WEST, GREEN VALLEY, GREENFIELD PARK, HAMMONDVILLE, HECKENBERG, HINCHINBROOK, HOLSWORTHY, HOXTON PARK, LANSVALE, LIVERPOOL, LURNEA, MIDDLETON GRANGE, MILLER, MILPERRA, MOOREBANK, MOUNT PRITCHARD, PANANIA, PICNIC POINT, PRAIRIEWOOD, PRARIEVALE, PRESTONS, SADLEIR, SMITHFIELD, ST JOHNS PARK, WAKELEY, WARWICK FARM, WATTLE GROVE, WEST HOXTON, WETHERILL PARK.
CA3	ARTARMON, ASQUITH, BALGOWLAH, BAULKHAM HILLS, BEROWRA, BLACKTOWN, BROOKVALE, CAMMERAY, CARLINGFORD, CASTLE HILL, CASTLECRAG, CHATSWOOD, CONSTITUTION HILL, CREMORNE, CROWS NEST, CURL CURL, DEE WHY, DENISTONE EAST, DUNDAS, DUNDAS VALLEY, EASTWOOD, EPPING, ERMINGTON, FORESTVILLE, FRENCHS FOREST, GIRRAWEEN, GLADESVILLE, GLENWOOD, GREYSTANES, HARRIS PARK, HORNSBY, HUNTERS HILL, KELLYVILLE, KINGS LANGLEY, KINGS PARK, LALOR PARK, LANE COVE, LANE COVE NORTH, MACQUARIE PARK, MANLY VALE, MARAYONG, MARSFIELD, MARYONG, MAYS HILL, MELROSE PARK, MILSONS POINT, MOSMAN, NAREMBURN, NARRAWEENA, NORMANHURST, NORTH BALGOWLAH, NORTH PARRAMATTA, NORTH ROCKS, NORTH RYDE, NORTHMEAD, OATLANDS, OLD TOONGABBIE, PARRAMATTA, PARRAMATTA NORTH, PENDLE HILL, PENNANT HILLS, PROSPECT, QUAKERS HILL, ROSEHILL, ROSS VALE, RYDALMERE, RYDE, SCHOFIELDS, SEAFORTH, SEVEN HILLS, TELOPEA, THE SPIT, THORNLEIGH, TOONGABBIE, WAITARA, WENTWORTHVILLE, WEST RYDE, WESTMEAD, WILLOUGHBY, WINGALA, WINSTON HILLS, WOODCROFT.
CA4	BIDWILL, BLACKETT, BLACKHEATH, BLAXLAND, BLIGH PARK, CAMBRIDGE GARDENS, CAMBRIDGE PARK, CLAREMONT MEADOWS, COLYTON, CRANEBROOK, DEAN PARK, DHARRUK, DOONSIDE, EMERTON, EMU HEIGHTS, EMU PLAINS, ERSKINE PARK, FAULCONBRIDGE, GLENDENNING, GLENMORE PARK, HASSALL GROVE, HAZELBROOK, HEBERSHAM, HOBARTVILLE, JAMISONTOWN, KATOOMBA, KINGSWOOD, LAPSTONE, LAWSON, LEMONGROVE, LETHBRIDGE PARK, LEURA, MINCHINBURY, MOUNT DRUITT, MOUNT PLEASANT, NORTH RICHMOND, NORTH ST MARYS, OAKHURST, OXLEY PARK, PENRITH, PLUMPTON, RICHMOND, RIVERSTONE, ROOTY HILL, SHALVEY, SOUTH PENRITH, SOUTH WINDSOR, SPRINGWOOD, ST CLAIR, ST MARYS, TREGEAR, WENTWORTH FALLS, WERRINGTON, WERRINGTON DOWNS, WHALAN, WILLMOT, WINDSOR, WINMALEE.

Contract Area	Suburbs Associated with that Contract Area
CA5	ABERDARE, ADAMSTOWN, ADAMSTOWN HEIGHTS, ALSTONVILLE, ARMIDALE, ASHTONFIELD, BALLINA, BANORA POINT, BAR BEACH, BARRABA, BERESFIELD, BIRMINGHAM GARDENS, BOAMBEE, BOAMBEE EAST, BOGANGAR, BOGGABILLA, BOWRAVILLE, BRAY PARK, BROADMEADOW, BRUNSWICK HEADS, BYRON BAY, CALALA, CARRINGTON, CASINO, CESSNOCK, COFFS HARBOUR, COOKS HILL, CORLETTE, CRABBES CREEK, CUDGEN, CUDGEN HEIGHTS, DORRIGO, DUNGOG, EAST BALLINA, EAST KEMPSEY, EAST LISMORE, EAST MAITLAND, EAST TAMWORTH, ELERMORE VALE, EVANS HEAD, FINGAL BAY, FORSTER, FREDERICKTON, GENEVA, GLEN INNES, GLOUCESTER, GOONELLABAH, GRAFTON, GUNNEDAH, GUYRA, GWABEGAR, HAMILTON, HAMILTON SOUTH, HIGHFIELDS, HILLVUE, INVERELL, ISLINGTON, JESMOND, KARUAH, KEMPSEY, KINGSCLIFF, KOTARA, KOTARA SOUTH, KURRI KURRI, KYOGLE, LAMBTON, LAURIETON, LISMORE, LISMORE HEIGHTS, MACKSVILLE, MACLEAN, MARYLAND, MAYFIELD, MAYFIELD EAST, MAYFIELD WEST, MEREWETHER, MERRIWA, METFORD, MOREE, MULLUMBIMBY, MUNGINDI, MURWILLUMBAH, MUSWELLBROOK, NAMBUCCA HEADS, NARRABRI, NELSON BAY, NEW LAMBTON, NEWCASTLE, NEWCASTLE EAST, NEWCASTLE WEST, NORTH BOAMBEE VALLEY, NORTH HILL, NORTH LAMBTON, NORTH MACKSVILLE, NORTH TAMWORTH, OCEAN SHORES, OXLEY VALE, PILLIGA, PORT MACQUARIE, POTTSVILLE, POTTSVILLE BEACH, QUIRINDI, RANKIN PARK, RAYMOND TERRACE, RUTHERFORD, SALAMANDER BAY, SAWTELL, SCONE, SHORTLAND, SINGLETON, SINGLETON HEIGHTS, SOUTH GRAFTON, SOUTH KEMPSEY, SOUTH TAMWORTH, SOUTH WEST ROCKS, STANFORD MERTHYR, STOCKTON, STUARTS POINT, SUFFOLK PARK, TAMWORTH, TAREE, TARRO, TELARAH, TENAMBIT, TENTERFIELD, THE HILL, THORNTON, TINGHA, TOORMINA, TOWNSEND, TUNCURRY, TWEED HEADS, TWEED HEADS SOUTH, TWEED HEADS WEST, URALLA, URUNGA, WALCHA, WALLSEND, WARABROOK, WARATAH, WARATAH WEST, WARATH, WARDELL, WARIALDA RAIL, WAUCHOPE, WEE WAA, WERRIS CREEK, WEST BALLINA, WEST KEMPSEY, WEST TAMWORTH, WEST WALLSEND, WESTDALE, WESTON, WICKHAM, WINGHAM, WOLLONGBAR, WOODBERRY, WOOLGOOLGA, YARRAVEL.
CA6	ARGENTON, BATEAU BAY, BATEAU BAY ESTATE, BELMONT, BELMONT NORTH, BELMONT SOUTH, BERKELEY VALE, BLACKALLS PARK, BLACKSMITHS, BLACKWALL, BLUE HAVEN, BOLTON, BOLTON POINT, BONNELLS BAY, BOOKER BAY, BOORAGUL, BUDGEWOI, BUFF POINT, CAMERON PARK, CANTON BEACH, CARDIFF, CARDIFF HEIGHTS, CARDIFF SOUTH, CAREY BAY, CAVES BEACH, CHARLESTOWN, CHARMHAVEN, CHITTAWAY BAY, COORANBONG, DUDLEY, EAST GOSFORD, EDGEWORTH, ERINA, ETTALONG BEACH, FASSIFERN, FENNELL BAY, FLORAVILLE, GATESHEAD, GLENDALE, GOROKAN, GOSFORD, GREEN POINT, HAMLYN TERRACE, HILLSBOROUGH, JEWELLS, KAHIBAH, KANWAL, KARIONG, KILABEN BAY, KILLARNEY VALE, KINCUMBER, LAKE HAVEN, LAKEHAVEN, LISAROW, LONG JETTY, MACQUARIE HILLS, MANNERING PARK, MARDI, MARKS POINT, MORISSET, MOUNT HUTTON, NARARA, NIAGARA PARK, NORAH HEAD, NORTH GOSFORD, OURIMBAH, PELICAN, POINT CLARE, POINT FREDERICK, RATHMINES, REDHEAD, SAN REMO, SARATOGA, SPEERS POINT, SPRINGFIELD, SWANSEA, TERALBA, TERRIGAL, THE ENTRANCE, THE ENTRANCE NORTH, TINGIRA HEIGHTS, TORONTO, TOUKLEY, UMINA, UMINA BEACH, VALENTINE, WADALBA, WARNERS BAY, WATANOBBI, WEST GOSFORD, WHITEBRIDGE, WINDALE, WOODRISING, WOONGARRAH, WOY WOY, WYOMING, WYONG.

Contract Area	Suburbs Associated with that Contract Area
CA7	ABERCROMBIE, BARADINE, BATHURST, BINNAWAY, BLAYNEY, BOURKE, BOWENFELS, BREWARRINA, BROKEN HILL, CANOWINDRA, CARINDA, COBAR, COLLARENEBRI, CONDOBOLIN, COOLAH, COONABARABRAN, COONAMBLE, COWRA, DUBBO, DUNEDOO, EGLINTON, EUGOWRA, FORBES, GILGANDRA, GOOLOOGONG, GORMANS HILL, GRENFELL, GULARGAMBONE, GULGONG, KELSO, LAKE CARGELLIGO, LITHGOW, MILLTHORPE, MITCHELL, MOLONG, MORTS ESTATE, MUDGEE, NARROMINE, NYNGAN, OBERON, ORANGE, PARKES, PEAK HILL, PORTLAND, POTTERY ESTATE, QUAMBONE, RAVENSWOOD, SOUTH BATHURST, SOUTH BOWENFELS, TOTTENHAM, TRANGIE, TRUNDLE, WALGETT, WALLERAWANG, WARREN, WELLINGTON, WEST BATHURST, WINDRADYNE, YEOVAL.
CA8	ADELONG, ALBURY, ASHMONT, BALRANALD, BATLOW, BEELBANGERA, BERRIGAN, BOURKELANDS, COLEAMBALLY, COOLAMON, COOTAMUNDRA, COROWA, CULCAIRN, DARETON, DARLINGTON POINT, DENILIQUIN, EAST ALBURY, FOREST HILL, GLENFIELD PARK, GLENROY, GRIFFITH, GUNDAGAI, HAY, HILLSTON, HOLBROOK, HOWLONG, JUNEE, KOORINGAL, LAKE ALBERT, LAVINGTON, LEETON, LLOYD, LOCKHART, MOAMA, MOULAMEIN, MOUNT AUSTIN, NARRANDERA, NORTH ALBURY, OAKLANDS, SOUTH ALBURY, SOUTH GUNDAGAI, SPRINGDALE HEIGHTS, TARCUTTA, TEMORA, THE ROCK, THURGOONA, TOCUMWAL, TOLLAND, TUMBARUMBA, TUMUT, TURVEY PARK, WAGGA WAGGA, WENTWORTH, WEST ALBURY, WEST WYALONG, YANCO, YENDA.
CA9a	REDFERN, SURRY HILLS.
CA9b	ALEXANDRIA, BEACONSFIELD, CHIPPENDALE, DARLINGHURST, DARLINGTON, ERSKINEVILLE, EVELEIGH, FOREST LODGE, GLEBE, KINGS CROSS, MILLERS POINT, POTTS POINT, PYRMONT, THE ROCKS, ULTIMO, WATERLOO, WOOLLOOMOOLOO.
CA10	ABBOTSFORD, ANNANDALE, ASHBURY, ASHFIELD, BALMAIN, BALMAIN EAST, BELFIELD, BELMORE, BEVERLY HILLS, BURWOOD, CAMPERDOWN, CAMPSIE, CANADA BAY, CANTERBURY, CHISWICK, CLEMTON PARK, CONCORD, CONCORD WEST, CROYDON, CROYDON PARK, DRUMMOYNE, DULWICH HILL, EARLWOOD, ENFIELD, ENMORE, FIVE DOCK, GREENACRE, HABERFIELD, HOMEBUSH, HOMEBUSH WEST, HURLSTONE PARK, KINGSGROVE, LAKEMBA, LEICHHARDT, LEWISHAM, LILYFIELD, MARRICKVILLE, MOUNT LEWIS, NARWEE, NEWTOWN, PETERSHAM, PUNCHBOWL, RHODES, ROSELANDS, ROZELLE, RUSSELL LEA, ST PETERS, STANMORE, STRATHFIELD, STRATHFIELD SOUTH, SUMMER HILL, SYDENHAM, TEMPE, UNDERCLIFFE, WILEY PARK.
CA11	ALFORDS POINT, ALLAWAH, ARNCLIFFE, BANGOR, BANKSMEADOW, BARDEN RIDGE, BARDWELL VALLEY, BEXLEY, BEXLEY NORTH, BLAKEHURST, BONDI, BONDI BEACH, BONDI JUNCTION, BOTANY, BRIGHTON-LE-SANDS, BRONTE, BURRANEER, CARINGBAH, CARINGBAH SOUTH, CARLTON, CARSS PARK, CHIFLEY, CLOVELLY, COMO, COOGEE, CRONULLA, DACEYVILLE, EASTGARDENS, EASTLAKES, ENGADINE, GYMEA, GYMEA BAY, HILLSDALE, HURSTVILLE, HURSTVILLE GROVE, HURSTVILLE SOUTH, JANNALI, KENSINGTON, KINGSFORD, KIRRAWEE, KOGARAH, KURNELL, LA PEROUSE, LITTLE BAY, LOFTUS, LUGARNO, MALABAR, MAROUBRA, MASCOT, MATRAVILLE, MENAI, MIRANDA, MORTDALE, NORTH BONDI, OYSTER BAY, PADDINGTON, PAGEWOOD, PEAKHURST, PEAKHURST HEIGHTS, PENSHURST, PHILLIP BAY, QUEENS PARK, RAMSGATE, RANDWICK, RIVERWOOD, ROCKDALE, ROSE BAY, ROSEBERY, SANS SOUCI, SOUTH COOGEE, SOUTH HURSTVILLE, SUTHERLAND, SYLVANIA, TURRELLA, WAVERLEY, WOLLI CREEK, WOOLLAHRA, WOOLOOWARE.

Contract Area	Suburbs Associated with that Contract Area
CA12	AIRDS, AMBARVALE, BARGO, BATEHAVEN, BATEHAVEN NORTH, BATEMANS BAY, BEGA, BERMAGUI, BERRAMBOOL, BLAIR ATHOL, BOMADERRY, BOOROWA, BOW BOWING, BOWRAL, BRADBURY, BRAIDWOOD, CALLALA BAY, CAMDEN, CAMDEN SOUTH, CAMPBELLTOWN, CATALINA, CLAYMORE, COOMA, CRESTWOOD, CULBURRA BEACH, CURRANS HILL, DALMENY, DENHAMS BEACH, EAGLE VALE, EDEN, ELDERSLIE, ESCHOL PARK, GILEAD, GLENFIELD, GOULBURN, GRASMERE, INGLEBURN, JERRABOMBERRA, KARABAR, KEARNS, KIANGA, LEUMEAH, MACQUARIE FIELDS, MERIMBULA, MINTO, MITTAGONG, MORUYA, MOSS VALE, MOUNT ANNAN, NARELLAN, NARELLAN VALE, NAROOMA, NORTH NAROOMA, NORTH NOWRA, NOWRA, PAMBULA, PICTON, QUEANBEYAN, QUEANBEYAN EAST, QUEANBEYAN WEST, RABY, ROSEMEADOW, RUSE, SANCTUARY POINT, SILVERDALE, SOUTH NOWRA, ST ANDREWS, ST GEORGES BASIN, ST HELENS PARK, SUNSHINE BAY, SURF BEACH, SURFSIDE, SUSSEX INLET, TAHMOOR, THE OAKS, TURA BEACH, ULLADULLA, WEST NOWRA, WORRIGEE, YASS.
CA13	ALBION PARK, ALBION PARK RAIL, AUSTINMER, AVONDALE, BALGOWNIE, BARRACK HEIGHTS, BELLAMBI, BERKELEY, BLACKBUTT, BROWNSVILLE, BULLI, CONISTON, CORDEAUX HEIGHTS, CORRIMAL, CRINGILA, DAPTO, EAST CORRIMAL, FAIRY MEADOW, FARMBOROUGH HEIGHTS, FERNHILL, FIGTREE, FLINDERS, GWYNNEVILLE, HELENSBURGH, HORSLEY, KANAHOOKA, KEIRAVILLE, KEMBLAWARRA, KOONAWARRA, LAKE HEIGHTS, LAKE ILLAWARRA, MANGERTON, MOUNT KEMBLA, MOUNT SAINT THOMAS, MOUNT ST THOMAS, MOUNT WARRIGAL, NORTH WOLLONGONG, OAK FLATS, PENROSE, PORT KEMBLA, PRIMBEE, RUSSELL VALE, SHELLHARBOUR, SHELLHARBOUR CITY CENTRE, TARRAWANNA, THIRROUL, TOWRADGI, TULLIMBAR, UNANDERRA, WARILLA, WARRAWONG, WEST WOLLONGONG, WOLLONGONG, WOONONA.

Schedule 15 (Form of Statutory Declaration)

STATUTORY DECLARATION
(New South Wales)

I, ... of ....., do solemnly and sincerely declare as follows:

1. I am [Position held in Contractor's organisation] of Infinity Fire Protection Pty Ltd ABN 57 067 135 246 (Contractor).
2. The Contractor has a contract with the New South Wales Land and Housing Corporation ABN 24 960 729 253 for Specialised Fire Safety Services dated [Date] (**Contract**).
3. All subcontractors, Contractors and consultants engaged by the Contractor with respect to the work under the Contract have been paid all moneys due and payable to them in respect of work carried out for or materials supplied to the Contractor.
4. All workers who have been employed by the Contractor for the work under the Contract have been paid all monies due and payable to them in respect of their employment on the work under the Contract (and otherwise have been paid in accordance with all relevant Legislative Requirements, including the *Fair Work Act 2009* (Cth));
5. The Contractor is solvent and is not subject to an Insolvency Event as that term is defined in the Contract.
6. Attached to and forming part of this declaration is a subcontractor's statement given by the Contractor in its capacity as 'subcontractor' (as that term is defined in the *Workers Compensation Act 1987*, *Pay-roll Tax Act 2007* and *Industrial Relations Act 1996*) (**Acts**) which is a written statement:
   (a) under section 175B of the Workers Compensation Act 1987, in the form and providing the detail required by that legislation;
   (b) under Schedule 2, Part 5, ss17-20 Payroll Tax Act 2007, in the form and providing the detail required by that legislation; and
   (c) under section 127 of the Industrial Relations Act 1996, in the form and providing the detail required by that legislation.
7. The matters which are contained in this declaration and the attached subcontractor's statement are true.
8. If the Contractor has subcontractors, the Contractor has received from each of those subcontractors a statutory declaration and subcontractor's statement in equivalent terms to this declaration (made no earlier than 10 Business Days before the date of this declaration).
9. All statutory declarations and subcontractor's statements received by the Contractor from subcontractors referred to in clause 4 of this statutory declaration were:
   (a) given to the Contractor in its capacity as 'principal contractor' as defined in the Acts; and
   (b) given by the subcontractors in their capacity as 'subcontractors' as defined in the Acts.
10. The period of the Contract covered by this declaration and the attached subcontractor's statement is from _____ to _____.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the *Oaths Act 1900* (NSW).

Declared at _____ on _____
(*place where declaration made)* (*date of declaration*)

by _____
Signature of person making the declaration

in the presence of an authorised witness, who states:

I, [*Name of authorised witness*], a [*qualification of authorised witness*],

certify the following matters concerning the making of this statutory declaration by the person who made it:

1. I saw the face of the person; and
2. I have known the person for at least 12 months.

OR

1. I did not see the face of the person because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering, and

2. I have confirmed the person's identity using an identification document and the document I relied on was [identification document relied on].

....

Signature of authorised witness *date*

SUBCONTRACTOR'S STATEMENT

REGARDING WORKER'S COMPENSATION, PAYROLL TAX AND REMUNERATION (Note 1 – see back of form)

New South Wales

For the purposes of this Statement a 'subcontractor' is a person (or other legal entity) that has entered into a contract with a 'principal contractor' to carry out work.

This Statement must be signed by a 'subcontractor' (or by a person who is authorised, or held out as being authorised, to sign the statement by the subcontractor) referred to in any of s175B *Workers Compensation Act 1987*, Schedule 2 Part 5 *Payroll Tax Act 2007*, and s127 *Industrial Relations Act 1996* where the 'subcontractor' has employed or engaged workers or subcontractors during the period of the contract to which the form applies under the relevant Act(s). The signed Statement is to be submitted to the relevant principal contractor.

SUBCONTRACTOR'S STATEMENT (Refer to the back of this form for Notes, period of Statement retention, and Offences under various Acts.)

Subcontractor: _____ ABN: _____
(Business name)

Of _____
(Address of subcontractor)

has entered into a contract with_____ ABN _____ **(Note 2)**
(Business name of principal contractor)

Contract number/identifier: _____ **(Note 3)**

This Statement applies for work between: ___/___/___ and ___/___/___ inclusive, **(Note 4)**

subject of the payment claim dated: _____. **(Note 5)**

I, _____ a Director or a person authorised by the Subcontractor on whose behalf this declaration is made, hereby declare that I am in the position to know the truth of the matters which are contained in this Subcontractor's Statement and declare the following to the best of my knowledge and belief:

(a) The abovementioned Subcontractor has either employed or engaged workers or subcontractors during the above period of this contract. Tick **[ ]** if true and comply with **(b)** to **(g)** below, as applicable. If it is not the case that workers or subcontractors are involved or you are an exempt employer for workers compensation purposes tick **[ ]** and only complete **(f)** and **(g)** below. You must tick one box. **(Note 6)**

(b) All workers compensation insurance premiums payable by the Subcontractor in respect of the work done under the contract have been paid. The Certificate of Currency for that insurance is attached and is dated ___/___/___ **(Note 7)**

(c) All remuneration payable to relevant employees for work under the contract for the above period has been paid. **(Note 8)**

(d) Where the Subcontractor is required to be registered as an employer under the *Payroll Tax Act 2007*, the Subcontractor has paid all payroll tax due in respect of employees who performed work under the contract, as required at the date of this Subcontractor's Statement. **(Note 9)**

(e) Where the Subcontractor is also a principal contractor in connection with the work, the Subcontractor has in its capacity of principal contractor been given a written Subcontractor's Statement by its subcontractor(s) in connection with that work for the period stated above. **(Note 10)**

(f) *Signature* _____ *Full Name* _____

(g) *Position/Title* _____ *Date* ___/___/___

NOTE: Where required above, this Statement must be accompanied by the relevant Certificate of Currency to comply with section 175B of the *Workers Compensation Act 1987*.

Notes

1. This form is prepared for the purpose of section 175B of the *Workers Compensation Act 1987*, Schedule 2, Part 5 *Pay-roll Tax Act 2007* and section 127 of the *Industrial Relations Act 1996*. If this form is completed in accordance with these provisions, a principal contractor is relieved of liability for workers compensation premiums, pay-roll tax and remuneration payable by the subcontractor.

   A principal contractor can be generally defined to include any person who has entered into a contract for the carrying out of work by another person (or other legal entity called ***the subcontractor***) and where employees of the subcontractor are engaged in carrying out the work which is in connection with the principal contractor's business.

2. For the purpose of this Subcontractor's Statement, a principal contractor is a person (or other legal entity), who has entered into a contract with another person (or other legal entity), referred to as the subcontractor, and employees/workers of that subcontractor will perform the work under contract. The work must be connected to the business undertaking of the principal contractor.

3. Provide the unique contract number, title, or other information that identifies the contract.

4. In order to meet the requirements of s127 *Industrial Relations Act 1996*, a statement in relation to remuneration must state the period to which the statement relates. For sequential Statements ensure that the dates provide continuous coverage.

   Section 127(6) of the *Industrial Relations Act 1996* defines remuneration *'as remuneration or other amounts payable to relevant employees by legislation, or under an industrial instrument, in connection with work done by the employees.'*

   Section 127(11) *Industrial Relations Act 1996* states *'to avoid doubt, this section extends to a principal contractor who is the owner or occupier of a building for the carrying out of work in connection with the building so long as the building is owned or occupied by the principal contractor in connection with a business undertaking of the principal contractor.'*

5. Provide the date of the most recent payment claim.

6. For Workers Compensation purposes an exempt employer is an employer who pays less than $7500 annually, who does not employ an apprentice or trainee and is not a member of a group.

7. In completing the Subcontractor's Statement, a subcontractor declares that workers compensation insurance premiums payable up to and including the date(s) on the Statement have been paid, and all premiums owing during the term of the contract will be paid.

8. In completing the Subcontractor's Statement, a subcontractor declares that all remuneration payable to relevant employees for work under the contract has been paid.

9. In completing the Subcontractor's Statement, a subcontractor declares that all payroll tax payable relating to the work undertaken has been paid.

10. It is important to note that a business could be both a subcontractor and a principal contractor, if a business 'in turn' engages subcontractors to carry out the work. If your business engages a subcontractor you are to also obtain Subcontractor's Statements from your subcontractors.

Statement Retention

The principal contractor receiving a Subcontractor's Statement must keep a copy of the Statement for the periods stated in the respective legislation. This is currently up to seven years.

Offences in respect of a false Statement

In terms of s127(8) of the *Industrial Relations Act 1996*, a person who gives the principal contractor a written statement knowing it to be false is guilty of an offence if:

(a) the person is the subcontractor;

(b) the person is authorised by the subcontractor to give the statement on behalf of the subcontractor; or

(c) the person holds out or represents that the person is authorised by the subcontractor to give the statement on behalf of the subcontractor.

In terms of s175B of the *Workers Compensation Act 1987* and clause 18 of Schedule 2 of the *Payroll Tax Act 2007* a person who gives the principal contractor a written statement knowing it to be false is guilty of an offence.

Further Information

For more information, visit the WorkCover website www.workcover.nsw.gov.au, Office of State Revenue website www.osr.nsw.gov.au or Office of Industrial Relations, Authority of Commerce website www.commerce.nsw.gov.au. Copies of the *Workers Compensation Act 1987*, the *Pay-roll Tax Act 2007* and the *Industrial Relations Act 1996* can be found at www.legislation.nsw.gov.au

Schedule 16 (Form of Parent Company Guarantee)

Deed of guarantee, undertaking and substitution

Parties

This Deed made the …….. day of …….. 20……..

BY:	**Infrastructure Maintenance & Engineering Australia Pty Ltd** (ABN 89 002 357 600) of Australia Square, Level 33, 264 George Street, Sydney New South Wales 2000 (**Guarantor**)
IN FAVOUR OF:	**New South Wales Land and Housing Corporation** (ABN 24 960 729 253) of 4 Parramatta Square, 12 Darcy Street, Parramatta, New South Wales 2150 (**Principal**)

Background

A The Principal and Infinity Fire Protection Pty Ltd (ABN 57 067 135 246) ('**Contractor**') have entered into a contract dated [Date] ('**Contract**') in relation to Specialised Fire Safety Services.

B The Principal has entered into the Contract:

(i) at the request of the Guarantor (which request is confirmed by the Guarantor's execution of this Deed); and

(ii) conditionally upon the Guarantor signing this Deed.

Operative Terms

1 Guarantee of Performance

The Guarantor guarantees to the Principal the due and punctual performance of every legal, equitable, contractual, statutory or other duty, undertaking, warranty, guarantee, indemnity, covenant, agreement or other obligation ('obligation') on the part of the Contractor which at any time arises under or in connection with the Contract including without limitation:

(a) any obligation on the part of the Contractor to pay the Principal any costs, expenses, damages or other liabilities, whether present, future, actual or contingent, liquidated or unliquidated;

(b) any obligation arising from any variation to the Contract:

(i) agreed between the Contractor and the Principal; or

(ii) made in accordance with the Contract,

at any time, whether or not the Guarantor is aware of or consents to the variation; and

(c) the unenforceable Contractor's obligations referred to in clause 6 of this Deed,

(**Contractor's obligations**).

2 Indemnity for loss

The Guarantor indemnifies the Principal and agrees at all times hereafter to keep the Principal indemnified from and against all damages, costs, losses, expenses and liabilities which the Principal may suffer or incur consequent upon or arising out of the Contractor's obligations not being performed, observed or fulfilled and the Guarantor agrees that the indemnity given by the Guarantor under this clause:

(a) is a separate and additional obligation of the Guarantor under this Deed;

(b) is given by the Guarantor as a principal indemnifier and not as a surety;

(c) applies even though the Principal may not be entitled for any reason to recover those amounts from the Contractor, with the effect that the moneys are not recoverable from the Guarantor on the basis that the Guarantor has otherwise only given a guarantee in respect of payment of those amounts; and

(d) is given on the other terms of this Deed (with all necessary changes being made) so far as those other terms can apply.

3 Continuing guarantee and indemnity

This Deed shall be a continuing obligation and security and shall not be considered as wholly or partially satisfied or discharged by the payment at any time or times hereafter of any sum or sums of money for the time being due to the Principal under the Contract or by any settlement of any other obligation or any other matter or thing.

4 Liability not discharged by other events

The liability of the Guarantor and the rights of the Principal under this Deed shall not be affected by:

(a) the granting of time or other indulgence or concession to the Contractor;

(b) the compounding, compromise, release, abandonment, waiver, variation, relinquishment or renewal of any of the rights of the Principal against the Contractor;

(c) any neglect or omission to enforce such rights;

(d) the liquidation of the Contractor;

(e) the termination, cancellation, rescission, assignment or novation of the Contract in whole or in part;

(f) the Contract being or becoming void or voidable in whole or in part; or

(g) any other act, matter or thing which under the law relating to sureties would or might but for this provision release the Guarantor from its obligations under this Deed or any part of them.

5 Assignment by the Principal

The Principal may assign the benefit of this Deed to the extent that the assignee also accepts an assignment of the whole or any part of the Contractor's obligations. The Principal shall be

entitled to provide any information it may have concerning the Guarantor to any proposed assignee.

6 Invalidity of Contractor's obligations

Despite any other provisions of this Deed, the guarantee and indemnity given by the Guarantor under this Deed shall also extend and apply to obligations on the part of the Contractor which were void from the beginning, or have been subsequently avoided or are otherwise unenforceable by the Principal as a result of:

(a) any legal limitation, disability or incapacity relating to the Contractor;

(b) any delay, neglect or failure to register or perfect the Contract or obtain any consent or authorisation necessary to give legal effect to the Contract (other than by reason of an act or omission of the Principal);

(c) the Contractor's failure to comply with any law; or

(d) any death, mental incapacity, winding up, liquidation, bankruptcy, insolvency, voluntary administration, composition of debts, scheme of reconstruction, official management, receivership, assignment of property, scheme of arrangement or other incapacity, insolvency or demise on the part of or entered into by the Contractor,

whether or not the Principal should have known about the same (**unenforceable Contractor's obligations**).

7 Governing law

This Deed and any matter arising in connection with it shall be governed by the laws of the State of New South Wales, and the parties submit to the non-exclusive jurisdiction of the Courts of that State.

8 Parties successors and assigns

References in this Deed to the Guarantor, the Principal and the Contractor shall be taken to include their respective successors and assigns.

The parties have signed, sealed and delivered this Deed on the day and year mentioned above.

Execution

Executed as a Deed

by
Infrastructure Maintenance & Engineering Australia Pty Ltd (ABN: 89 002 357 600) in accordance with section 127 of the *Corporations Act 2001* (Cth):

Director	Director/Secretary
Full name of Director	Full name of Director/Secretary

Executed for and on behalf of
New South Wales Land and Housing Corporation
on / / by its duly authorised officer in the presence of:

	Signature of Authorised Officer
Signature of witness	Full Name of Authorised Officer
Name of witness (print)	Office Held

Schedule 17 (Home Building Act Requirements)

This Schedule applies to the extent that the Home Building Act applies to either this Contract or to any Work Order issued pursuant to this Contract.

CHECKLIST UNDER SCHEDULE 2 OF THE HOME BUILDING REGULATION

1.	Have you checked that contractor holds a current contractor licence?	**Yes** ☐ **No** ☐
2.	Does the licence cover the type of work included in the contract?	**Yes** ☐ **No** ☐
3.	Is the name and number on the contractor's licence the same as on the contract?	**Yes** ☐ **No** ☐
4.	Is the work to be undertaken covered in the contract, drawings or specifications?	**Yes** ☐ **No** ☐
5.	Does the contract clearly state a contract price or contain a warning that the contract price is not known?	**Yes** ☐ **No** ☐
6.	If the contract price may be varied, is there a warning and an explanation about how it may be varied?	**Yes** ☐ **No** ☐
7.	Are you aware of the cooling-off provisions relating to the contract?	**Yes** ☐ **No** ☐
8.	Is the deposit within the legal limit of 10%?	**Yes** ☐ **No** ☐
9.	Does the contract include details of the progress payments payable under the contract?	**Yes** ☐ **No** ☐
10.	Do you understand the procedure to make a variation to the contract?	**Yes** ☐ **No** ☐
11.	Are you aware of who is to obtain any council or other approval for the work?	**Yes** ☐ **No** ☐
12.	Do you understand that any registered certifier required to certify work under the contract is to be selected by you and the contractor cannot object to your selection?	**Yes** ☐ **No** ☐
13.	Do you understand that you are not required to pay the contractor a deposit or any progress payments until the contractor has given you a certificate of insurance under Part 6 or Part 6B of the *Home Building Act 1989* (except where the work is of a kind that does not require insurance)?	**Yes** ☐ **No** ☐
14.	Does the contract include either of the following: (a) the cost of the insurance under Part 6 of the *Home Building Act 1989*, (b) the cost of the alternative indemnity product under Part 6B of the *Home Building Act 1989*?	**Yes** ☐ **No** ☐
15.	Has the contractor given you a copy of the Consumer Building Guide, which provides key information about your rights and responsibilities under NSW's home building laws and where to get more information?	**Yes** ☐ **No** ☐

16.	Does the contract include a statement about the circumstances in which the contract may be terminated?	**Yes** ☐ **No** ☐
17.	Does the contract include the Security of Payment Guide which provides key information about your rights and responsibilities under the Building and Construction Industry Security of Payment Act 1999 and the Building and Construction Industry Security of Payment Regulation 2020?	**Yes** ☐ **No** ☐

Signatures
Do not sign the contract unless you have read and understand the clauses as well as the notes and explanations contained in the contract and this document.
If you have answered "no" to any question in the checklist, you may not be ready to sign the contract.
Both the contractor and the owner should retain an identical signed copy of the contract including the drawings, specifications and other attached documents. Make sure that you initial all attached documents and any amendments or deletions to the contract.

Signed copy of contract
Under the *Home Building Act 1989* a signed copy of the contract must be given to the owner within 5 working days after the contract is entered into.

Home Building Compensation Fund
The contractor must provide you with a certificate of insurance under the Home Building Compensation Fund before the contractor commences work and before the contractor can request or receive any payment.

Acknowledgement of owners
I/We have been given a copy of the Consumer Building Guide and I/we have read and understand it.
I/We have completed the checklist and answered "**Yes**" to all items on it.

Note
Where the owner is a company or partnership or the contract is to be signed by an authorised agent of the owner, the capacity of the person signing the contract, eg director, must be inserted

Signature
Name [*print*]
Capacity [*print*]

Signature
Name [*print*]
Capacity [*print*]