



Government of **Western Australia**
Housing Authority

Housing Authority

MAINTENANCE WORKS AND SERVICES CONTRACT

Technical Specification

11.0



Document History

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GENERAL

1. Overview

1.1 General

- (a) The Technical Specification:
 - (i) specifies requirements that apply to all Contractors undertaking Maintenance Works and Services on behalf of the Principal;
 - (ii) is intended to enable the Contractor to understand the Principal's expectations with regard to performing the Maintenance Works and Services, where those expectations are above or different from an Australian or International standard or required by the Principal;
 - (iii) should be read in conjunction with the:
 - A. the Conditions of Contract;
 - B. the General Specification;
 - C. the Schedule of Rates; and
 - D. all other relevant Contract documents.
 - (iv) has been developed to provide efficient, cost-effective and high quality Maintenance Works and Services to the Principal and its Tenants;
 - (v) is intended to enable the Principal to manage the quality of the Maintenance Works and Services together with the Conditions of Contract, General Specification and the Performance Management Framework;
 - (vi) is intended to enable the parties to more efficiently resolve disputes over technical issues related to the Maintenance Works and Services; and
 - (vii) is for use with Reactive Maintenance, Void Maintenance, Cyclical Maintenance and Quoted Works as provided in the General Specification.
- (b) The Principal's requirements concerning the matters the subject of this Technical Specification may change over the Term. The Principal may amend the Technical Specification by varying, deleting, adding or otherwise altering the terms of the Technical Specification (Amendment). Prior to making any Amendment the Principal must use its best endeavours to agree with the Contractor any amendments to the Technical Specification.

1.2 Legislation and Codes of Practice

- (a) In carrying out the Maintenance Works and Services, the Contractor must comply with all Statutory Requirements, including but not limited to:
 - (i) *Building Act 2011* (WA);



- (ii) *Building Regulations 2012 (WA);*
- (iii) *Code of Practice – Safe electrical work on low voltage electrical Installations (Energy Safety);*
- (iv) *Dividing Fences Act 1961 (WA);*
- (v) *Electricity (Licencing) Regulations 1991 (WA);*
- (vi) *Electricity (Supply Standards and System Safety) Regulations 2001 (WA);*
- (vii) *Electricity Regulations 1947 (WA);*
- (viii) *Environmental Protection (Noise) Regulations 1997 (WA);*
- (ix) *Environmental Protection Act 1986 (WA);*
- (x) *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (WA);*
- (xi) *Gas Standards Act 1972 (WA);*
- (xii) *Health (Pesticides) Regulations 2011 (WA);*
- (xiii) *Health Act 1911 (WA);*
- (xiv) *Heritage of Western Australia Act 1990 (WA);*
- (xv) *Local Government Act 1995 (WA);*
- (xvi) *Local Government regulations and by-laws;*
- (xvii) *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth);*
- (xviii) *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (Cth);*
- (xix) *Plumbing Code of Australia;*
- (xx) *Poisons Act 1964 (WA);*
- (xxi) *Residential Tenancies Act 1987 (WA);*
- (xxii) *Rights in Water and Irrigation Act 1914 (WA);*
- (xxiii) *Strata Titles Act 1985 (WA);*
- (xxiv) *Trade Practices (Consumer Products Safety Standard – Corded Internal Window Coverings) Regulations 2010 (Cth);*
- (xxv) *Utility Providers Code of Practice for Western Australia;*
- (xxvi) *WA Electrical Requirements (WAER) 2008;*



(xxvii) *Water Services Regulations 2013 (WA)*; and

(xxviii) *Water Services Act 2012 (WA)*.

(b) Where a standard is referenced it shall refer to the most current version.

1.3 General Specification and Technical Specification – function of each

- (a) The General Specification contains general work requirements that apply to all Contractors undertaking Maintenance Works and Services and provides the operational framework for the Contract.
- (b) The Technical Specification provides the detailed technical standards for the Schedule of Rates Tasks.

1.4 Schedule of Rates

- (a) The Schedule of Rates is categorised by trade and each trade is divided into sub headings. Each sub heading is split into a number of Tasks, each with a unique code.
- (b) Each Task defines a particular outcome required in carrying out the Maintenance Works and Services.
- (c) The column labelled 'Further Detail' may contain information that relates directly to a single Task such as a particular:
 - (i) standard;
 - (ii) instruction;
 - (iii) material description; and
 - (iv) business rule (for example, some Tasks cannot be raised or claimed in conjunction with other Tasks on the same Works Order).
- (d) Tasks denoted by P1 are applicable to an Emergency Works Order. The price of these Tasks includes all costs associated with the provision of a 24 hour / 7 days per week emergency premium service.
- (e) An emergency premium may be applied to Tasks not denoted by P1 at the Principal's discretion.

1.5 Measurements and Units

Area

- m² square metre

Distance

- km kilometre
- m metre (linear metre)



- cm centimetre
- mm millimetre
- μm micrometre (micron)

Energy

- A ampere (amp)
- J joule
- kA kiloampere (kiloamps)
- kW kilowatt
- mA milliampere
- mJ millijoule
- mV millivolt
- V volt
- W watt

Pressure/Force

- MPa megapascal
- kPa kilopascal

Temperature

- $^{\circ}\text{C}$ degrees Celsius

Time

- h hour
- s second

Volume

- kl kilolitre
- l litre
- ml millilitre
- m^3 cubic metre



Weight

- kg kilogram
- g gram
- oz ounce

Unit

- ea each
- it item
- h hour
- m metre
- m² square metre
- m³ cubic metre
- pr pair
- rm room
- sh sheet
- si site
- st set
- un unit

1.6 Definitions

ACM

Means Asbestos Containing Material – bonded, loose or friable asbestos or any product that contains asbestos.

Adjacent

Means to be near, close or adjoining.

Adjust

Means to align, support, straighten, reposition, Secure, recalibrate, reset, tighten, loosen or otherwise perform work to restore to proper working order.

Appliance

Means a device or instrument designed to perform a specific function or functions, such as an electrical or gas water heater for household use.

Appliance Report



Means a report in the form provided at annexure 177.5 Inspect and Report Templates.

Authorisation

Means and refers to the written (and if necessary verbal) approval from the Principal.

BCA means the Building Code of Australia.

Bed

Means a foundation or layer to support, underlie or Secure.

Borehole Completion Record

Is defined in chapter 15 of the Minimum Construction Requirements for Water Bores in Australia.

Concealed

Means, in relation to gas and water leaks, concealed below ground, in wall, in cavity or roof space.

Contractor

Has the same meaning as in the Conditions of Contract.

Corrective

Means an action performed as a result of failure to restore an item or asset to its optimal condition.

Colour Schemes

Means those colour schemes provided by the Principal to the Contractor from time to time. See annex 177.9 Colour Schemes for details.

Debris

Means green waste, rubble, waste, wrecked, damaged, broken or Removed Materials including all Materials not refitted and also packaging and containers resulting from undertaking Maintenance Works and Services.

Defect

Has the same meaning as in the Conditions of Contract.

Demolish

Means to tear down completely, raze, or do away with completely.

Dispose

Means to take away from a Site any Debris or Removed or Demolished Materials. Disposal must be according to material type in accordance with legislation, regulations, standards and best practices.

Drilling Log

Is defined in chapter 15 of the Minimum Construction Requirements for Water Bores in Australia.



Ease

Means to alleviate binding or hitting.

Exposed

Means, in relation to gas and water leaks, exposed above ground or external to a wall and includes where applicable appliance, meter assembly or regulator.

ESD Remediation

Has the meaning provided in the General Specification.

Fit, Fitting or Fitted

Means an acceptable method used to Install, erect, stand or Fix a product as required by the product manufacturer so that the product performs its functions as intended and warranted. It also includes all Testing and commissioning that may be required and the supply of all instructions to the Tenant on its use.

Fix or Fixed

Means the acceptable method of using Fixings to align, Adjust, adjoin, attach, erect, stand and Secure a product so it performs its functions as intended and warranted by the manufacturer and/or supplier.

Fixing

Means any screws, nails, tape, adhesives, brackets, bolts and nuts etc. needed to fit, Secure or Repair a material or product in order that it performs its intended function or functions.

Fixtures

Mean any item or product Fixed or attached to the structure of a Site, including but not limited to:

- air-conditioning units;
- curtains, blinds, floor coverings, insect mesh and screens;
- door handles, locks, door buffers;
- fans, exhaust fans and range hoods;
- light and power switches or outlets;
- manhole covers;
- meter boxes and circuit boards;
- picture rails, dado rail, architraves, skirting boards, doors, windows and glazing;
- pipework, cabling and conduit;
- stoves, Room heaters, sinks, troughs, hand basins, showers, baths, cisterns, pedestal pans, cupboards, shaving cabinets, medicine cabinets etc.



- taps, sprout and shower roses; and
- TV outlets.

Flush¹ means to align or have surfaces in the same plane so the Adjacent surfaces are level or even.

Flush² means to clean waste or blockage by the flow of water through it.

Hang or Rehang means to suspend, swing, sling or slide using Fixings to make or return a component to its working condition and so it performs its functions as intended and warranted.

Hold Point

Has the meaning provided by the General Specification.

Incidental Works

Has the meaning provided by clause 4.2 Incidental Works.

Install

Has its ordinary meaning, but includes all preparation required prior to the supply, placement and fixing or fitting of a new material, component or finish and any connection to services, commissioning and testing before cleaning and tidying up.

Inspect and Report Task

Has the meaning provided by clause 4.3 Inspect and Report.

Lay

Means the fixing in place or laying of the new material, component or finish. It also includes any preparation, making good, cleaning and tidying.

Lop

Means to safely prepare a lopping site for the lopping process, safely lop vegetation and Remove from site. Lopping involves the random cutting of branches or stems between the branch unions or at internodes on trees.

Match

Means to use products of similar size, shape, colour, material and quality of that of the original.

Materials

Means all materials, Appliances, equipment, Fixings, fittings, goods, parts, plant, products, tools and other items required to complete a Task.

Miscellaneous Task

Means a Task not directly related to a trade skill, but is necessary for successful completion of some Works Orders, and identified as such in the Schedule of Rates.

Nominated Brand



Means a brand identified by the Principal as required to be used when performing specific Maintenance Works and Services.

Nominated Product

Means a product identified by the Principal as required to be used when performing specific Maintenance Works and Services.

Non-Related Works means Maintenance Works and Services that are neither provided for on a Works Order nor Related Works.

Paint

Also means varnish where a Task requires the painting of a surface which was previously varnished or where similar Adjacent timber items at the Site are varnished.

Patch

Means to mend, Repair or connect and stabilise surfaces, apply a patching material, make Flush, sand, clean and Seal the patch ready for painting or Installation.

Personnel

Has the same meaning as in the General Specification.

Preventative

Is a descriptor relating to actions performed to retain an item or asset in its operational condition by providing systemic inspections, detection and prevention of incipient failure.

Principal

Means the Housing Authority.

Reactive Works Order

Has the same meaning as in the General Specification.

Related Works

Means Maintenance Works and Services associated specifically with the form and function of a component stipulated on a Works Order.

Relocate

Means to Remove an item from a position and Install it into a new position, including the Supply and Installation of new Fixings.

Remove

Means to Demolish, dismantle or take off, then Dispose of the item and Debris from the site, making good, cleaning and tidying upon completion of the Maintenance Works and Services.

Repair



Means to return to working order a component, Appliance or facility, including any disassembly and reassembly, making good, cleaning and leaving in a working and fit state upon completion of the Maintenance Works and Services. Repair items can include items such as Adjusting, Rehangng, easing, re-nailing and re-wiring. All parts are included in Repair Tasks unless otherwise stated.

Replace

Means: any demolition, removal and disposal of an existing item and Debris; any preparation required; the procurement and delivery to site of all necessary Materials and items; fitting and fixing or applying of the new material, Appliance, component or finish; Testing and commissioning that may be required to ensure that the product performs its intended function; instructing, or leaving instructions for, the Tenant on its use; making good, cleaning and tidying. It is distinct from Supply and Install in requiring removal of the existing item.

Room

Means an area separated from other parts of a Site by walls with a fully framed doorway and usually used for a particular purpose such as sleeping, cooking, eating or showering. Nib, half and part walls without fully framed doorways are not Room separations but are components within that Room. Cupboards such as pantries and linen cupboards are included as part of a Room, despite being separated by a fully framed door.

Safety Switch

Means either an RCD or RCBO.

Schedule of Rates

Has the same meaning as in the Conditions of Contract.

Scrub

Means to cleanse by rubbing hard in order to Remove dirt, marks or stains using water or other liquid usually with soap, detergent or bleach before rinsing and wiping down surface.

Seal

Means an appropriate application of sealant such as Sealer paint, silicon or grout to Seal a surface, joint, gap or crack.

Sealer

Means sealer paint, applied to a new, Repaired or replaced item or any area disturbed as a result of the Maintenance Works and Services as per Trade Specification – Painting.

Secure or Resecure

Means renew, change or Adjust Fixings so a product can perform its intended function or functions.

Service Report and Service Report Sheet

Means a report in the form provided at annexure 177.4 Service Report Sheets.

Site

Has the same meaning as in the Conditions of Contract.



Strip and Polish

Means to clean vinyl flooring then Remove old vinyl Sealer, apply new vinyl Sealer and polish to provide a smooth and shiny finish.

Structural

Means essential parts and components that form a Site such as roofs, ceilings, walls and floors without which the Site or Room cannot be used for its primary function.

Supply and Install

Means: any preparation required; the procurement and delivery to the Site of all necessary Materials and items; fitting and fixing or applying of the new material, Appliance, component or finish; Testing and commissioning that may be required to ensure that the product performs its intended function or functions; instructing, or leaving instructions for, the Tenant on its use; making good, cleaning and tidying. It is distinct from Replace in that it does not require the removal of an existing item.

Supply Authority

Means an agency charged with managing a Utility network such as electricity, gas or water.

Task

Means an outcome focussed action described in the Schedule of Rates.

Test

Means to check or trial the operations, assess, Adjust and accept performance then, if required, commission the product.

Tiling

Means floor and wall tiling including all temporary rules, temporary grounds, temporary screeds, all angles, cutting and waste, grouting, sealing, waterproofing, making good around pipes and penetrations, tidying and cleaning up.

Void Works Order

Has the meaning provided in the General Specification.

Warranty

Has the meaning provided in the Conditions of Contract.

Wiring Rules

The industry term for the AS/NZS 3000 standards.

Wet Area

Means a bathroom, laundry, toilet, en-suite and shower room or any Room that has or should have a floor waste to capture and Remove water. Kitchen is not considered to be a Wet Area.

Works Order



Has the meaning provided in the Conditions of Contract.

1.7 Abbreviations

Abbreviations in the Technical Specification and Schedule of Rates:

ABS	acrylonitrile butadiene styrene
ACM	asbestos containing Materials
ATU	aerobic treatment unit
BMT	base metal thickness
BSP	British standard pipe
CP	chrome plated
DPaW	Department of Parks and Wildlife
EBF	external balance flue
GPO	general power outlet
GROH	Government Regional Officer Housing
GW	galvanised wrought iron
HEPA	high efficiency particulate air
HID	high intensity discharge
HIR	high impact resistant
HMR	highly moisture resistant
HWS	hot water supply
HWU	hot water unit
IBF	internal balance flue
ID	internal diameter
ITP	inspect and Test plan
KPI	key performance indicator
LPG	liquid petroleum gas
MCB	miniature circuit breaker
MSDS	material safety data sheet
MDF	medium density fibre
MR	moisture resistant



PGI	plain galvanised iron
PLB	Plumbers Licensing Board
PPE	personal protective equipment
PVC	polyvinyl chloride
PVCu	unplasticised polyvinyl chloride
RCBO	Residual-current Circuit Breaker with Overcurrent protection (see RCD/MCB)
RCD	Residual Current Device
RCD/MCB	Residual Current Device/Mini Circuit Breaker (see RCBO)
RHS	rectangular hollow sections
SHS	square hollow sections
SoR	Schedule of Rates
SWMS	Safe Work Method Statement
T5A	Take 5 Safety Assessment
TLP	tempered liquid petroleum gas
TV	television
VOC	volatile organic compound
WHS	work health and safety

2. Materials, Equipment, Tools and Safety

2.1 Materials

- (a) The Contractor must procure all Materials, equipment and tools required to carry out the Maintenance Works and Services and such cost is deemed to be included in the SoR prices, unless otherwise specified.
- (b) Where the Contractor is required to renew, Replace or Supply and Install, the Contractor shall only use new Materials, from Nominated Brands, Nominated Products or Appliances.
- (c) The Contractor must gain the Principal's written approval prior to the use of any alternative Material, Brand, Product or Appliance other than those contained in the Principal's Nominated Products.
- (d) The Contractor may only use second-hand Materials or parts where nominated by the Principal on the Works Order, or otherwise approved by the Principal.



- (e) Where the Contractor uses Materials supplied by the Principal, the Contractor cannot charge for those Materials and may only charge for the Task in accordance with the relevant Labour Rate for the trade.
- (f) The Contractor must not use goods and/or Materials that are subject to anti-dumping measures by the Anti-Dumping Commission.
- (g) The Principal requires all Materials to be:
 - (i) of a similar shape, size, thickness, colour, and finish to the existing Materials unless otherwise nominated by the Principal; and
 - (ii) from a premium range unless nominated otherwise by the Principal.
- (h) All prices associated with each Task must allow for off cuts, overlaps and wastage.

2.2 Tools of the Trade, Equipment and Specialised Equipment

- (a) The Contractor is responsible for the procurement of all tools of the trade and equipment including any plant and vehicles that are necessary to perform the Maintenance Works and Services.
- (b) Tools of the trade that are not within the Contractor's possession must be hired or procured as necessary.
- (c) Where the Contractor requires specialised equipment that it would not reasonably be expected to have or procure as part of undertaking the Maintenance Works and Services, the Principal will reimburse the Contractor for the cost of hiring the specialised equipment.
- (d) In determining whether the Principal will reimburse for equipment, the Contractor must note:
 - (i) equipment that is considered to be industry or trade standard for that trade will not be paid for;
 - (ii) scaffold, elevated work platforms and boom lifts are not considered to be specialised equipment for those Trades that regularly undertake Works and Services at heights, including but not limited to electricians, tree loppers, glaziers, painters, brick layers, roof plumbers and carpenters;
 - (iii) recently released new equipment that is likely to become industry or trade standard will not be paid for;
 - (iv) the Principal will only pay for the short term hire or lease of the equipment to enable performance of Works directly related to the Tasks on the Works Order;
 - (v) prior approval to procure equipment must be obtained from the Principal;
 - (vi) procurement of additional equipment will be treated as Quoted Works; and



- (vii) the Contractor must submit the relevant supplier invoice with the submission of their account for reimbursement for the provision of the supply of the equipment.
- (e) The Contractor must submit the relevant supplier invoice with the submission of their account for reimbursement for the provision of the supply of the equipment. The Principal may issue business rules from time to time to clarify which specialised equipment the hire of which will be reimbursed under this clause.

2.3 Photographs

- (a) The Contractor must ensure that all photographs required to be taken that when submitted are clear, well lit, not blurry, the subject is centred, upright, show the entirety of the completed works in the context of the room and are correctly focussed so that any writing is legible.
- (b) When taking photographs of smoke alarms, the Contractor must ensure that photographs are taken as follows;
 - (i) close up of the back of the device so that writing is legible;
 - (ii) close up of the side of the device with the expiry date clearly visible; and
 - (iii) close up of the front of the device:
 - A. for all devices, with the written expiry date clearly visible; and
 - B. for devices located in a Bedroom or Passage, with the identification number clearly visible.
- (c) When taking photographs of wireless interconnection modules, the Contractor must ensure that photographs are taken as follows;
 - (i) for modules installed in a hardwired smoke alarms
 - A. close up of the back of the wireless interconnection device so that the Replace By date is legible; and
 - B. close up of the back of the smoke alarm with the wireless interconnection module device installed.
 - (ii) for modules installed in a battery operated smoke alarms
 - A. plastic tab so that Replace By date is legible; and
 - B. close up of the close up of the back of the smoke alarm with the wireless interconnection module device installed.
- (d) When taking photographs of safety switches and switchboards, the Contractor must ensure that photographs are taken as follows:
 - (i) for replaced and new safety switches:



- A. one close up of the front of the box of the safety switch so that the serial or batch number is legible (new switch);
- B. one close up of the front of the safety switch so that the make is visible and legible (old and new switch as applicable);
- (ii) two photographs of the switchboard:
 - A. one with the cover off; and
 - B. one with the cover on so that:
 - 1) the entire switchboard is visible;
 - 2) all labels are visible and legible; and
 - 3) the safety switch makes are visible and legible.

2.4 Warranties

- (a) Where the Contractor is required to perform Tasks on items that are covered under Warranties, the Warranty management includes the Contractor's coordination with and management of:
 - (i) manufacturers;
 - (ii) suppliers; and/or
 - (iii) their warranty agents,to restore the items to their intended function or functions.

2.5 Multi-trade Maintenance Works and Services

- (a) Where the skills of more than one trade are required to fulfil the requirements of the Works Order, the Contractor must arrange for the attendance of multiple trades Personnel.
- (b) The Principal may, but is not obliged to, issue separate Works Orders for each trade that is required to work at a Site. The Contractor must take this into account when arranging the Maintenance Works and Services to be carried out.

2.6 Respiratory Crystalline Silicon

- (a) For maximum protection from respiratory crystalline silicon, Personnel should use fibre shears or a circular saw equipped with HEPA vacuum extraction.
- (b) The Contractor should cut sheets outside wherever possible ensuring that the dust blows away from them. If Maintenance Works and Services must be carried out indoors, the Contractor must cut sheets using the score and snap method in a well-ventilated area.
- (c) The Contractor should never use a power saw to cut HardieFence sheets indoors.



- (d) The Contractor should never use a grinder to cut HardieFence sheet.
- (e) The Contractor should never dry sweep, instead use wet suppression or a HEPA vacuum.

2.7 Mould

- (a) Where the Contractor is required by this Technical Specification to treat mould, the Contractor must kill and clean all mould using a mixture of 80 per cent fermented white vinegar and 20 per cent water and apply in two stages:
 - (i) wash surface with vinegar and water mixture using a microfiber cloth and rinse cloth and renew water mixture frequently to avoid spreading mould further; and
 - (ii) wipe surface with another microfiber cloth using another container of clean water, again rinsing cloth and renewing water frequently.

3. Fees, Permits and Licences

- (a) Where the Contractor is required to pay fees, permits and licences in order to fulfil the requirements of a Works Order the cost of such fees, permits and licences relating to Personnel, Materials, plant, tools and equipment is deemed to be included in each Task.

4. Labour

4.1 General

- (a) All Personnel must be skilled, competent and licensed (where qualifications are required) tradespersons or competently supervised apprentices.
- (b) The Contractor must provide copies of relevant qualifications, competencies and licences to the Principal upon request. The qualifications, competencies and licenses must be formally recognised and accepted in Western Australia.
- (c) The Contractor must keep the areas of the Site in which they are performing the Maintenance Works and Services clean and tidy and regularly Remove Debris, rubbish, Demolished Materials and surplus or salvaged Materials.

4.2 Incidental Works

- (a) The Contractor must carry out Incidental Works where Maintenance Works and Services have resulted in revealed surfaces:
 - (i) which may be:
 - A. unpainted;
 - B. damaged;
 - C. patched; or



- (ii) where there is a visual contrast between the previously concealed/exposed surfaces and the original surface.
- (b) The cost of Incidental Works is included in each relevant Schedule of Rates Task.
- (c) Incidental Works means patching and applying a coat of Sealer paint or varnish to protect against moisture penetration into raw:
 - (i) wall sheeting;
 - (ii) hard wall plaster;
 - (iii) MDF;
 - (iv) mouldings and trims; and
 - (v) edges of timber doors and windows including frames.
- (d) Incidental Works are not required to Structural timbers including those that are concealed (e.g. joints and bearers) and house stumps.
- (e) Incidental Works excludes the painting of a whole surface.

4.3 Inspect and Report

- (a) The Principal may issue a Task known as an Inspect and Report Task where:
 - (i) more technical information is required to scope and prepare a Works Order, provided it is necessary to:
 - A. resolve Structural issues;
 - B. resolve complex Maintenance Works and Services issues;
or
 - C. identify the overall condition of Appliances in order to:
 - 1) provide advice on Repairs and replacements; and
 - 2) ascertain cost effectiveness before Works Orders are issued; or
 - (ii) a Void Maintenance Works Order is issued and the Principal requires the Contractor to report on specified issues related to compliance with the RTA (e.g. locks, smoke detectors, and RCDs).
- (b) The Contractor must notify the Principal where, having attended a Site, it forms the view that an Inspect and Report Task issued by the Principal does not comply with the criteria in paragraph (a).
- (c) The Principal may cancel an Inspect and Report Task following notification by the Contractor under paragraph (b), in accordance with clause 4.4 of the General Specification. Where the Principal cancels an Inspect and Report Task, the Contractor must not complete the Task, and the Contractor must record a



comment indicating why it was not completed and mark the Task as not complete. Other Tasks on the Works Order must be completed if appropriate.

- (d) The requirements of an Inspect and Report Task are to provide the following information:
 - (i) location of the problem;
 - (ii) description of the remedial Maintenance Works and Services required (including SoR and non-SoR Maintenance Works and Services where applicable);
 - (iii) timeframe to complete Maintenance Works and Services;
 - (iv) advice on specific trades required;
 - (v) in the case of non-SoR work, a quote for the work to be done, in accordance with clause 9 of the General Specification;
 - (vi) reference to the Principal's Works Order number and Site address; and
 - (vii) Trades license number, where applicable.
- (e) All Inspect and Report Tasks must be treated as Priority Works Orders and submitted within 48 hours of site attendance.
- (f) For all Inspect and Report Tasks, except Pest Control, the Contractor must use either:
 - (i) Inspect and Report Template in clause 177.5 of the Technical Specifications; or
 - (ii) Gas Appliance Inspect and Report Template in clause 177.5 of the Technical Specifications; or
 - (iii) Safety Culture iAuditor App Template Department of Communities/Housing Authority – Inspect and Report – Maintenance Works and Services Contract
- (g) For Inspect and Report Tasks for Pest Control the Contractor must use either:
 - (i) Pest Control Inspect and Report Template in clause 177.5 of the Technical Specifications; or
 - (ii) Safety Culture iAuditor App Template Department of Communities/Housing Authority – Pest Control Inspect and Report – Maintenance Works and Services Contract.

5. Appliances

- (a) Appliances must be Repaired in preference to being replaced where practical and economical to do so.
- (b) Appliances must be replaced rather than Repaired when:



- (i) suitable spare parts are not available; or
- (ii) the cost of the Repair or the age of the Appliance exceeds the following limits:

Appliance Type	Criteria	
	Age in years	% of Replacement Cost
Upright/Elevated Stove	15	60 %
In Bench Hot Plate	15	60 %
Wall Oven	15	60 %
Hot Water Heater – Electric Instantaneous	15	50 %
Hot Water Heater – Gas Instantaneous	15	50 %
Hot Water Heater – Gas Or Electric Storage	15	60 %
Hot Water Heater – Solar	15	60 %
Hot Water Heater – Heat Pump	15	60 %
Room Heater – Electric	15	0 %
Room Heater – Un-Flued Gas	15	50 %
Room Heater – Flued Gas	15	50 %
Air Conditioners		
Evaporative Cooler Unit	15	50 %
Evaporative Ducted	15	50 %
Refrigerated Room Or Split Units	15	40 %
Refrigerated Ducted	15	40 %

- (c) Where replacement is assessed by the Contractor as being caused by anything other than fair wear and tear or obvious wilful damage the Contractor must advise the Principal.
- (d) Where the Contractor receives a Works Order to undertake Repairs and the Contractor considers that the cost of the type and cost of Works required exceeds the percentage of the estimated Replacement Cost specified in the table at paragraph (b)(ii) the Contractor must treat the event as a Hold Point.

6. Cyclonic Areas

- (a) Some Tasks have different standards depending on their location. The Principal's Sites fall into four locations aligned with the Australian Wind Region Categories.
- (b) Australia is separated into four distinct Wind Regions A, B, C and D. Figure 1 provides an indicative depiction of how these Wind Regions apply to Western Australia.

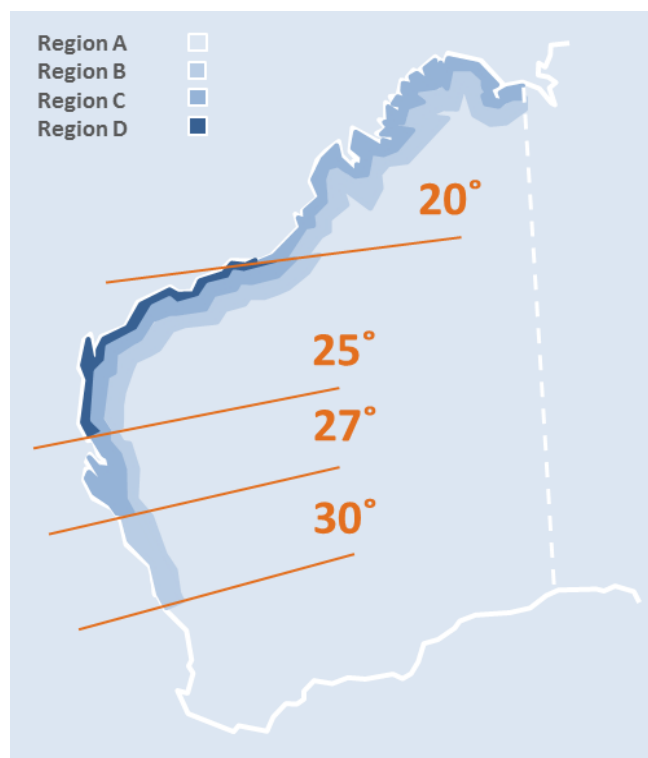


Figure 1: Wind Regions of Western Australia

- (c) Wind Region A is the area:
 - (i) South of 30°S
 - (ii) More than **100 km** from the coast between 25°S and 30°S
 - (iii) More than **150 km** from the coast between 20°S and 25°S
 - (iv) More than **100 km** from the coast north of 20°S
- (d) Wind Region B is the area:
 - (i) Within **100 km** of the coast between 27°S and 30°S
 - (ii) Between **50 km** and **100 km** from the coast between 25°S and 27°S
 - (iii) Between **100 km** and **150 km** from the coast between 20°S and 25°S
 - (iv) Between **50 km** and **100 km** from the coast north of 20°S



- (e) Wind Region C
 - (i) Within **50 km** of the coast between 25°S and 27°S
 - (ii) Between **50 km** and **100 km** from the coast between 20°S and 25°S
 - (iii) Within **50 km** of the coast north of 20°S
 - (iv) The ultimate regional design wind speed is **69 m/s** for Wind Region C which equates to mid-range category 4 cyclones.
- (f) Wind Region D
 - (i) Within **50 km** of the coast between 20°S and 25°S
 - (ii) Wind Region D is categorised as an area of severe cyclonic activity.
 - (iii) The ultimate regional design wind speed is **88 m/s** for Wind Region D which equates to mid-range category 5 cyclones.

7. Quality

7.1 Finishes

- (a) The Contractor must ensure that no sharp edges are left exposed; such edges must be Removed, hidden or capped.
- (b) The Contractor must ensure that all material exposed to weather has an appropriate weather protective coating or treatment.

7.2 Exemptions

- (a) There may be circumstances where Maintenance Works and Services cannot meet the requirements of a standard due to:
 - (i) a physical constraint such as the:
 - A. age;
 - B. design; or
 - C. construction type;
 - (ii) excessive costs that limit the ability to apply all the facets of a standard.
- (b) With the Principal's prior written approval, the Contractor may apply discretion in selecting a more suitable or alternative or cost effective solution.



AIR-CONDITIONING

8. Air-Conditioning General

8.1 Air-Conditioning Standards

- (a) The Contractor must apply as a minimum the following standards with respect to air-conditioning maintenance:
 - (i) **AS 2913 – 2000** Evaporative air-conditioning equipment;
 - (ii) **AS/NZS 3666.2 – 2002** Air-handling and water systems of buildings – Microbial control: Operation and maintenance;
 - (iii) **AS/NZS 1668.2 – 2012** The Use of Ventilation and Air Conditioning in Buildings: Mechanical Ventilation for Acceptable Indoor Air Quality;
 - (iv) **AIRAH DA19** HVAC&R Maintenance application manual;
 - (v) **HB 276 – 2004** A Guide to Good Practice for Energy Efficient Installation of Residential Heating, Cooling and Air-conditioning Plant and Equipment; and
 - (vi) **HB 40.2 – 2001** The Australian Refrigeration and Air-conditioning Code of Good Practise – Reduction of emissions of fluorocarbons in residential air-conditioning applications.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

8.2 Reporting and Record Keeping

- (a) The Contractor will report to the Principal immediately on the occurrence of any issues relating to health and safety, or any critical aspects relating to plant or systems' impending failure, or legionella events.
- (b) The Contractor must keep Records relating to the maintenance of the air-conditioning system as required by **AS 3666**, including but not limited to the following:
 - (i) all Service Reports;
 - (ii) date of the inspection, Test or maintenance;
 - (iii) name of the Personnel carrying out the Maintenance Works and Services;
 - (iv) details of any faults detected; and
 - (v) action taken to rectify any faults detected, date performed and cost.



9. Air Conditioning Quality

9.1 Materials and Workmanship

- (a) The Contractor must complete a Service Report Sheet for all Air-Conditioning Works and submit it to the Principal. The Service Report must include but is not limited to the following:
 - (i) Works Order number;
 - (ii) address of the Site where the unit is located;
 - (iii) type of unit, including details such as:
 - A. ducted or wall unit;
 - B. evaporative or reverse cycle;
 - C. manufacturer; and
 - D. model name or number;
 - (iv) works completed; and
 - (v) components replaced.

10. Refrigerated Air-Conditioners

10.1 General

- (a) Refrigerated Air-conditioning units include the following:
 - (i) Room Air-conditioning Units (Wall-box type) – plug in; and
 - (ii) Split System Units – including cassette type.

10.2 Ducted Units

- (a) Where the Principal directs that a Refrigerated Air Conditioner unit be supplied or installed, the Principal's Nominated Brands are: Daikin, Fujitsu or an approved alternative product.

10.3 Supply and Install Refrigerated Air Conditioner (All Types)

- (a) When directed, the Contractor must supply and install a Refrigerated Air Conditioner of a:
 - (i) size determined by the relevant room size and agreed upon with the Principal prior to installation;
 - (ii) brand being one of the Principal's Nominated Brands and agreed upon with the Principal prior to installation; and
 - (iii) model agreed upon with the Principal prior to installation.



- (b) Supply and Install Refrigerated Air Conditioners includes all electrical wiring, isolation switch and protected device as per AS/NZS 3000:2018

10.4 Replace Refrigerated Air Conditioner (All Types)

- (a) When directed, the Contractor must replace a Refrigerated Air Conditioner with a Refrigerated Air Conditioner:
 - (i) matching the existing unit as a minimum;
 - (ii) of a size, brand and model agreed upon with the Principal prior to installation; and
 - (iii) including by decommissioning, removing and disposing the existing Air Conditioner from the Site.
- (b) All electrical wiring and electrical components are to be reconnected as per AS/NZS 3000:2018

11. Locate fault to Air Conditioner (All Types)

- (a) Where the Contractor is directed to locate and identify the fault in an Air Conditioner (all types), the Contractor must carry out the tasks in the following manner:
 - (i) If batteries for an Air Conditioner remote control are flat, then the batteries must be replaced;
 - (ii) The use of components such as up to 1 metre of cable, connectors, tape, and sealant is deemed to be included within the Task;
 - (iii) If the fault can only be rectified by using components in addition to those listed in paragraphs (i) and (ii), notification must be made to the Principal of the type (including make and model) of component required, along with the approximate cost. The appropriate SOR will then be applied, taking into consideration the total cost of materials and labour as indicated by the Contractor.
 - (iv) In the event that clause 11(a)(iii) is applied, a tax invoice indicating the price of components used must be provided to the Principal with the Payment Claim.
- (b) Where it is not possible to Repair the Refrigerated Air Conditioning unit, the Contractor must contact the Principal for further instructions.
- (c) Where it is not possible to Repair an Evaporative or Wall Box type Air Conditioning unit, the Contractor must contact the Principal for further instructions.
- (d) Upon direction from the Principal, faulty Evaporative or Wall Box type Air Conditioning units must be replaced with Refrigerated Air Conditioner units of an appropriate size and type.



12. Decommission Refrigerated Air Conditioner

- (a) The Contractor must decant the refrigerant and dispose of refrigerant in accordance with Australian Standards.
- (b) The Contractor must decommission, Remove and dispose of all components, including fixtures and fixings, from site unless otherwise instructed by the Principal.
- (c) All electrical components must be disconnected and left safe in accordance with Wiring Rules AS/NZS 3000:2018.

13. Perform Service on Evaporative Air Conditioner

- (a) Where the Contractor is directed to perform a service on an evaporative air conditioner,
 - (i) the Contractor must drain the water from the unit and clean all internal parts of the unit;
 - (ii) the Contractor must check the condition of the pulleys and V belt (where applicable) and adjust or replace as appropriate;
 - (iii) Pads must be checked for salt build-up and signs of deterioration. Salt must be scrubbed off; if pads require replacing, this can be claimed via minor repair to Evaporative Air Conditioner task;
 - (iv) The motor and blower bearings must be checked by the Contractor and lubricated where required;
 - (v) Dump valves must be checked to ensure that they operate correctly and any obstructions to the drains are Removed. Drains must be flushed and Tested using clean water;
 - (vi) The Contractor must ensure that there are no blockages to the water supply or to the water delivery to the pads. Pads must be washed to remove dust; The ball float must be checked for correct operation and level, and Adjusted where necessary. The ball float valve mechanism must be lubricated;
 - (vii) Where fitted the Contractor must check the motorised damper for correct operation;
 - (viii) All buttons, switches and controls on the units and any remotes must be checked, including checking the operation of the controllers and all functions including fan speed control and make good where required. Any replacement of faulty components can be claimed via minor repair to Evaporative Air Conditioner task ; and
 - (ix) All ducting and flashing must be checked.



14. Perform Service on refrigerated Air Conditioner

- (a) The Contractor must check the condition of the unit, clean casings and where necessary:
 - (i) Remove loose rust;
 - (ii) wipe down with denatured alcohol and dry;
 - (iii) apply a water based rust converter with the following active ingredients:
 - A. tannic acid; and
 - B. an organic polymer.
- (b) The Contractor must check and clean coils, comb fin damage. Add 1 teaspoon of carbonate of soda per litre of water where salt build-up is prevalent.
- (c) The Contractor must check drains and drip trays are clean.
- (d) The Contractor must check for undue noise and vibration and make good as necessary.
- (e) The Contractor must lubricate components in accordance with manufacturer's requirements.
- (f) The Contractor must check refrigerant pressures and adjust pressure charge as necessary.
- (g) The Contractor must check condition of pipework, supports and insulation and Repair or Replace where required. Repaired insulation must be wrapped with canvas tape and painted with UV resistant paint. Any replacement of pipework, supports or insulation components can be claimed via minor repair to Refrigerated Air Conditioner task.
- (h) The Contractor must record coils' on/off temperatures to check performance.
- (i) Filters must be cleaned and must be Replaced where necessary. Any replacement of filters can be claimed via minor repair to Refrigerated Air Conditioner task.
- (j) The Contractor must check operation of defrost systems and devices.
- (k) The Contractor must measure and record full load current.
- (l) The Contractor must check the operation of the controllers and all functions including fan speed control, temperature set-point and control and make good as necessary. Any replacement of faulty components can be claimed via minor repair to Refrigerated Air Conditioner task.
- (m) Perform service on a Refrigerated Air-Conditioner task does not include re-gassing of the unit. This can be claimed under Minor repair to Refrigerated Air-Conditioner.



15. Heat Pump (Hot Water Unit)

- (a) Where a fault is reported to a heat pump hot water unit, the Contractor must locate and identify the fault and report to the Principal with the cost to repair.

AEROBIC TREATMENT UNITS

16. Aerobic Treatment Units General

16.1 General

- (a) The Principal requires regular servicing, desludging and breakdown maintenance of aerobic treatment units.

16.2 Standards

- (a) The Contractor must apply as a minimum the following standards and comply with the following codes and legislation with respect to aerobic treatment units:
 - (i) **AS/NZS 1546.3 – 2008** On-site domestic wastewater treatment units – Aerated wastewater treatment systems;
 - (ii) Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units – Department of Health; and
 - (iii) *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974* (WA)
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

16.3 Personnel

- (a) The Contractor must only engage Personnel to work on ATUs who have been approved by the WA Department of Health.

17. Aerobic Treatment Units Quality

17.1 Health, Safety and Environment

- (a) Chlorinated effluent from ATUs may be used to surface irrigate garden areas but can only be used below grassed areas. It may not be used on vegetable gardens.
- (b) The Department of Health has concerns associated with the potential degradation of environmental water bodies, and requires some developments to use a waste water system capable of removing phosphates.
- (c) The Contractor must seek guidance from the Department of Health before Installing an ATU as to whether phosphate removal is required and if so, the Contractor must only use ATUs approved as phosphate removing.



- (d) Where natural soils do not have an ability to bind phosphates, the type of ATU system Installed must:
 - (i) have in-system phosphate removal; or
 - (ii) use of a specially approved amended soil mix which is incorporated into the irrigation area.
- (e) The Contractor must be aware that the type of phosphate removing system can affect the choice of effluent irrigation method available.

18. Aerobic Treatment Unit Installation and Service

18.1 General

- (a) ATU system Installations are only permitted with Local Government Authority approval to ensure that the system is of an approved design and manufacture, is properly sized and is suitably located.
- (b) The Contractor, where required to Install an ATU, must be responsible for lodging an “Application to Construct or Install an ATU for the Treatment of Sewage” with the relevant Local Government Authority. The Contractor must pay all fees associated with such applications.
- (c) Where required to Install an ATU the Contractor must only use those systems that are approved for use in WA by the Department of Health. For further information about approved ATUs please visit:
www.public.health.wa.gov.au/3/663/2/aerobic_treatment_units.pm

18.2 Service Reports

- (a) The Contractor is required to submit a service report in a form approved by the Department of Health to the Principal and to the appropriate Local Government Authority following the Completion of an ATU Works Order.

18.3 Monitoring and Maintenance

- (a) In carrying out the servicing of an ATU, the Contractor must:
 - (i) check the electrical panel for functioning alarms;
 - (ii) check and clean filters on aerator;
 - (iii) check odour (should be musty);
 - (iv) check clarity of effluent (should be clear and lightly brownish);
 - (v) record sludge level in pre-treatment tank – pump as needed and refill with water;
 - (vi) record sludge level in aeration tank – pump as needed.
- (b) Additionally, if the ATU system has a disinfection unit, quarterly faecal coliform Testing is required as listed on the operational certificate.



BORE DRILLING AND PUMP

19. Bore Drilling and Pump General

19.1 General

- (a) Bore Drilling and Pump work consists of drilling boreholes and Installation of pumps for reticulation water supply. The construction technique and water entry selected must allow for the long-term production of clear silt-free water.
- (b) All Bore Drilling and Pump work will be issued as Quoted Works.

19.2 Standards

- (a) The Contractor must apply as a minimum the following standards and comply with the following codes and legislation with respect to bore drilling and pump Installation and maintenance:
 - (i) **API 5L 350 MPa** Linepipe;
 - (ii) **AS 1257 – 1973** Bore sizes, Test pressures and tolerances on lengths of elastomeric hose;
 - (iii) **AS 1396 – 2000** Steel water bore casing;
 - (iv) **AS 1579 – 2001** Arc welded steel pipes and fittings for water and wastewater;
 - (v) **AS 2019 – 1986** Fluid power – Hydraulic and pneumatic cylinders – Bore and rod dimensions;
 - (vi) **AS 4024.3101 – 2008** Safety of machinery – Materials cutting – Milling machines (including boring machines) – Safety requirements;
 - (vii) **AS 5082.1 – 2007** Polybutylene (PB) plumbing pipe systems – Metric series – Metric polybutylene (PB) pipes for hot and cold water applications;
 - (viii) **AS/NZS 1477 – 1999** PVC pipes and fittings for pressure applications;
 - (ix) **AS/NZS 2053.6 – 2001** Conduits and fittings for electrical installations – Profile-wall, smooth-bore conduits and fittings of insulating material;
 - (x) The WA Department of Water's Minimum Construction Requirements for Water Bores in Australia developed in conjunction with the National Uniform Drillers Licencing Committee. See <http://www.water.wa.gov.au/PublicationStore/first/102386.pdf>;
 - (xi) *Water Services Regulations 2013* (WA) – including the WaterMark Certification Scheme; and
 - (xii) **ISO 161.1 – 1996** Thermoplastics pipes for the conveyance of fluids – Nominal outside diameters and nominal pressures – Part 1: Metric series.



- (b) Where amendments to the standards and codes exist, the Contractor must be aware of the latest amendments.

20. Bore Drilling and Pump Quality

20.1 Materials and Workmanship

- (a) Only Personnel possessing:
 - (i) at least current Class 2 Water Well Drillers Certificate issued by the Western Australian branch of the Australian Drilling Industry Association; or
 - (ii) other certification as approved by the Department of Water for the class of work proposed and endorsed for the drilling method to be used,may carry out work on a water bore.
- (b) The Contractor must determine the most suitable location for the bore taking into consideration aspects including but not limited to:
 - (i) access for drilling equipment;
 - (ii) Dial Before You Dig information;
 - (iii) existing location of Utility supply assets;
 - (iv) local geological formations;
 - (v) existing reticulation systems; and
 - (vi) suitability of water supply.
- (c) Having determined the best site for the bore, the Contractor must obtain the Principal's approval prior to commencing the work.
- (d) The Contractor must keep a Drilling Log for each borehole. The records must contain as a minimum the following information:
 - (i) Site address;
 - (ii) location of borehole;
 - (iii) date of reporting;
 - (iv) names of foreman and drillers;
 - (v) method of drilling;
 - (vi) make, model, type and size of drilling rig;
 - (vii) diameter of hole, and depth of changes in diameter;
 - (viii) depth of hole at start and end of each shift or working day;



- (ix) depth and size of casing at start and end of each shift or working day;
 - (x) description of strata drilled with depth of transitions encountered;
 - (xi) depth at which water is struck;
 - (xii) yield of air lifted water (when drilling or developing with air in litres per second);
 - (xiii) time log showing rate of penetration in minutes per metre, type of bit, standby;
 - (xiv) time due to breakdown;
 - (xv) depth intervals at which formation samples are taken;
 - (xvi) records of components and quantities used or added to the drilling fluid or air;
 - (xvii) water level at the start of each working day;
 - (xviii) electrical conductivity measurements during Test pumping;
 - (xix) problems encountered during drilling;
 - (xx) details of Installations in the borehole (if any);
 - (xxi) depth, size and description of well casing;
 - (xxii) depth, size and description of well screens; and
 - (xxiii) aquifer depth and SWL after completion of well.
- (e) The Contractor must make the Daily Record available daily to the Principal and include any other pertinent data requested by the Principal.
- (f) The Contractor must keep a Borehole Completion Record for each completed borehole. The records must contain the information including, but not limited to:
- (i) Site address;
 - (ii) location of borehole;
 - (iii) date of completion;
 - (iv) names of foreman and drillers;
 - (v) method of drilling;
 - (vi) make, model, type and size of drilling rig;
 - (vii) diameter of hole, and depth of changes in diameter;
 - (viii) description of strata drilled with depth of transitions encountered;
 - (ix) depth at which water is struck;



- (x) yield of air lifted water, when drilling or developing with air in litres per second;
 - (xi) time log showing rate of penetration in minutes per metre, type of bit, standby;
 - (xii) time due to breakdown;
 - (xiii) depth intervals at which formation samples are taken;
 - (xiv) records of components and quantities used or added to the drilling fluid or air;
 - (xv) electrical conductivity measurements during Test pumping;
 - (xvi) problems encountered during drilling;
 - (xvii) details of Installations in the borehole (if any);
 - (xviii) depth, size and description of well casing;
 - (xix) depth, size and description of well screens;
 - (xx) aquifer depth and SWL after completion of well;
 - (xxi) bore development procedure and record; and
 - (xxii) bore disinfection procedures utilised (if any).
- (g) The Contractor must provide design, a copy of the Drilling Log, a copy of the Bore Completion Record and Installation details, including as-built drawings, to the Principal.

20.2 Verticality

- (a) The Contractor must ensure that boreholes are drilled vertical and cased straight. All casings and screens must be set round, plumb and true to line.
- (b) If required by the Principal, the Contractor must make a vertical Test during and after the drilling by approved methods and at the Contractor's expense in order to demonstrate that the departure from the vertical does not exceed **3 mm / 1 m** between the ground level and the bottom of the borehole.
- (c) If the departure described at paragraph (b) is exceeded, the Contractor must make the necessary corrections at the Contractor's expense.
- (d) If the Contractor cannot rectify the skew, then drilling must cease and a new borehole must be drilled at a position nearby that also conforms with clause 21.1 Bore Drilling General, at the cost of the Contractor.
- (e) Abandoned boreholes must be backfilled and/or capped at the Contractor's expense.
- (f) Materials lost to abandoned boreholes must be at the Contractor's expense.



20.3 Warranty

- (a) Without limiting the Principal's rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Bore Drilling and Pump work complies with the terms and conditions of the Contract; and
 - (ii) will reperform the Bore Drilling and Pump work when directed by the Principal when a Defect occurs during the Defects Liability Period (12 months) from the date upon which the Bore Drilling and Pump work was performed.
- (b) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to Bore Drilling and Pump work during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Bore Drilling and Pump work at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal's direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).
- (c) Installed pumps must have a manufacturer's warranty.

20.4 Health, Safety and Environment

- (a) The Contractor must be mindful in the handling and storage of all drilling fluids, oils, greases and fuel on Site to avoid environmental degradation.
- (b) The Contractor must correctly Dispose of any toxic Materials, drilling fluids and other additives, cuttings and discharged water so as not to damage the Principal's assets.

21. Bore Drilling

21.1 General

- (a) The bore design must suit the hydrogeological conditions, be appropriate to protect the aquifer and be suitable for the intended purpose of the bore.
- (b) The Contractor's initial preparation work involves applying and paying for licenses or permits, Site evaluation and assessment of probable water suitability and likely yield, evaluating access, organising equipment and Personnel.
- (c) The drilling borehole work includes: Installation of casings and screens; provision of gravel packing; development of the boreholes; Test pumping; obtaining rock and water samples; water quality analysis; and platform casting.
- (d) The pump Installation work includes: Installation of electrical supply; Installation of pump; Installation of pump ancillaries; and correct connection to reticulation and electrical systems.
- (e) The Contractor must drill to the total appropriate depth dependent upon the predetermined geological formation(s) and to a diameter that will allow a minimum borehole nominal **101.6 mm** diameter (**250 mm** to permit the insertion



of **125 mm** Class 12 series 1 PVC casing (**124.9 mm** OD) and **100 mm** of gravel packing) at the completion of the borehole including casing Installation.

- (f) The following additional parameters must also be adhered to by the Contractor when drilling a borehole:
 - (i) drill for surface casing **4 m** minimum depth;
 - (ii) surface casing hole diameter **200 mm** minimum (dependent upon casing size);
 - (iii) drill pilot hole depth to be ascertained on Site;
 - (iv) pilot hole diameter **50 mm** minimum;
 - (v) ream borehole depth to be ascertained on Site;
 - (vi) ream diameter **50 mm** minimum (dependent upon casing size).
- (g) The minimum drilled depth must be that which yields water of suitable quality and volume for the intended use.
- (h) The Contractor may use any rotary drilling technique (air or mud) suitable for the encountered geological conditions and the type of facility to be constructed, and that will result in the required borehole depth and diameter.

21.2 Drilling Fluid Additives

- (a) The Contractor must be aware that the use of bentonite mud, lost circulation agents or any form of plugging material that may ultimately affect the production capacity of the intersected water bearing strata is restricted. The Contractor must first seek Authorisation from the Principal before using drilling fluid additives.
- (b) Drilling fluid additives must be low in solids, non-toxic and degradable.

21.3 Cutting Samples

- (a) Cutting samples of the penetrated strata must be collected on Site at a rate of **100 g** (minimum) per **1.0 m** depth. The Contractor must collect the samples using whichever technique best suits the type of drilling technique being used.
- (b) The Contractor must ensure that cutting samples are not contaminated and be aware that cutting samples are not to be washed.
- (c) Representative samples from the cuttings must be put into approved containers supplied by the Contractor. Samples must be labelled with the borehole location, number and depth interval.

21.4 Temporary Casings

- (a) Installation and diameter of any temporary casing required for the successful construction of the boreholes will be at the discretion of the Contractor provided that the completed borehole meets the specifications and design requirements.



- (b) The cost for supply, Installation and removal of temporary casings is the responsibility of the Contractor.

21.5 Water Supply for Drilling

- (a) The Contractor must make its own arrangements for obtaining, storing, transporting and pumping of water required for drilling.

21.6 Yield Estimates during Drilling

- (a) The Contractor must make yield estimates during the course of drilling, preferably using the calibrated bucket method or the velocity-area method. Average yields must be recorded in the Daily Record.

21.7 Borehole Design

- (a) The final design of the borehole must be approved by the Principal in consultation with the Contractor during the drilling process, or immediately after the drilling is complete.
- (b) As far as possible, boreholes must be drilled into the underlying bedrock or, if the depth to the bedrock is too deep, drilling must stop in an impervious formation underlying the aquifer.
- (c) The bottom of the borehole must act as a sedimentation sump and a support for the casing and screen. The sump must be a bottom plain casing of at least **1.5 m to 3.0 m** in length. The diameter of the sump must equal its length. The underside of the sump must be sealed with a bottom PVC plug.

21.8 Open Borehole

- (a) Open boreholes must be achieved using one of the following drilling techniques:
 - (i) percussion, air-rotary or mud-rotary drilling through the overburden (alluvial, laterite, weather or soft bedrock). Minimum final drilling diameter **152 mm**; or
 - (ii) percussion or rotary/percussion drilling through the overburden (consolidated hard rock) using foam stabilisers where necessary. Minimum final diameter **115 mm**.
- (b) Boreholes must be drilled at least **6.0 m** below any water bearing fractures to allow sufficient space for a sedimentation sump.
- (c) Fractured bedrock in this instance is not considered by the Principal to be collapsing and must be left open by the Contractor.
- (d) Where it is necessary to prevent the collapse of the overburden the Contractor must Install casings with a minimum diameter **140 mm** and be sealed with grouting, backfilled and with cementation of the top **5.0 m**.

21.9 Protected Borehole

- (a) Protected boreholes must be achieved using one of the following drilling techniques:



- (i) percussion, air-rotary or mud-rotary drilling through the overburden (alluvial, laterite, weathered or soft bedrock). Minimum final drilling diameter **202 mm**; or
 - (ii) percussion or rotary/percussion drilling through the overburden (consolidated rock). Minimum final diameter **165 mm**.
- (b) Fractured bedrock (water bearing) is considered by the Principal to be collapsing and must be protected with casing/screen minimum inner diameter **102 mm**.
- (c) Where it is necessary to prevent the collapse of the overburden, the Contractor must Install casings with a minimum diameter of **140 mm** and sealed with grouting. Backfilling must be topped with **5 m** of cementation.

21.10 Screened Borehole

- (a) Screened boreholes must be achieved using only the following drilling technique:
 - (i) percussion, air-rotary or mud-rotary drilling through the overburden (alluvial or unconsolidated rock). Minimum final diameter **203 mm**.
- (b) The Contractor must leave a minimum annular space of **38 mm** between the casing and the borehole wall to allow for gravel pack Installation. The Principal recommends an annular space of between **51 mm** and **76 mm**.
- (c) The Contractor must Install a screen or slotted casing with a minimum inner diameter of **102 mm**.
- (d) The Contractor must Install a gravel pack of at least **3.0 m** above the top of the first screen and must be topped with a **1.0 m** clay seal. Backfilling must be topped with **5.0 m** of cementation.
- (e) Boreholes must be drilled at least **6.0 m** below any water bearing fractures to allow sufficient space for a sedimentation sump.

22. Bore Casings and Screens

- (a) Aquifer zones must be completely or partly lined with a PVCu screen.
- (b) The PVCu casings and screens supplied and Installed by the Contractor must have a minimum wall thickness of **7.65 mm** for a **127 mm** nominal diameter casing and have a tensile strength of at least **52 MPa**.
- (c) The Contractor must ensure that PVCu pipes are joined by threads and the joints are water tight.
- (d) The Contractor must ensure that screens are slotted PVCu (with the slots cut progressively around the casing screen and with a maximum slot length of **200 mm**) and are provided in maximum **6.0 m** lengths and joined water tight by either Flush threaded connections or by an appropriate method as recommended by the manufacturer. Joints must be strong and have the same structural integrity as the castings and screens.



- (e) In particular cases the lower end of the screen must be completed with a sump of minimum **0.5 m** and maximum **2.0 m** length. The bottom end should be sealed with a PVCu bottom cap.

23. Gravel Pack

- (a) The Contractor must supply suitable gravel pack (of a permeability greater than the existing aquifer material) consisting of:
 - (i) washed, well-rounded particles;
 - (ii) a uniform grading of between **2.5 mm** and **4.0 mm** (or a gradation larger than the average soil grain size found within the aquifer); and
 - (iii) 90 per cent siliceous material.
- (b) Gravel pack must not contain:
 - (i) clay;
 - (ii) shale;
 - (iii) silt;
 - (iv) fines;
 - (v) excessive amounts of calcareous material; or
 - (vi) crushed rock.
- (c) Where gravel pack has not been graded prior to delivery, the Contractor must subject samples of the gravel to a grain size analyser, at the Contractor's expense. The results must be submitted together with a sample of the gravel to the Principal for approval before use by the Contractor.
- (d) The Contractor must ensure that sufficient gravel pack is Installed so as to cover completely the uppermost screen, including an additional **2.0 m** length to allow for settling and to a minimum annular thickness of approximately **100 mm**.
- (e) The emplacement of the gravel pack must be by means of a conductor pipe (tremie) and a good supply of water must be introduced with the gravel to prevent "bridging". The tremie should be raised gradually as the level of the gravel builds up.
- (f) The gravel pack must be capped with a clay Seal to prevent contamination. The annular space above this Seal can be backfilled with inert drill cuttings up to a minimum of **3.0 m** below ground level.

24. Casing Centralisers and Sanitary Seals

- (a) The Contractor must Install suitably sized casing centralisers, constructed of an inert material, throughout the length of casing in each bore at a minimum rate of one per length of casing and no further than **6 m** apart, ensuring all guidelines for such, as outlined in the Minimum Construction Requirements for Water



Bores in Australia document issued by the Australian Drilling Industry Association, are strictly adhered to.

- (b) The Contractor must pressure cement grout the annulus between the casing and bore hole, in each instance, from the top of the screen to the base of the surface casing, in accordance with the requirements of the Department of Water and the Minimum Construction Requirements for Water Bores in Australia document issued by the Australian Drilling Industry Association.
- (c) The grout utilised within each bore must be a low-heat sulphate resistant cement slurry (**1.85 kg – 2.15 kg** cement/litre) and must be injected into the annulus in a single operation so that a complete and continuous Seal is achieved; however the top **0.4 m** of the annulus must be left ungrouted and temporarily back-filled with inert drill cuttings, to allow for Installation of the concrete pit box.

25. Development and Cleaning

- (a) The Contractor must develop and clean the boreholes upon completion of the drilling and Installation of casing, screens, grouting and gravel packs, in order to Remove native:
 - (i) silts;
 - (ii) clays;
 - (iii) loose rock particles; and
 - (iv) drilling fluid residues,deposited on the borehole wall during the drilling process, and will be considered successfully completed only once the bore produces no sand or silt and the like with no evident sand to the bottom of the screen sump after a one hour period of development.
- (b) Where the Contractor uses organic drilling fluids, they must be broken down chemically according to the manufacturer's recommendations before or during development.
- (c) Cleaning may be carried out by airlift pumping, surging, backwashing or jetting. Clay desegregation by means of sodium hexametaphosphate ($\text{NaPO}_3)_6$ treatment may in some cases also be required.
- (d) The Contractor must carry out air-lift pumping until the ground water runs clear and turbidity free, but in any case for three hours.
- (e) If clear running, turbidity free water is not achieved within six hours, airlift pumping must be carried out until the water becomes limpid, but to a maximum of 12 hours.



26. Test Pumping

- (a) The Contractor must perform Test pumping to establish the performance and yield of the borehole and must provide a suitable, self-contained, mobile test pumping unit for this purpose.
- (b) The discharge rate of the pump must achieve the range of constant flow rates required to run the reticulation system.
- (c) Where boreholes have indicative yields of between **500 l** and **1,500 l/h**, the borehole must be Tested at a constant discharge rate of **600 l/h** for a minimum period of four hours or until the water level stabilises.
- (d) Where boreholes have indicative yields of more than **1,500 l/h**, the boreholes must be Tested in the manner of a step-test with:
 - (i) the initial step being at **600 l/h**;
 - (ii) the duration of each step being 90 minutes with a minimum of three steps, each with an increasing discharge;
 - (iii) the final step lowering the dynamic water level to approximately **3.0 m** above the level of the pump;
 - (iv) the discharge for each step being kept constant; and
 - (v) the recovery of the water level upon completing the first step being monitored by the Contractor until 95 per cent recovery has been achieved.
- (e) The maximum Testing and recovery time per borehole should not exceed six hours, or 24 hours for motorised boreholes.
- (f) The Contractor must measure discharge by volumetric methods, or by means of other approved calibrated measuring device.
- (g) During Test pumping the Contractor must ensure that discharged water is handled and Disposed of in an appropriate manner to a point of overland drainage sufficiently far from the borehole to prevent recharge. The point of overland drainage must be at least **100 m** from the borehole, but may be less than **100 m** from the borehole following approval from the Principal if the pumped aquifer is confined.
- (h) During all Testing operations, once the flow rate has been determined and preliminary Adjustments made, the measured discharge rate must be maintained within 5 per cent of the required rate for the duration of the Test or Test stage. Persistent fluctuations beyond this tolerance will require abortion of the Test.
- (i) When continuous pumping at a uniform rate is specified, failure of the pump operation for a period greater than one per cent of the elapsed pumping time must also require abortion of the Test.
- (j) Any Test aborted in accordance with paragraph (h) and (i) must be repeated, after full recovery of the water level, at the Contractor's expense.



27. Borehole Disinfection

- (a) The Contractor is required to disinfect the borehole following the successful completion of Test pumping.
- (b) The Contractor must use a chlorine solution into the well so that a concentration of at least **50 mg/l** (0.005 %) of available chlorine exists in all parts of the well at static conditions. The solution must remain in the well a minimum of 12 hours before pumping to waste.
- (c) All parts of the borehole above the water level should be completely Flushed with same chlorine solution stipulated in paragraph (b).

28. Water Level Observations

- (a) The Contractor must supply appropriate electric contact water level gauges (i.e. liquid level measurement probe) to be able to measure water levels in boreholes to an accuracy of **5 mm**.
- (b) Water levels must be measured during Test pumping at pre-determined intervals, dependent on the nature of the Test.
- (c) The frequency of measurement must be specified in an agreed Test pumping data form or as otherwise determined by the Principal.
- (d) Well head arrangements must permit these gauges to be inserted and passed freely.
- (e) Any other method of measuring water levels will be subject to approval by the Principal.
- (f) The Contractor must have on the Site at least two electric gauges suitable for a maximum depth of **100 m**. The devices must fit into the **19 mm -26 mm** observation pipes and should permit direct, convenient and accurate reading of depth of static and dynamic water levels.

29. Electrical Conductivity Measurements

- (a) The Contractor must take electrical conductivity readings of the discharge water during Test pumping.

30. Water Sampling and Testing

- (a) The Contractor must take water samples for Testing the physio-chemical and bacteriological quality at the end of the Test pumping.
- (b) For this purpose the Contractor must supply and keep on Site a minimum of four suitable two-litre capacity water containers, and must collect water samples as directed by the Principal.
- (c) Samples must be Tested for:
 - (i) pH;



- (ii) electrical conductivity;
- (iii) total dissolved salts;
- (iv) bicarbonates;
- (v) hardness;
- (vi) sodium;
- (vii) calcium; and
- (viii) dissolved carbon dioxide,

at a certified laboratory, and the Test results must be attached to the Borehole Completion Report.

- (d) A sample must also be submitted to the Department of Water.

31. Capping of Borehole

- (a) During borehole construction, Installation, development and Test pumping, the Contractor must use all reasonable measures to prevent entry of foreign matter into the borehole.
- (b) The Contractor must be responsible for any objectionable material that may fall into the borehole and any effect it may have on the water quality or quantity until completion of the Maintenance Works and Services and acceptance by the Principal.

32. Lost Bore

- (a) Should any incident to the plant, behaviour of the ground, jamming of the tools, casing or any other cause prevent the satisfactory completion of a borehole, that borehole will be deemed to be lost at the cost of the Contractor.
- (b) Where equipment is lost down a borehole it must be Removed from that borehole or that borehole will be considered lost. Any Materials not recovered from a lost borehole must be at the cost of the Contractor.
- (c) Where a borehole is deemed lost, a replacement borehole must be constructed at the cost of the Contractor.
- (d) The Contractor may salvage as much casing and screen from the lost borehole as possible. Salvaged casing and screen may be used in replacement boreholes if not damaged.
- (e) Materials supplied by the Principal that become damaged during performance of the Maintenance Works and Services must become the property of the Contractor who will compensate the Principal accordingly.
- (f) Lost bores must be backfilled with native soil from the bottom upward with **2 m** of the last **3 m** being sealed by concrete, cement grout or neat cement in a method that avoids segregation or dilution of material. The upper most **1 m** of a lost bore must be backfilled with native topsoil.



- (g) The sealing of such abandoned boreholes must be done in such a manner as to avoid accidents or subsidence and to prevent the lost borehole from transmitting contaminated surface or subsurface water into the water bearing formations.

33. Platform and Valve Box Construction

- (a) The Contractor must construct for each successful borehole a concrete box for the bore head which must include:
- (i) excavating a pit approximately **350 mm** deep around the casing pipe;
 - (ii) placing any electrical and controller wiring conduit and water pipe PVC required prior to pouring the concrete;
 - (iii) laying a **75 mm** thick concrete platform to the bottom of the pit in order to achieve a height of the top of the new valve box which finished **30 mm** to **50 mm** above the natural ground level;
 - (iv) a concrete platform at least **100 mm** wider and longer than the valve box;
 - (v) a concrete valve box with a metal lid, minimum dimension of **395 mm** x **300 mm** x **200 mm**; and
 - (vi) fixing and sealing valve box to the concrete platform.
- (b) The Contractor must ensure that the valve box is large enough to accommodate placement and retrieval of the pump and all the pump ancillaries.
- (c) The Contractor must ensure that the ground around the valve box slopes away from the valve box so that any water runs away from the valve box.
- (d) The concrete used in the construction of the platform and the valve box must be cured for three days and protected from evaporation or exposure to rain.

34. Pump Installation

34.1 General

- (a) The Contractor must Supply and Install a submersible pump with a water delivery capacity (i.e. flow and total dynamic head pressure) of at least 20 per cent more than that required to operate the associated reticulation system at full capacity.
- (b) Only pumps with the following characteristics are acceptable to the Principal:
- (i) **240 V**;
 - (ii) minimum **100 mm** nominal diameter; and
 - (iii) 304 grade stainless steel;
- (c) The Principal's Nominated Brands are as follows:



- (i) Davey – for further information about Davey products please visit: www.davey.com.au;
 - (ii) Onga – for further information about Onga products please visit: www.onga.com.au;
 - (iii) Lowara – for further information about Lowara products please visit: www.lowara.com; and
 - (iv) Grundfos – for further information about Grundfos products please visit: www.grundfos.com.
- (d) The Principal requires all pumps to be fitted with a minimum 304 grade stainless steel 7/19 cable of a minimum **4 mm** diameter for future retrieval. The cable must be **2 m** longer than the depth of the pump and securely Fixed to the concrete platform with suitable 316 grade stainless steel minimum **4 mm** wire rope grips.
- (e) The Contractor must arrange for the correct Installation of electricity, water and controller wiring.
- (f) The Contractor must Supply and Install the following minimum ancillary items to each pump:
- (i) riser column of suitable nominal diameter to ensure the required reticulation system design flow and pressure, while minimising pipe friction losses. Riser column to be utilised will be dependent upon flow and pressure requirements and pump set depth. For pump set depths of **30 m** or less, either High Density Polyethylene (HDPE) of nominal outside diameter no greater than **40 mm** with appropriate compression couplings or PVC nitrile/woven polyester flexible hose with appropriate minimum 304 grade stainless steel couplings. For pump set depths greater than **30 m**, either PVC nitrile/woven polyester flexible hose with appropriate minimum 304 grade stainless steel couplings or Fibreglass Reinforced Plastic (FRP) with appropriate minimum 304 grade stainless steel end connectors, locking wires and O-rings (lubricated);
 - (ii) minimum **2.5 mm** diameter (for single phase motor sizes of **5.5 kW** and less and pump set depths of **30 m** or less) TriCab KK Series or equivalent flexible rubber submersible pump cable, to affect all power supply to pump motor electrical connections. Such electrical connections must be accomplished by a suitably qualified with sufficient demonstrable experience with similar Installations, utilising pump manufacturer recommended underwater cable splice kits, which must be constructed to such a standard as to receive Certification of Suitability from the relevant Supply Authority; and
 - (iii) the discharge flange (bore cap) assembly must be fabricated entirely from Schedule 40, 304 Grade stainless steel or cast iron. The assembly must incorporate a Fixed flange with suitable pipe attachment points (for riser pipe/column and discharge pipe work) and be Securely fastened to the bore head via hot-dipped galvanised nuts and bolts (generally M16 size) and sealed with an appropriately sized



flange gasket. All associated fittings must be similarly sized and must incorporate HDPE BSP threaded fittings or pre-fabricated 316 grade stainless steel and grade specification WP316/316L-W.

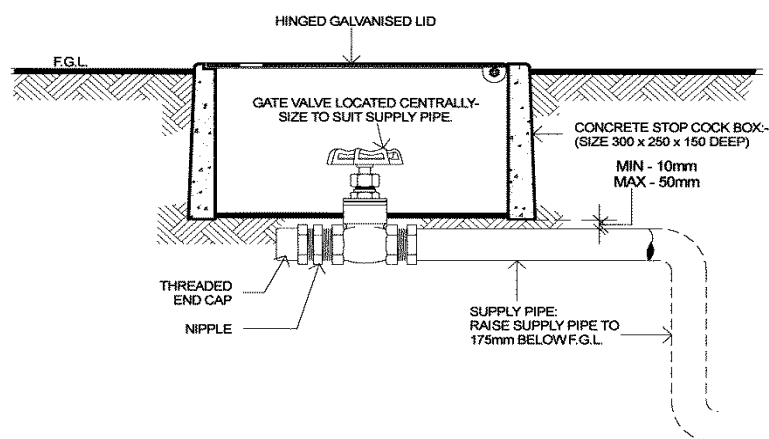
- (g) The discharge assembly must incorporate, but not be limited to:
 - (i) one isolation valve (i.e. gate valve or ball valve) manufactured of HDPE or brass (see clause 34.2 Gate Valve Detail for further detail);
 - (ii) one check valve (i.e. spring loaded or wafer dual check) manufactured of HDPE or cast iron;
 - (iii) one **25 mm** polymer combination air release valve;
 - (iv) one liquid filled pressure gauge with a minimum **800 kPa** measurement to the face;
 - (v) one suitably sized, calibrated and Supply Authority approved water meter, where required by the relevant local government authority. The meter must be manufactured of cast iron with either BSP threaded or flanged connections, reed switch actuated pulse generating and pressure rated to a minimum of **1600 kPa** (PN16). The meter must be manufactured to ISO 4064 class B-H; and
 - (vi) termination of electrical cable must be completed within an electrical junction box manufactured of PVC located at and Secured to the bore head, to be utilised for all bore head electrical connections and with associated nylon cable glands to Seal electrical cable entry to the discharge flange (bore cap).
- (h) Once Installed the Contractor must Remove the sprinkler heads and Test and Flush the reticulation system to Remove any sediment. All stations must be Tested by running for a minimum of fifteen minutes each.
- (i) During the Test running, the Contractor is required to monitor the water quality and pressure.

34.2 Gate Valve Detail

See over page:



(a) P4 Gate Valve in Concrete Box




Section Through Valve Box

1:5

NOTE:

- REFER TO CONSULTANT'S DRAWINGS OR SITE PLAN FOR LOCATION OF GATE VALVES IN CONCRETE BOX

ISSUE DATE October 2013	 DEPARTMENT OF HOUSING	GATE VALVE IN CONCRETE BOX FOR GARDEN RETICULATION	DETAIL No. P4
SCALE N.T.S			



CARPENTRY AND GENERAL REPAIRS

35. Carpentry and General Repairs **General**

35.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to carpentry and general repairs:
- (i) **AS 1170.2 – 2011** Structural design actions – Wind actions;
 - (ii) **AS 1247 – 2004** Metallic coatings – Ratings of test specimens and manufactured articles subject to corrosion Tests;
 - (iii) **AS 1379 – 2007** Specification and supply of concrete;
 - (iv) **AS 1428.1 – 2009** Design for access and mobility – General requirements for access – New building work;
 - (v) **AS 1459.14 – 1999** Methods of sampling and testing ceramic tiles – Determination of resistance to stains;
 - (vi) **AS 1459.15 – 1999** Methods of sampling and testing ceramic tiles – Determination of lead and cadmium given off by glazed tiles;
 - (vii) **AS 1562.1 – 1992** Design and installation of sheet roof and wall cladding – metal;
 - (viii) **AS 1580.0 – 2004** Paints and related materials – Methods of Test – Introduction and list of methods;
 - (ix) **AS 1684.1 – 1999** Residential timber-framed construction – Design criteria;
 - (x) **AS 1684.2 – 2010** Residential timber-framed construction – Non-cyclonic areas;
 - (xi) **AS 1684.3 – 2010** Residential timber-framed construction – Cyclonic areas;
 - (xii) **AS 1905.1 – 2005** Components for the protection of openings in fire resistant wall;
 - (xiii) **AS 2047 – 1999** Windows in buildings – Selection and installation;
 - (xiv) **AS 2358 – 1990** Adhesives – For fixing ceramic tiles;
 - (xv) **AS 2796.1 – 1999** Timber - Hardwood – Sawn and milled products – Product specification;
 - (xvi) **AS 2796.2 – 2006** Timber – Hardwood – Sawn and milled products – Grade description;
 - (xvii) **AS 2796.3 – 1999** Timber – Hardwood – Sawn and milled products – Timber for furniture components;



- (xviii) **AS 3740 – 2010** Waterproofing of domestic wet areas;
- (xix) **AS 3958.2 – 1992** Ceramic tiles – Guide to the selection of ceramic tiling systems;
- (xx) **AS 4055 – 2012** Wind loads for housing
- (xxi) **AS 4145.4 – 2002** Locksets – Padlocks;
- (xxii) **AS 4459.1 – 1999** Methods of sampling and testing ceramic tiles – Sampling and basis for acceptance;
- (xxiii) **AS 4459.10 – 1999** Methods of sampling and testing ceramic tiles – Determination of moisture expansion;
- (xxiv) **AS 4459.11 – 1997** Methods of sampling and testing ceramic tiles – Determination of crazing resistance for glazing tiles;
- (xxv) **AS 4459.12 – 1999** Methods of sampling and testing ceramic tiles – Determination of frost resistance;
- (xxvi) **AS 4459.13 – 1999** Methods of sampling and testing ceramic tiles – Determination of chemical resistance;
- (xxvii) **AS 4459.2 – 1999** Methods of sampling and testing ceramic tiles – Determination of dimensions and surface quality;
- (xxviii) **AS 4459.3 – 1999** Methods of sampling and testing ceramic tiles – Determination of water absorption, apparent porosity, apparent relative density and bulk density;
- (xxix) **AS 4459.4 – 1997** Methods of sampling and testing ceramic tiles – Determination of impact resistance by measurement of coefficient of restitution;
- (xxx) **AS 4459.5 – 1999** Methods of sampling and testing ceramic tiles – Determination of impact resistance by measurement of coefficient of restitution;
- (xxxi) **AS 4459.7 – 1999** Methods of sampling and testing ceramic tiles – Determination of resistance to surface abrasion for glazed tiles;
- (xxxii) **AS 4459.8 – 1999** Methods of sampling and testing ceramic tiles – Determination of linear thermal expansion;
- (xxxiii) **AS 4459.9 – 1999** Methods of sampling and testing ceramic tiles – Determination of resistance to thermal shock;
- (xxxiv) **AS 4506 – 2005** Metal finishing – thermoset powder coatings;
- (xxxv) **AS 5039 – 2008** Security screen doors and security window grilles;
- (xxxvi) **AS 5040 – 2003** Installation of security screen doors and window grilles;



- (xxxvii) **AS 5041 – 2003** Methods of test – Security screen doors and window grilles;
 - (xxxviii) **AS ISO 10545.16 – 2013** Ceramic tiles – Determination of small colour differences;
 - (xxxix) **AS ISO 10545.6 – 2013** Ceramic tiles – Determination of resistance to deep abrasion for unglazed tiles;
 - (xl) **AS ISO 13006 – 2013** Ceramic tiles – Definitions, classifications, characteristics and marking;
 - (xli) **AS ISO 13007.1 – 2013** Ceramic tiles – Grouts and adhesives – Terms, definitions and specifications for adhesives;
 - (xlii) **AS ISO 13007.2 – 2013** Test methods for adhesives – Grouts and adhesives;
 - (xliii) **AS ISO 13007.3 – 2013** Grouts and adhesives – terms, definitions and specification for grouts;
 - (xliv) **AS/NZS 1163 – 2009** Cold-formed structural steel hollow sections;
 - (xlv) **AS/NZS 1170.0 – 2002** Structural design actions – general principles;
 - (xlvi) **AS/NZS 1170.1 – 2002** Structural design actions – permanent, imposed and other actions;
 - (xlvii) **AS/NZS 1170.2 – 2011** Structural design actions – wind actions;
 - (xlviii) **AS/NZS 4858 – 2004** Wet area membranes;
 - (xlix) **AS/NZS 4859.1 – 2002** Materials for the thermal insulation of buildings – general criteria and technical provisions;
 - (l) **AS/NZS ISO 31000 – 2009** Risk Management – Principles and Guidelines;
 - (li) *Competition and Consumer (Corded Internal Window Coverings) Safety Standard 2014 (Cth)*;
 - (lii) **HB 44 – 1993** Understanding the Timber Framing Code; and
 - (liii) **ISO 9044 – 1999** Industrial woven wire cloth – Technical requirements and tests.
- (b) Where amendments to the standards and codes exist, the Contractor must comply with the latest amendments.



36. Carpentry and General Quality

36.1 Materials and Workmanship

- (a) Fixings
 - (i) Metal Fixings used in areas exposed to weather or water or in Wet Areas must be galvanised, stainless steel or brass, unless specified otherwise.
 - (ii) Gap sealants, adhesives and glues used in areas exposed to weather or water or in Wet Areas must be waterproof.
- (b) Joinery
 - (i) All joinery must be:
 - A. strongly and properly framed-up;
 - B. neatly put together with mortise and tenon joints (including window and door frames and glazing bars); and
 - C. hand or machine sanded.
 - (ii) Externally, all exposed surfaces must be dressed and then arrised to prevent splintering edges. Timber sunk into or in contact with the ground must be treated using an appropriate timber preservative to prevent rot on all surfaces before being placed in position.
 - (iii) Where maintenance results in raw timber, the Contractor must paint a coat of Sealer paint to protect the raw surface.
 - (iv) The use of larger or different fixings is permissible where the existing screws are incapable of providing an acceptable outcome. The cost of using longer screws is incorporated into price of the Tasks.
- (c) Timber
 - (i) All timbers used in joinery and natural timber mouldings, beading, skirting and architraves must be Australian or New Zealand timber.
 - (ii) Each length of Structural timber (solid or fabricated) delivered to Site must bear at least one brand mark or label indicating its stress grade and production location.
- (d) Treated Pine
 - (i) Copper Chrome Arsenic treated pine is not permitted to be used at an Site.
 - (ii) Other treated pines may be used provided the product data sheets state “non-hazardous and non-dangerous goods”. The treated pine must be correctly marked with a Treatment Plant Number, Preservative Code Number and Hazard Class Number.



- (iii) Hazard classes must be appropriate for intended use. The following factors should be taken into consideration:
 - A. external or internal use;
 - B. exposure to moisture;
 - C. buried or above ground; and
 - D. located north of the Tropic of Capricorn.
 - (iv) All cuts to treated pine must be treated and sealed with an appropriate product prior to Installation to prevent decay or attack.
 - (v) Where being used for Repairs, treated pine cannot be used with other woods if it is to be left exposed and not painted. The only exception to this is where treated wood is to be in fencing or Structural timbers such as stumps, bearers and joist Repairs.
- (e) Metal Hardware
- (i) Metal hardware exposed to view, unless otherwise nominated, is to be chrome plated satin finished aluminium or stainless steel unless otherwise nominated.

37. Accessibility Modifications

37.1 Grab Rail

- (a) Where the Contractor is required to Supply and Install a grab rail, the Contractor must use a clean span, stainless steel grab rail with hole lugs at both ends and bolted to the wall using concealed stainless steel Fixings.

37.2 Accessibility Ramps

- (a) Where the Contractor is required to Supply and Install accessibility ramps, the Principal's Nominated Brand is Tyrex products - for further information about Tyrex Fixtures please visit: www.tyrex.com.au
- (b) The WA distributor for Tyrex products is:

AC Mobility Pty Ltd, Unit 2, 5 Boulder Road, Malaga. 6090.

Phone: 08 9209 1777

37.3 Door Stop

- (a) Where the Contractor is required to Supply and Install a wall mounted magnetic door stop, the Principal's Nominated Brand is Adoored Trumpet T0540 - for further information about Adoored Fixtures please visit: www.adoored.com.au

37.4 Lever Handle Sets

- (a) Where the Contractor is required to Replace or Supply and Install a lever handle set, the Contractor must only use Carbine, Gainsborough, Lane or Lockwood



products – for further information about Carbine products please visit: www.carbine.com.au – for further information about Gainsborough products please visit: www.gainsboroughhardware.com.au; for further information about Lane Fixtures please visit: www.itwproline.com.au – for further information about Lockwood products please visit: www.lockweb.com.au

- (b) Lever sets must have a minimum **60 mm** back-set.

38. Flywire Replacement

Where the Contractor is required to rewire an existing window flyscreen, window barrier screen, flyscreen door or barrier screen door, the Contractor must ensure:

- (a) Flywire for screen doors and framed window screens must be aluminium wire with a minimum gauge of **0.23 mm** and a mesh strand count of 18 x 16 per **25.4 mm²**.
- (b) Flywire for chrome plated flexible screens must be fiberglass fine weave mesh with a minimum gauge of **0.25 mm** and a mesh strand count of 18 x 14 per **25.4 mm²**.
- (c) Heavy duty tough screen mesh must be powder coated, aluminium wire with a minimum gauge of **0.41 mm** and a maximum mesh strand count of 14 x 14 per **25.4 mm²**.
- (d) Plastic splines are to be replaced only when the existing spline is perished and unusable. The replacement is deemed to be included in the price of the Task.
- (e) Where the Contractor is required to Replace or Supply and Install a heavy duty tough screen the Principal's Nominated Brand is Cyclone - for further information about Cyclone Fixtures please visit: www.cyclone.com.au

39. Security Screen Doors

39.1 General

- (a) Where locks are to be replaced, the Contractor must, where locks allow, ensure that replacement locks are keyed alike.
- (b) Where locks are not keyed alike, replacement locks must be keyed alike to the main entrance door. If replacing the main entrance door lock, the lock must be keyed alike the majority of any existing door locks at the property i.e. all door locks are to be keyed to the same.
- (c) Where the Contractor is required to Replace or Supply and Install a nylon brush strip, the Principal's Nominated Brand is Raven RP2A – for more information about Raven products please visit: www.raven.com.au
- (d) Where the Contractor is required to Replace or Supply and Install a double cylinder safety door lock, the lock must be key operated internally and externally and have an internal snib. Where a three point locking system is in place the three point locking system must engage when locked with the key as well as when locked with the internal snib only. The Principal's Nominated Products are Whitco Tasman Mk3 (hinged) or Whitco Leichhardt (sliding), Rolltrak or Yale –



for more information about Whitco products please visit: www.whitco.com.au;
for more information about Rolltrak products please visit:
www.rolltrakspares.com; for more information about Yale products please visit:
www.yalelock.com.au

39.2 Screen

- (a) Stainless steel mesh must be fully insulated from all aluminium using a PVC or nylon barrier to ensure no contact between any of the mesh and the aluminium products.
- (b) Screens must have the following characteristics:
 - (i) mesh must have a high durability powder coating. The Principal's preferred coating colour is black;
 - (ii) mesh must be a plain weave, 10 or 11 count mesh i.e. 10/11 strands on the weft and 10/11 strands on the warp per **25.4 mm** of mesh;
 - (iii) mesh must be woven to **ISO 9044 – 1999**;
 - (iv) mesh must have apertures on average of less than or equal to **1.6 mm x 1.6 mm**;
 - (v) the open area of the mesh must be less than or equal to 44 per cent;
 - (vi) extruded aluminium must have a high durability powder coating;
 - (vii) extruded aluminium must be from aluminium alloy 6063-T5 or 6063-T6;
 - (viii) mesh must be manufactured from 304 or 316 grade stainless steel, have a diameter greater than or equal to **0.8 mm** or **1.0 mm** and a tensile strength greater than or equal to **800 + 40 MPa**; and
 - (ix) manufacturer's marking adhered to frame with transparent acrylic adhesive or untearable polyester film label.

39.3 Hinged Security Screen Doors

- (a) Where the Contractor is required to Install a hinged screen door, the Contractor must ensure that doors have:
 - (i) 3 x anti-tamper hinges; or
 - (ii) 3 x steel Fixed pin hinges welded to the frame; or
 - (iii) 3 x hinges that are concealed when door is closed.
- (b) Hinged screen doors must be fitted with:
 - (i) a standard pneumatic door closer;
 - (ii) **3 mm** nylon cord or light chain swing restraint;
 - (iii) aluminium Fixings to an aluminium extrusion;



- (iv) a brush strip at the base of the door;
- (v) a double cylinder keyed lock with a three point locking system. The three point locking system must engage when locked with a key as well as when locked with the internal snib only – the Principal's Nominated Product is Rolltrak , or Whitco Tasman Mk3 or Yale – for further information about Rolltrak products please visit www.rolltrakspares.com; for further information about Whitco products please visit: www.whitco.com.au; for further information about Yale products please visit: www.yalelock.com.au and
- (vi) a stainless steel mesh – 304 or 316 grade.
- (c) The colour of the security screen door must match that of the existing screen door or existing window frames and window screens, unless a colour is nominated by the Principal.
- (d) The door must comply with **AS 5039 – 2008** and **AS 5041 – 2003** and therefore must pass all relevant tests including but not limited to the Impact Test, Knife Test, Jemmy Test and Pull Test.
- (e) The door must comply with **AS 5040 – 2003** and therefore must be supplied and installed by a licence installer.

39.4 Sliding Security Screen Doors

- (a) Where the Contractor is required to Install a sliding screen door, the Contractor must ensure that doors:
 - (i) have at least two Adjustable roller wheels supporting the door;
 - (ii) must be Installed so that screen doors are removable only in the fully open position;
 - (iii) have a double cylinder keyed lock with a three point locking system. The three point locking system must engage when locked with a key as well as when locked with the internal snib only – the Principal's Nominated Product is Rolltrak, or Whitco Leichhardt or Yale – for further information about Rolltrak products please visit www.rolltrakspares.com; for further information about Whitco products please visit: www.whitco.com.au; for further information about Yale products please visit: www.yalelock.com.au;
 - (iv) have stainless steel mesh – 304 or 316 grade; and
 - (v) have a vertical brush strip.
- (b) The Contractor must Supply and Install aluminium channels enclosing:
 - (i) the lock edge of the sliding door where required; and
 - (ii) the aluminium track where required.
- (c) Aluminium angles must be Fixed in two positions:



- (i) one Fixed to the sliding door mullion; and
 - (ii) one to the sliding barrier screen door,
- which interlock when the sliding barrier door is in a closed position. Interlocking angles must extend for a minimum of 80 per cent of the door height.
- (d) The Contractor must ensure that channels, tracks and angles are Securely Fixed using Fixings that cannot be Removed when the barrier screen door is closed.
 - (e) A weather Seal is to be fitted to the closing mullion, where interlock sections are not required.
 - (f) The colour of the security screen door must match that of the existing screen door or existing window frames and window screens, unless a colour is nominated by the Principal.
 - (g) The door must comply with **AS 5039 – 2008** and **AS 5041 – 2003** and therefore must pass all relevant tests including but not limited to the Impact Test, Knife Test, Jemmy Test and Pull Test.
 - (h) The door must comply with **AS 5040 – 2003** and therefore must be supplied and installed by a licence installer.
 - (i) All the above is deemed included in the Task.

40. Window Security Screens

- (a) Where the Contractor is required to Replace or Supply and Install window security screens to sliding windows, the Contractor must only do so to the external side of a sliding window sash to allow for escape in case of emergency.
- (b) Screens fitted internally to casement timber sashes are to have a keyed Fixed chain winder to the sash, and may be carried out as Additional Works. Locate handle operation clear of the flyscreen. Magi flaps are not to be used.
- (c) Where required the Contractor must provide and Fix an aluminium sub-frame or Fixed barrier screen to a timber window frame to support the screen, the cost of which is incorporated into the price of the Tasks.
- (d) Screens must be Securely Fixed using pop rivets or screws with tamper resistant heads.
- (e) Where screens are greater than **0.82 m²** or **1 m** in width or height, the screen must be fitted with a powder coated extruded aluminium spreader bar to support the longer edges.
- (f) **7 mm** aluminium diamond shaped security screen is not acceptable. All window security screens must be fitted with stainless steel mesh – 304 or 316 grade. Where the mesh is anchored to the screen frame, the screen frame must be **3 mm** thick.



- (g) The colour of the window security screen must match that of the existing window frames and/or window screens, unless a colour is nominated by the Principal.
- (h) The window screen must comply with AS 5039 – 2008 and AS 5041 – 2003 and therefore must pass all relevant tests including but not limited to the Impact Test, Knife Test, Jemmy Test and Pull Test.
- (i) The window screen must comply with AS 5040 – 2003 and therefore must be supplied and installed by a licence installer.
- (j) All the above is deemed included in the Task.

41. Cyclone Screens

- (a) Where the Contractor is required to Replace or Install screens in Wind Regions C and D, the Contractor must ensure that screens have passed the **AS 1170.2 – 2002** Cyclone Missile Impact Test (category D) and be built to standard. See also clause 6 Cyclonic Areas.
- (b) Cyclone screen are not to be fitted to sliding glass doors.
- (c) Cyclone screens must be stainless steel screw clamped **0.9 mm** 304 grade or 316 marine grade high tensile, black powder coated stainless steel mesh. The Principal's Nominated Brands are:
 - (i) Crimsafe – for further information about Crimsafe products please visit: www.crimsafe.com.au
 - (ii) Westral – for further information about Westral products please visit www.westral.com.au
 - (iii) Amplimesh - for further information about Amplimesh products please visit www.amplimesh.com.au
 - (iv) Invisi-gard - for further information about Invisi-gard products please visit www.invisi-gard.com.au
 - (v) Secureview - for further information about Secureview products please visit www.secureview.com.au
- (d) All screens must be top hung and must be mounted in a full surround frame, mitred and staked to provide protection from side impact as well as insect intrusion.
- (e) The base frame must be screw fixed to building structure utilising **10 g** tamper resistant screws, **100 mm** in front of each corner and at **300 mm** after that. The Contractor must provide a flat surface to the perimeter of window to ensure a stable, sealable surface to mount the base frame of the cyclone screen.
- (f) The base frame must have the following characteristics:
 - (i) no less than 2 x drainage points of 20 x **5 mm** (elongated) to allow egress of water and to prevent pooling; and



- (ii) sufficient projection to enable wire surface clearance from glazing to be no less than the rate of instantaneous deflection measured at Testing.
- (g) The screen shall have the following characteristics:
 - (i) sufficient projection of surface from glazing to be in accordance with the missile impact criteria, the Principal regards **105 mm** to be an optimum;
 - (ii) Safe-S-Cape 1 touch emergency egress latching must have a continuous bite onto the base frame to provide latching as well as security but to be accessible from the exterior of the building;
 - (iii) cyclone screen infill panels should be applied as individual screening to align with the widow joinery panels and no individual screen panel should be greater than **1200 mm x 1500 mm**;
 - (iv) top hung screen to have minimum 3 x **70 mm** fixed pin hinges per screen. Hinges must be **170 – 180 mm** in from the outer edge of each screen and then placed at **500 mm** centres thereafter;
 - (v) each screen requires a gravity, self-centring, retaining hook with Fixings to Hang the screen from the rafters or eaves when in the full open position;
 - (vi) each hook must be constructed of galvanised **6 mm** rod;
 - (vii) minimum screen frame surround must be **70 mm x 20 mm**;
 - (viii) aluminium finish – entire frame and screen must be powder coated to selected colour; and
 - (ix) wire infill to be black powder coated.
- (h) Each cyclone frame must be marked with the manufacturer's name in **3 mm** high letters either:
 - (i) embossed into the frame; or
 - (ii) on a non-tearable polyester film label, adhered to the frame with transparent acrylic adhesive.
- (i) The mesh must be attached to the cyclonic extruded frame exceeding **3 mm** in metal gauge where the mesh is anchored.

42. Window Repairs and Locks

- (a) Where the Contractor is required to Replace or Supply and Install a fastener to a hinged or double hung timber window, the Principal's Nominated Product is Whitco Whitmatic Window Catch or Sash Fastener AW14.
- (b) Where the Contractor is required to Replace or Supply and Install a window safety lock, the Principal's Nominated Products are:



- (i) Whitco CYL4 Push Lock; and
- (ii) Lockwood 785.
- (c) When replacing a window lock only and a Whitco or Lockwood lock cannot be fitted, the Contractor must use the brand and type appropriate for the window. The cost of the appropriate lock is deemed included in the price of the Task.
- (d) Where the Contractor is required to Replace or Supply and Install a window winder, the Principal's Nominated Product is Whitco W380116.
- (e) Where the Contractor is required to Replace or Supply and Install a keyed lock bolt to an aluminium or timber window, the Principal's Nominated Product is Whitco W2203116.
- (f) When replacing a window lock, catch, fastener or winder and the Principal's Nominated Product cannot be fitted, the Contractor must use the brand and type appropriate for the window. The cost of the product is deemed included in the price of the Task.
- (g) For more information about Whitco products please visit: www.whitco.com.au.
- (h) For more information about Lockwood products please visit: www.lockweb.com.au

43. Window and Sash Replacement

- (a) Where the Contractor replaces or Supplies and Installs a sash that includes the glass, rollers, flyscreen and catch, the cost of this is deemed to be included in the price of the Task.
- (b) The Contractor must also Install mouldings and paint any raw timbers with Sealer paint and the cost of this is deemed to be included in the price of the Task.
- (c) Short glazed windows must be fitted with flyscreen and the cost of this is deemed to be included in the price of the Task.
- (d) Before patching and filling timber frames, the Contractor must Remove timber sashes, Fixed panes and mullions then undertake Repairs.
- (e) New aluminium sash windows must be designed and constructed in accordance with the Standards in 1.2 and exhibit the following qualities:
 - (i) lockable chain winders are to be used on hinged sashes;
 - (ii) keyed safety lock is to be fitted to sliding sashes with two locking positions (fully closed and slightly open (approximately **100 mm**)); and
 - (iii) manufacturer's marking adhered to frame with transparent acrylic adhesive or untearable polyester film label.
- (f) Where a window's designed wind pressure exceeds **600 Pa**, the Contractor must provide to the Principal upon request a certificate certifying as such, prepared by the aluminium window manufacturer and signed by an engineer.



- (g) Where the Contractor is required to Replace timber windows with aluminium windows, the Contractor must reuse mouldings where possible and Replace where required.
- (h) Replacement of rotten or damaged timber mullins, studs or trimmings must also be carried out by the Contractor where necessary. The Contractor may charge carpentry Materials using the appropriate Task as Additional Works.

44. Door Buffers and Door Frames

- (a) Where the Contractor is required to Remove architraves and moulding to perform Maintenance Works and Services on door buffers and door frames, these are to be refitted.
- (b) Where the Contractor is required to Replace or Supply and Install a satin chrome wall mounted door buffer stop, the Principal's Nominated Product is Lockwood A350.
- (c) Where the Contractor is required to Replace or Supply and Install a satin chrome floor mounted door buffer stop, the Principal's Nominated Product is Lockwood A250.
- (d) For further information about Lockwood products please visit:
www.lockweb.com.au
- (e) Floor mounted door stoppers must be packed to raise height if required. Packing material must be neatly trimmed around the base of the door buffer stop.
- (f) Where the Contractor is required to replace or supply and install an external entry door frame, hardwood timber such as Meranti or Jarrah must be used.
- (g) Where the Contractor is required to secure a door frame the Contractor must ensure the door frame is as plumb, level and square as possible and is fully secure. Door frame must have a minimum of 3 fixings per side of door frame. Contractor is not entitled to additional labour or Tasks to ensure door frame is plumb, level or square. This is deemed included in the Task.

45. Door Repairs & Replacement

45.1 General

- (a) Where the Contractor is required to perform maintenance on a door, the Contractor must be aware that the labour cost of removing and Rehangng a door is deemed to be included in the price of the Task.
- (b) The Contractor must select and Install doors best suited to the position and use of door e.g. external, internal, Wet Area or designed for frequent impact. The following door sizes are deemed included in the price of the Task:
 - (i) Timber flush panel sliding door up to 870mm x 2065mm x 35mm;
 - (ii) Timber, fibreglass, solid core and waterproof Duracoat flush panel door up to 820mm x 2040mm x 35mm .



- (c) Sealer paint must be applied to the bottom edge of all doors where weather seals are being Secured, replaced or Supplied and Installed.
- (d) Aluminium door frames must be finished in a powder coat free of die marks, scratches and other blemishes to the colour nominated on the Works Order.
- (e) New sliding glass doors must slide on the internal face of adjoining Fixed glazing.
- (f) The Contractor must ensure hinged doors are hung with a minimum clearance of **2 mm** around the perimeter of the door. Hinges are to be rebated into side of door.
- (g) The Contractor must reuse existing hinges, sets, locks and door furniture unless otherwise stated by the Principal. Where new hinges are required these must be charged using the appropriate Task.
- (h) Doors are to be full size (without edging added to obtain that size) and all edges are to be finished smooth and arrised.
- (i) Where Maintenance Works and Services to doors results in raw timber, the Contractor must paint Sealer paint to the raw timber before Hanging the door. The cost of the Sealer paint is deemed to be included in the price of the Task.

45.2 Sliding Doors

- (a) Timber sliding doors must feature a groove to the bottom side suitable for the existing floor guides. The Contractor must reuse existing track, rollers, guides, stop ends and door furniture unless damaged.
- (b) Door pulls must be positioned **1000 mm** above the floor.
- (c) Door pelmets must be Removed and refitted where necessary.

45.3 Timber External Doors

- (a) Timber doors for external use must be certified by the manufacturer to be for external use. External doors must be solid core with tempered hardboard faces and sealed on all four sides prior to hanging.
- (b) Where the Contractor is required to Rehang or Replace an external door, the Contractor must ensure doors are hung with 3 x **100 mm** broad butt hinges with screws no less than **32 mm** in length. Hinges are to be rebated into the side of the door.
- (c) Contractor must reuse passage set, deadlock with a snib on the inside door furniture and weather Seal unless otherwise stated by the Principal.
- (d) Timber external doors are to be used for storerooms, where storerooms are in common areas such as shared garages.
- (e) See clause 47 Door Locks (key operated) for information about external solid core door locks.



45.4 Internal Doors

- (a) Where the Contractor is required to Ease, Rehang, Replace or Supply and Install an internal door, the Contractor must ensure a minimum clearance of **2 mm** around the perimeter of the door.
- (b) The maximum clearance a door may have from the floor covering is **5 mm**.
- (c) Where the Contractor is required to Rehang or Replace an internal door, the Contractor must ensure doors are hung with 2 x **100 mm** broad butt hinges with screws no less than **32 mm** in length. Hinges are to be rebated into the side of the door.

45.5 Wet Area Doors

- (a) Where the Contractor is required to Ease, Rehang, Replace or Supply and Install a Wet Area door, the Contractor must ensure a minimum clearance of **2 mm** around the perimeter of the door.
- (b) The maximum clearance a door may have from the floor covering is **5 mm**.
- (c) Where the Contractor is required to Rehang or Replace an internal door, the Contractor must ensure doors are hung with 2 x **100 mm** broad butt hinges and 4 x screws no less than **32 mm** in length per hinge. Hinges are to be rebated into the side of the door.
- (d) Timber doors for Wet Areas must be:
 - (i) certified by the manufacturer for Wet Area use; and
 - (ii) painted with Sealer paint on all four edges before Hanging.
- (e) Wet Area doors can be used on a storeroom where the storeroom is not in a common area such as a rear yard.

45.6 M & B Weathercote Fiberglass Doors

- (a) Where the Contractor is required to Replace or Supply and Install a fiberglass door, the door must be Installed to the same standards described in clauses 45.1 to 45.5 inclusive.

46. Door Sets and Handles (non-key operated)

46.1 General

- (a) Where the Contractor is required to Adjust and Secure a door set, the Contractor must use Locktite or thread seal tape if required and use a silicone lubricant spray on all moving parts.
- (b) The cost of Adjusting and securing door sets, furniture, locks and striker plates is deemed to be included in the price of the Task.
- (c) The Principal's Nominated Brands are:



- (i) Lockwood – for further information about Lockwood products please visit: www.lockweb.com.au; and
- (ii) Lane – for further information about Lane products please visit: www.itwproline.com.au.
- (iii) Carbine – for further information about Carbine products please visit: www.carbine.com.au.
- (iv) Gainsborough – for further information about Gainsborough please visit: www.gainsboroughhardware.com.au.

46.2 Privacy Sets

- (a) Bathroom, shower and toilet doors are to be fitted with privacy latch sets and must have an internal turn snib and an external recessed snib for emergency entry.
- (b) The Principal's Nominated Products are:
 - (i) Lockwood Symmetry Series Knob privacy set in satin stainless steel;
 - (ii) Lane satin stainless steel knob privacy set;
 - (iii) Carbine Round Privacy Set; and
 - (iv) Gainsborough Manning Door Know Privacy Set.

46.3 Passage Sets

- (a) All other internal doors are to be fitted with passage sets.
- (b) The Principal's Nominated Products are:
 - (i) Lockwood Symmetry Series Knob passage set in satin stainless steel;
 - (ii) Lane satin stainless steel knob passage set;
 - (iii) Carbine Rounded Passage Set; and
 - (iv) Gainsborough Contractor 500 Terrace Passage Set.

46.4 Other

- (a) Where the Contractor is required to Replace or Supply and Install a dummy trim door knob, the Principal's Nominated Products are:
 - (i) Lockwood Symmetry Series Knob dummy knob in satin stainless steel;
 - (ii) Lane satin stainless steel dummy knob;
 - (iii) Carbine Round Dummy; and
 - (iv) Gainsborough G4 Villa Dummy Knobset.



- (b) Where the Contractor is required to Replace or Supply and Install a handle for an aluminium framed sliding door, the Principal's Nominated Product is Rolltrak 8530 – for further information about Rolltrak products please visit: www.rolltrakspares.com.

47. Door Locks (key operated)

- (a) Where the Contractor is required to Replace or Supply and Install a lock, the Contractor must ensure the new lock is keyed to Match existing locks. The Contractor must supply the Principal with two keys.
- (b) The cost of Adjusting and securing door sets, furniture, locks and striker plates is deemed to be included in the price of the Task.
- (c) External solid core doors are to be fitted with deadlock with internal snib and a passage set **200 mm** below the deadlock. Contractor must reuse existing unless damaged. Lock sets to be placed so that they do not interfere with screen door.
- (d) The Principal's Nominated Brands are:
- (i) Lockwood – for further information about Lockwood products please visit: www.lockweb.com.au;
 - (ii) Lane – for further information about Lane products please visit: www.itwproline.com.au.
 - (iii) Carbine – for further information about Carbine products please visit: www.carbine.com.au; and
 - (iv) Gainsborough – for further information about Gainsborough products please visit: www.gainsboroughhardware.com.au.

48. Cupboard and Meter Box

48.1 General

- (a) Where the Contractor is required to Replace or Supply and Install cupboards, meter boxes or drawers, the Contractor must use existing hinges, locks, runners and handles unless damaged.
- (b) All cupboard doors are to be made from pre-finished **16 mm** MR MDF or HMR Particle Board.
- (c) The maximum door width for all new cupboards is **450 mm**.
- (d) All cupboard doors must operate on self-closing fully concealed hinges. A minimum of 2 hinges per door must be required on all doors up to **1200 mm** high. Doors taller than this will require three hinges.
- (e) Every cupboard door, meter box and drawer will require a **100 mm** satin chrome "D" handle.
- (f) All exposed edges must be covered with **1 mm** ABS edging.



- (g) All shelves must be Fixed and non-Adjustable, except where otherwise stated.
- (h) Where the Contractor is required to Ease, Hang and Adjust each door, the door must be left in a full working order.
- (i) For further information about cupboard and meter box construction please see clause 48.15 Cupboards and Meter Box Details.

48.2 Colour

- (a) All colours are to be as per the Principal's Colour Schemes and the Principal will nominate the colour on the Works Order.
- (b) All melamine surfaces inside the cupboards must be white.
- (c) When replacing edging to an existing cupboard door, drawer, shelf or benchtop, the colour of the edge strip must match the existing material as close as possible as reasonably determined by the Contractor, unless otherwise instructed by the Principal.

48.3 Details

- (a) All cupboards are to be constructed to Details L1, L1A, L1M, L2, L2A, L3, L3A and L4A.
- (b) Cupboards must be completely prefabricated with pre-finished MR MDF or HMR Particle Board. Contractors must provide **1 mm** ABS edging to exposed edges of all shelves, doors, drawers and other face edges.
- (c) Cupboard dimensions and layout must be the same as existing cupboard dimensions and take into account the current and future location of water, waste, gas and electrical supplies, unless nominated otherwise on the Works Order.

48.4 Bench Tops

- (a) Where the Contractor is required to Replace or Supply and Install bench tops, the Contractor must ensure that any mouldings are refixed following the Installation of the bench top and that all joins and gaps are sealed with flexible mould resistant silicone. The cost of this is deemed to be included in the price of the Task.
- (b) All bench tops must be **32 mm** thick MR MDF or **33 mm** thick Aquaban HMR Particle Board. See Details L1 and L2.
- (c) The Contractor must apply a silicone coating sealant to all cut edges of MR MDF or HMR Particle Board prior to fixing cupboards.
- (d) Laminate plastic sheeting must be Formica or Laminex.
- (e) For further information about Formica products please visit:
www.formica.com.au.
- (f) For further information about Laminex products please visit:
www.laminex.com.au.



- (g) All exposed horizontal tops to cupboards must have post formed edges and corners to bench tops must have rounded **16 mm** radius or bevelled **16 mm** chamfer (except where adjoining a stove).
- (h) All other MR MDF or HMR Particle Board components such as cupboard carcasses and shelves (excluding drawers and backs of cupboards) must be a minimum thickness of **16 mm**.
- (i) The cost of the cut-out such as for a drop in sink or cooktop is deemed to be included in the price of the Task.
- (j) The cost for a benchtop up to 850mm in width is deemed included in the price of the Task for replacing a benchtop.

48.5 Meter Boxes

- (a) Meter box doors must be framed and fitted on both sides with waterproof ply and then painted.

48.6 Child Proof Storage

- (a) Both kitchen cupboards and vanity units require child proof storage.
- (b) At least one cupboard door is to have a child proof catch as per Detail L12 and a partition in the cupboard from the remaining storage area.

48.7 Drawers

- (a) Drawer bottoms must be pre-finished with hardboard Masonite. Draw fronts are to be **16 mm** MR MDF with melamine surfaces on both sides and **1 mm** ABS edging. Drawer sides must be pre-finished MR MDF or HMR Particle Board.
- (b) Drawers must run on metal drawer runners.
- (c) A plastic cutlery tray must be provided in a top drawer of every kitchen. Cutlery trays must be cut and planed so as to fit neatly within the drawer. The cost of this is deemed to be included in the price of the Task.

48.8 Island Cupboards

- (a) Island cupboards must be constructed as per Detail L2 and L2A with the exception that the back must be **16 mm** MR MDF or HMR Particle Board and the top must be **850 mm** wide unless otherwise stated.

48.9 Pantry / Linen Cupboards

- (a) Pantry / linen cupboards must be constructed as Detail L3 and L3A. Each cupboard must have 3 Adjustable shelves in pre-finished white MR MDF. Three self-closing, fully concealed hinges are to be used on each door.
- (b) Size to be either **1944 mm** height x **600 mm** depth x **1000 mm** width or the same size as that being replaced.



48.10 Microwave Shelf

- (a) Microwave shelves must be constructed similar to cupboards and bench tops but should have the following dimensions: **600 mm** width x **450 mm** depth x **450 mm** height and be a minimum **400 mm** above the bench top.
- (b) Microwave shelves must have:
 - (i) bottom;
 - (ii) two sides;
 - (iii) top; and
 - (iv) backall manufactured from **16 mm** MR MDF.
- (c) Microwave shelves must be fully supported on purpose made microwave brackets. The Contractor must trim the wall framing prior to lining so that brackets and shelf have adequate support for the microwave. A vent to the cabinet to be installed where necessary. Rectangle vent to be approx. 300 mm x 80mm.
- (d) The Task includes cut-out for power point and lead, cut out and supply and installation of a vent.

48.11 Inbuilt Hot Plates, Basins and Sinks

- (a) The Contractor must perform the cut-out for the basin, sink or cooktop using the template dimensions or template supplied with the item.

48.12 Kitchen Cupboard Layout

- (a) Kitchen cupboards are to be constructed as per the dimensions of the existing kitchen layout, unless nominated otherwise on the Works Order.
- (b) The Contractor must be aware that hotplates must be located to dimensions shown and that under bench ovens are to be positioned directly under hotplates.
- (c) Where the distance between the hot plate / under bench oven and the end of the bench is **350 mm** or less, the Contractor must provide a cupboard with no central shelf in this space. Where the distance is greater than **350 mm** the cupboard must have a central shelf.
- (d) Internal corners of bench cupboards must be provided with a double hinged or piano hinged door allowing for access to the back corner of the cupboard.
- (e) Double hinged doors are to be no wider than 2 x **300 mm** each.
- (f) Internal corner cupboards must be one unit with no partition.



48.13 Vanity Units

- (a) Vanity units are to be constructed as per Detail L1, L1A or L1M and must be supported on:
 - (i) a **200 mm** high glazed ceramic tile faced brick hob where the floor waste is not under vanity;
 - (ii) a **200 mm** high glazed ceramic tile faced **19 mm** compressed fibre cement board screwed to **25 mm x 25 mm** square hollow section steel frame where the floor waste is not under vanity; or
 - (iii) 2 x (up to) silver anodised Adjustable feet supports where floor waste is under the vanity;
 - (iv) all of which are deemed included in the price of the Task.
- (b) The complete boxed frame and double doors must be **16 mm** pre-finished MR MDF or HMR Particle Board.
- (c) Vanity units must have three doors as standard unless a vanity is less than **800 mm** wide where units must have two doors. Two door vanity units must still have a child proof compartment: see clause 48.6 Child Proof Storage.
- (d) Vanity bench tops must have post formed edges and require a minimum **20 mm** overhang.

48.14 Cupboards Repairs

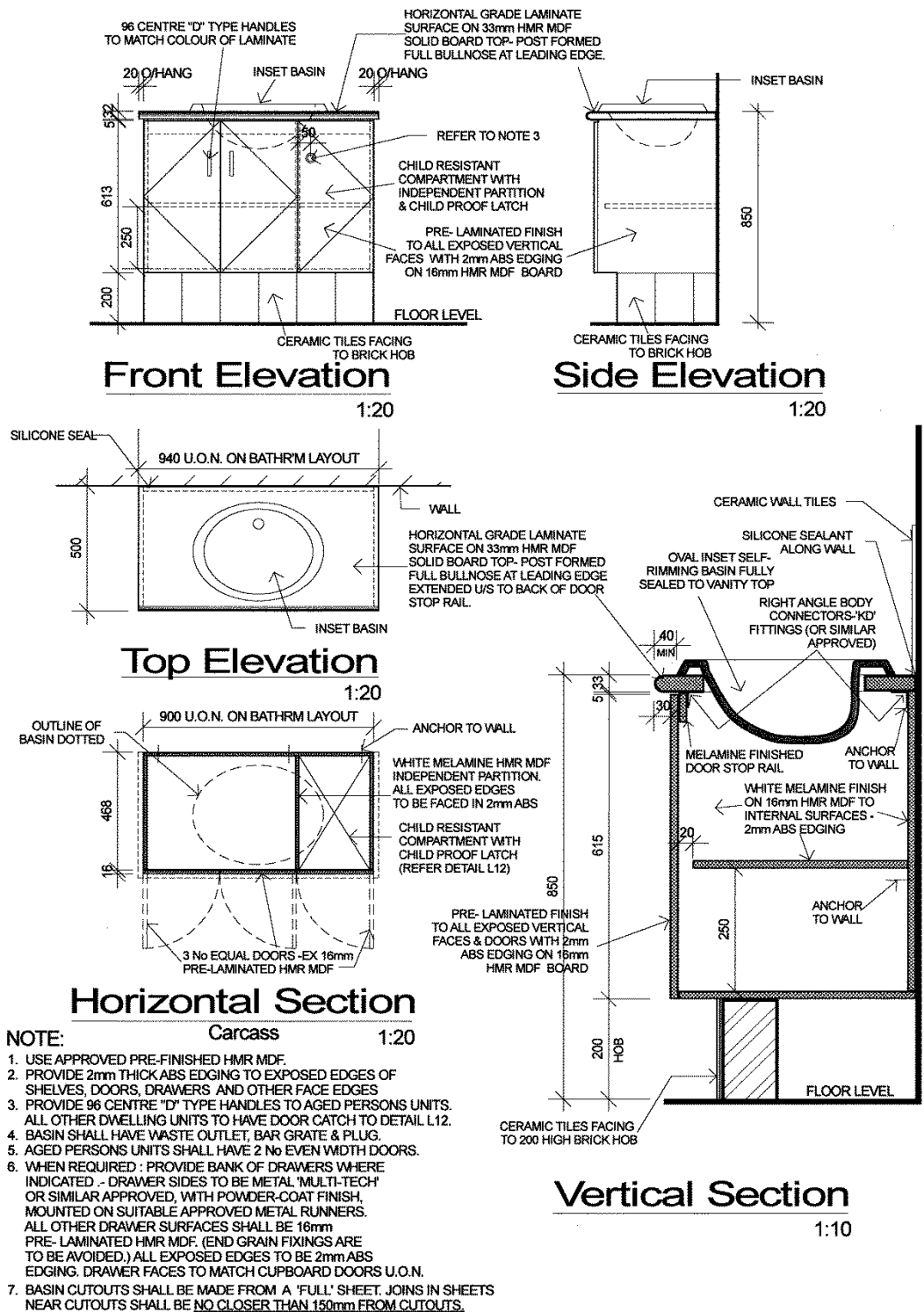
- (a) Where the Contractor is required to Ease, Hang and Adjust each door, the door must be left in a full working order.

48.15 Cupboard and Meter Box Details

See over page:



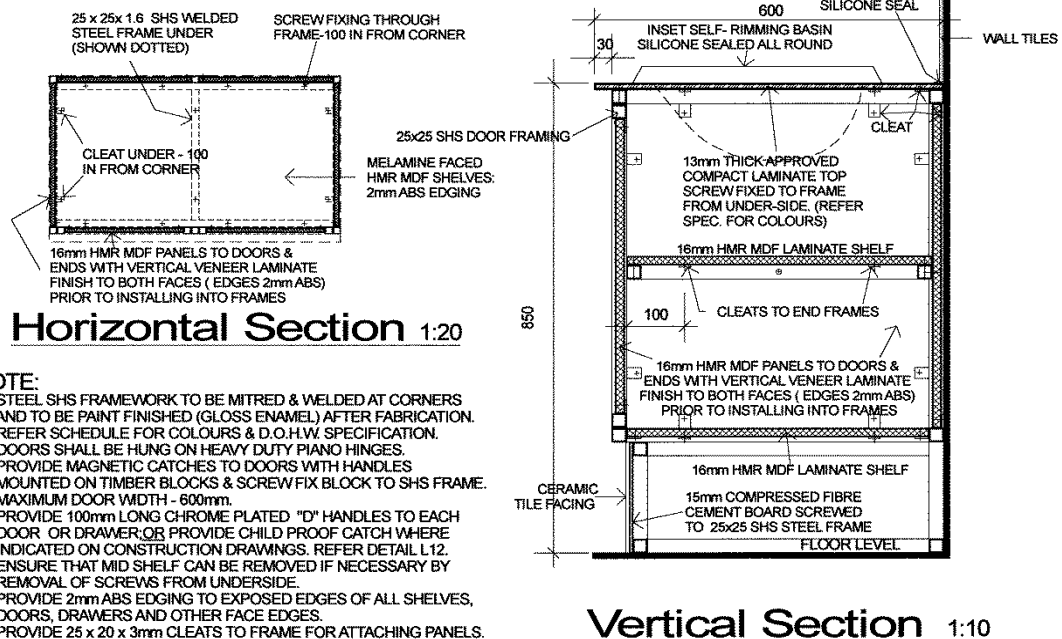
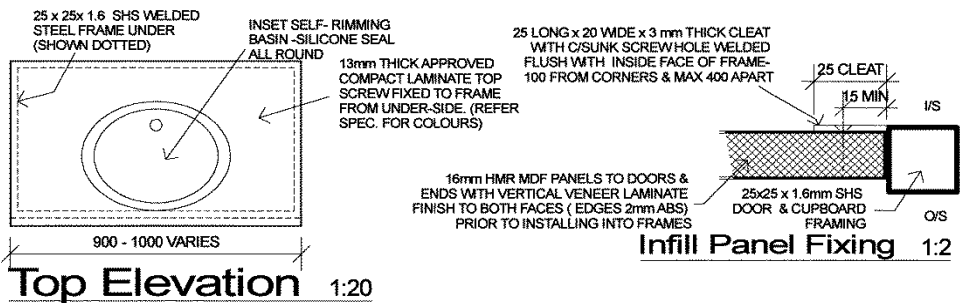
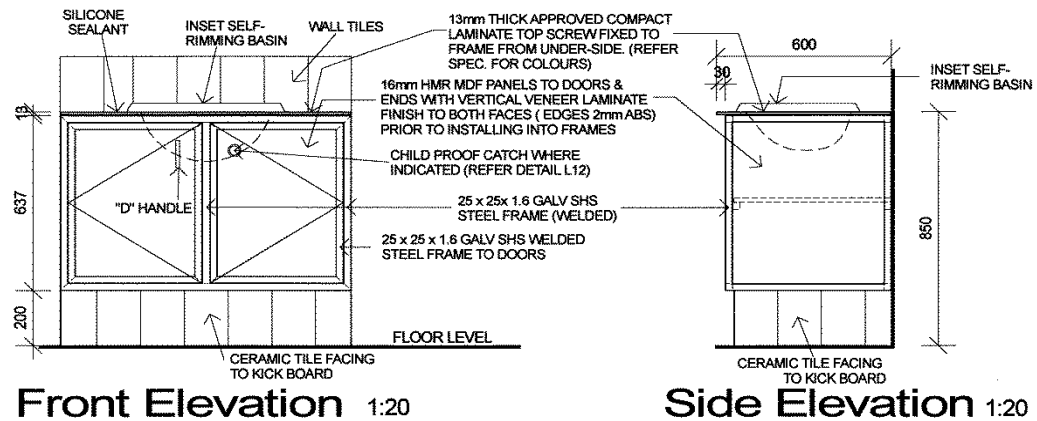
(a) L1 Vanity Cabinet



ISSUE DATE	DETAIL	DETAIL No.
October 2013 SCALE N.T.S	DEPARTMENT OF HOUSING VANITY CABINET WITH INSERT SELF-RIMMING BASIN	L1




(b) L1A Metal Framed Vanity Cabinet



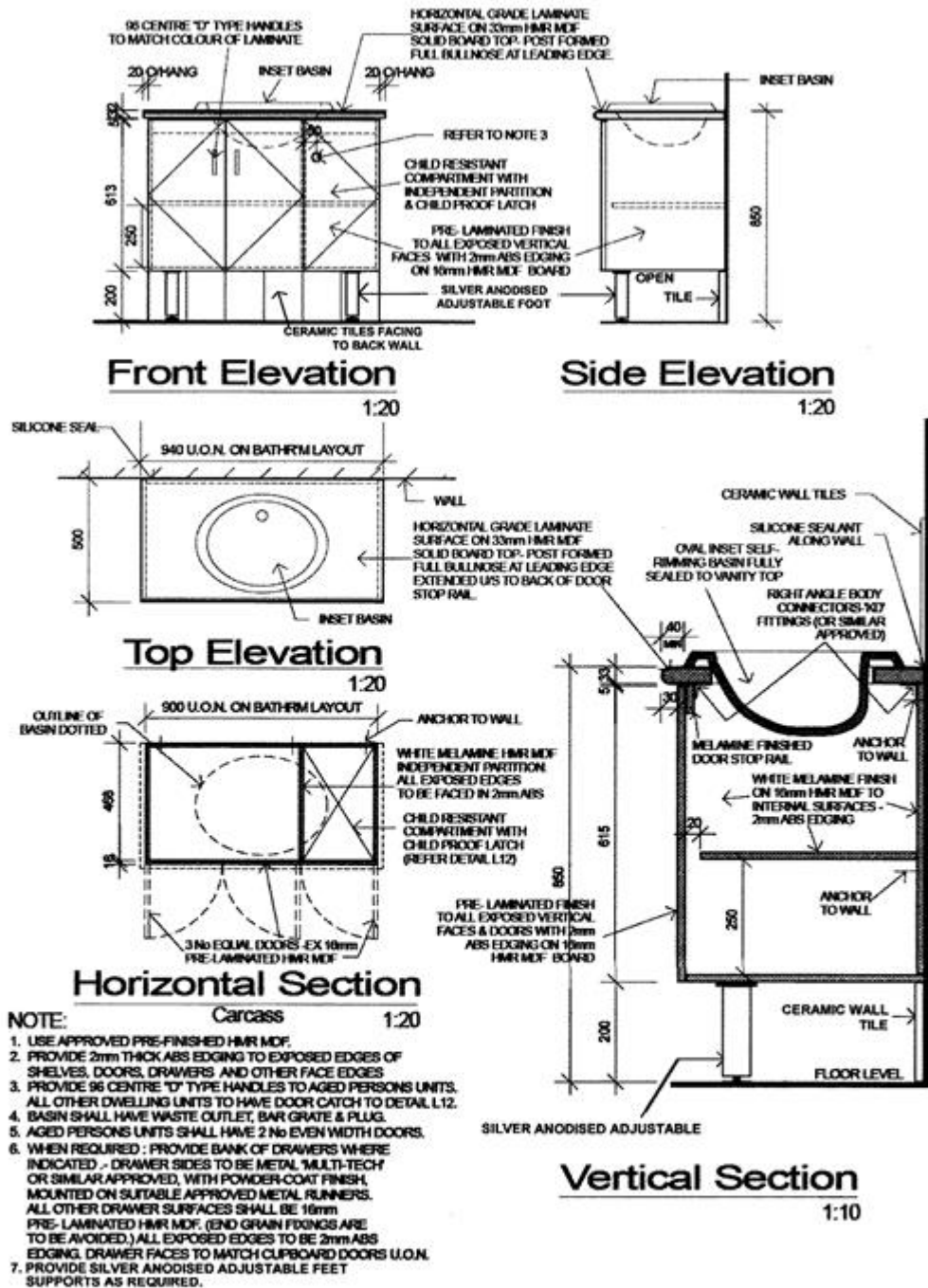
NOTE:


1. STEEL SHS FRAMEWORK TO BE MITRED & WELDED AT CORNERS AND TO BE PAINT FINISHED (GLOSS ENAMEL) AFTER FABRICATION. REFER SCHEDULE FOR COLOURS & D.O.H.W. SPECIFICATION.
2. DOORS SHALL BE HUNG ON HEAVY DUTY PIANO HINGES. PROVIDE MAGNETIC CATCHES TO DOORS WITH HANDLES MOUNTED ON TIMBER BLOCKS & SCREW FIX BLOCK TO SHS FRAME. MAXIMUM DOOR WIDTH - 600mm.
3. PROVIDE 100mm LONG CHROME PLATED "D" HANDLES TO EACH DOOR OR DRAWER OR PROVIDE CHILD PROOF CATCH WHERE INDICATED ON CONSTRUCTION DRAWINGS. REFER DETAIL L12.
4. ENSURE THAT MID SHELF CAN BE REMOVED IF NECESSARY BY REMOVAL OF SCREWS FROM UNDERSIDE.
5. PROVIDE 2mm ABS EDGING TO EXPOSED EDGES OF ALL SHELVES, DOORS, DRAWERS AND OTHER FACE EDGES.
6. PROVIDE 25 x 20 x 3mm CLEATS TO FRAME FOR ATTACHING PANELS. CLEATS LOCATED 100 IN FROM CORNERS & MAX 400 APART
7. PROVIDE SQUARE EDGES TO BENCH TOPS.
8. BASIN SHALL HAVE WASTE OUTLET, BAR GRATE & PLUG.
9. BASIN CUTOUT SHALL BE MADE FROM A 'FULL' SHEET. JOINS IN SHEETS SHALL BE NO CLOSER THAN 150mm FROM CUTOUT.

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL METAL FRAMED VANITY CABINET WITH INSERT SELF-RIMMING BASIN DURABLE CONSTRUCTION	DETAIL No. L1 A
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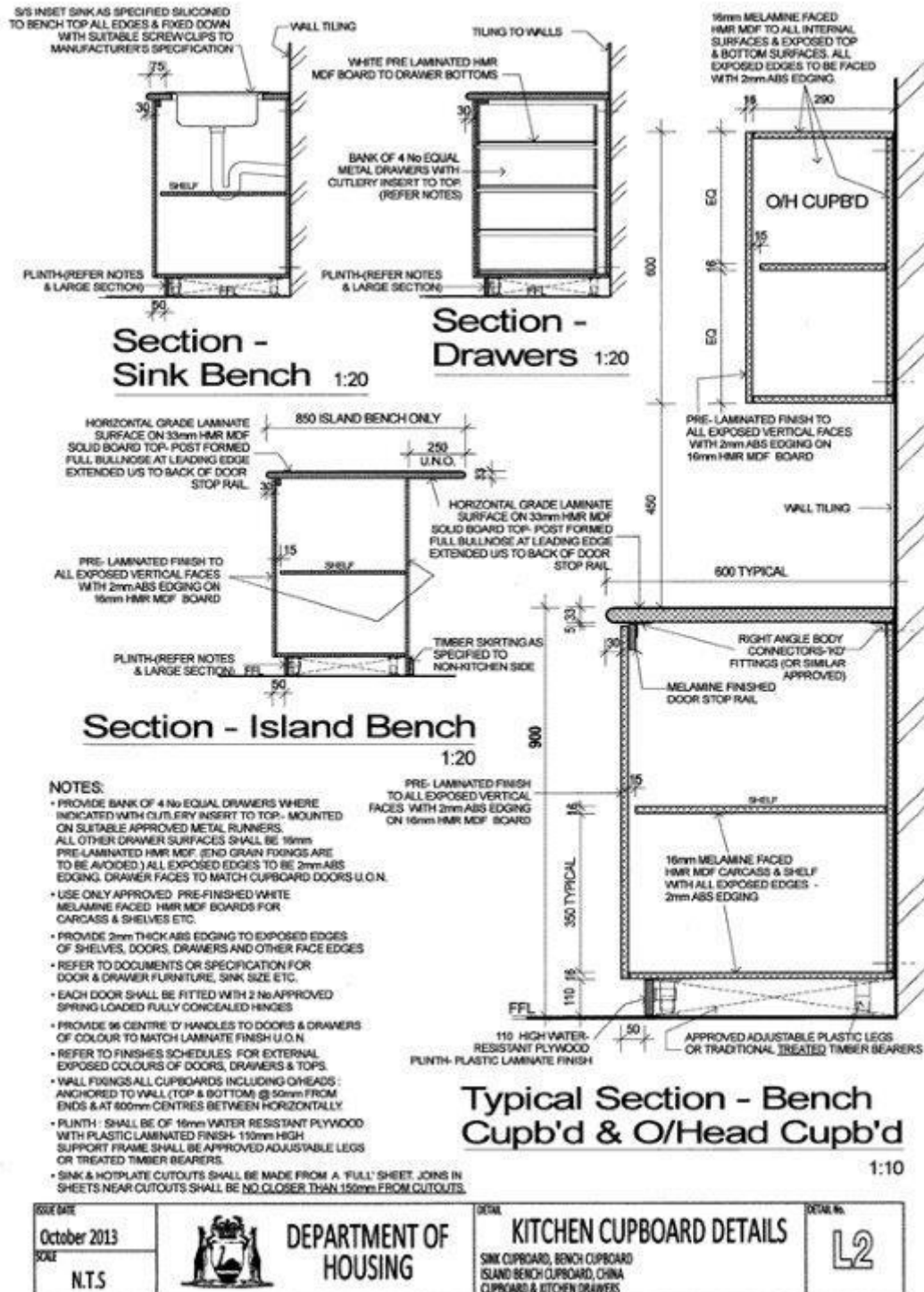
(c) L1M Vanity Cabinet Detail



ISSUE DATE October 2013 SCALE N.T.S.		DEPARTMENT OF HOUSING	DETAIL VANITY CABINET DETAIL	DETAIL No. L1M
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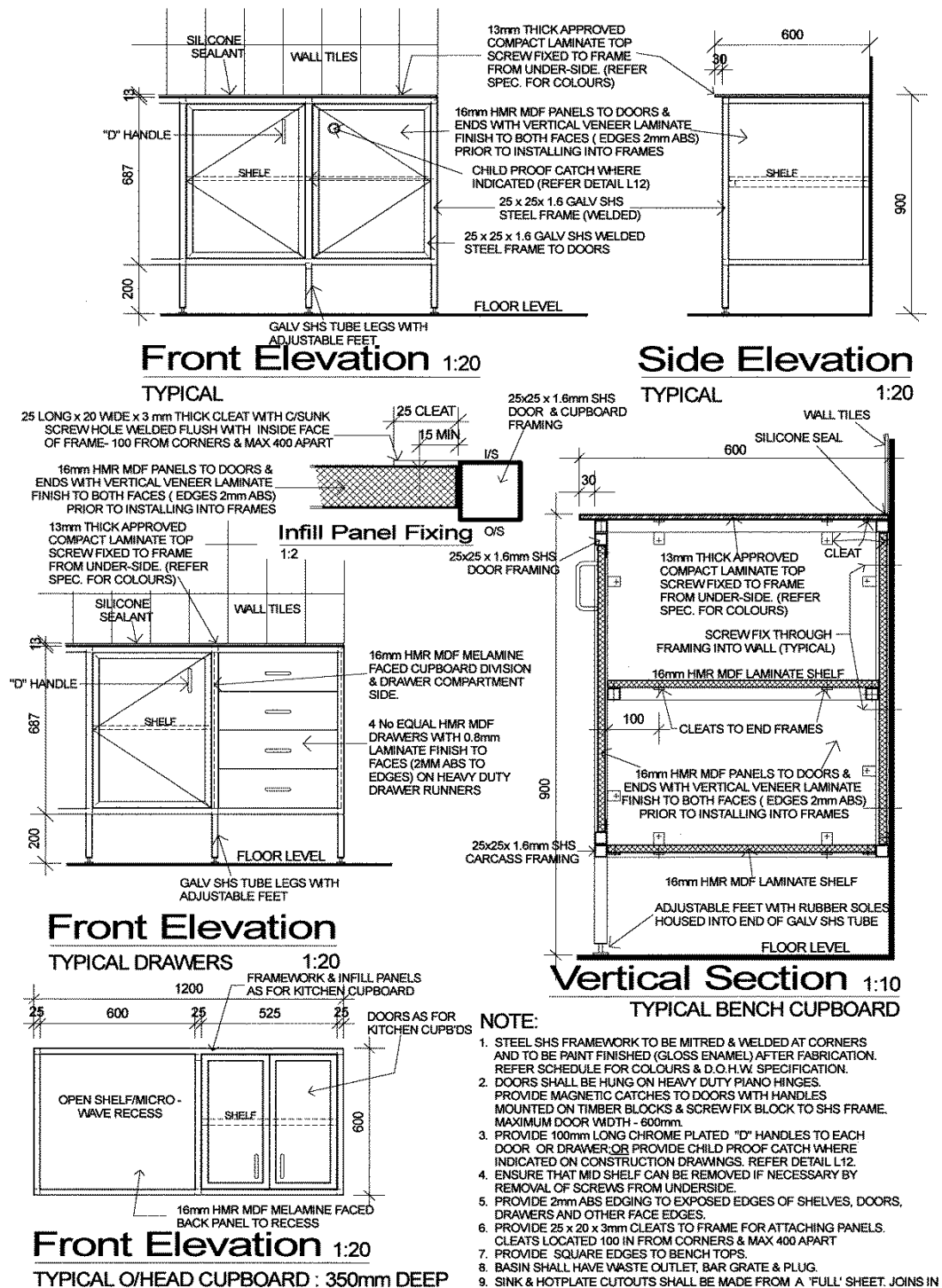



(d) L2 Kitchen Cupboard Details





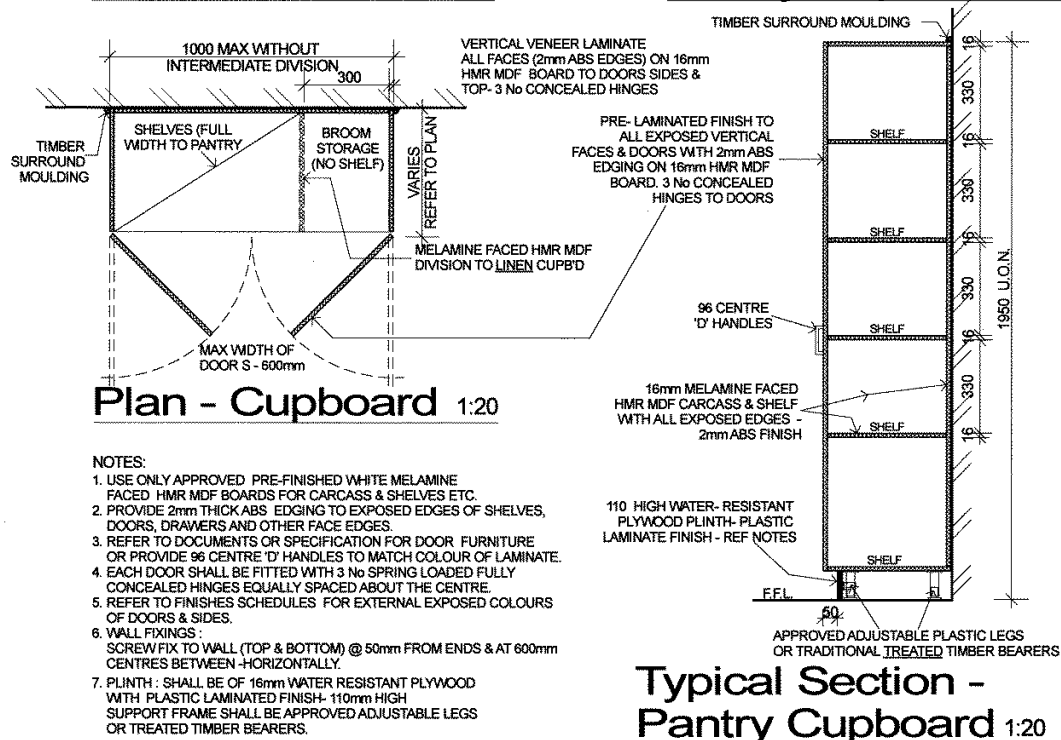
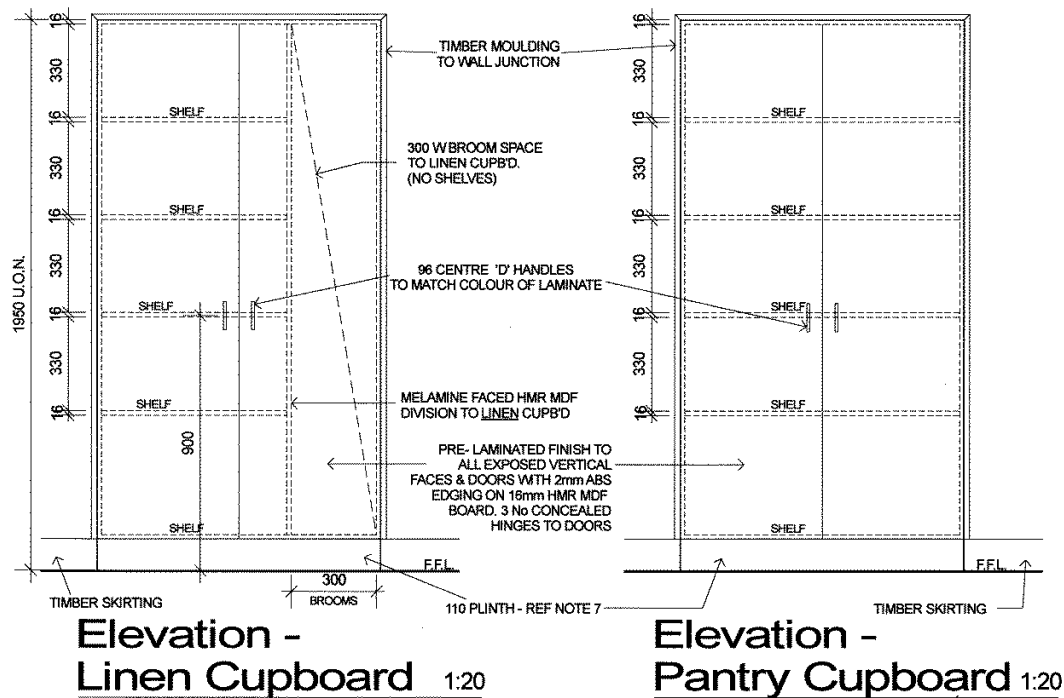
(e) L2A Metal Framed Kitchen Cabinets




ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL METAL FRAMED KITCHEN CABINETS DURABLE CONSTRUCTION	DETAIL No. L2 A
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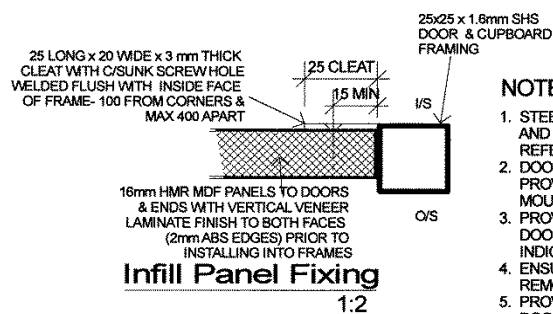
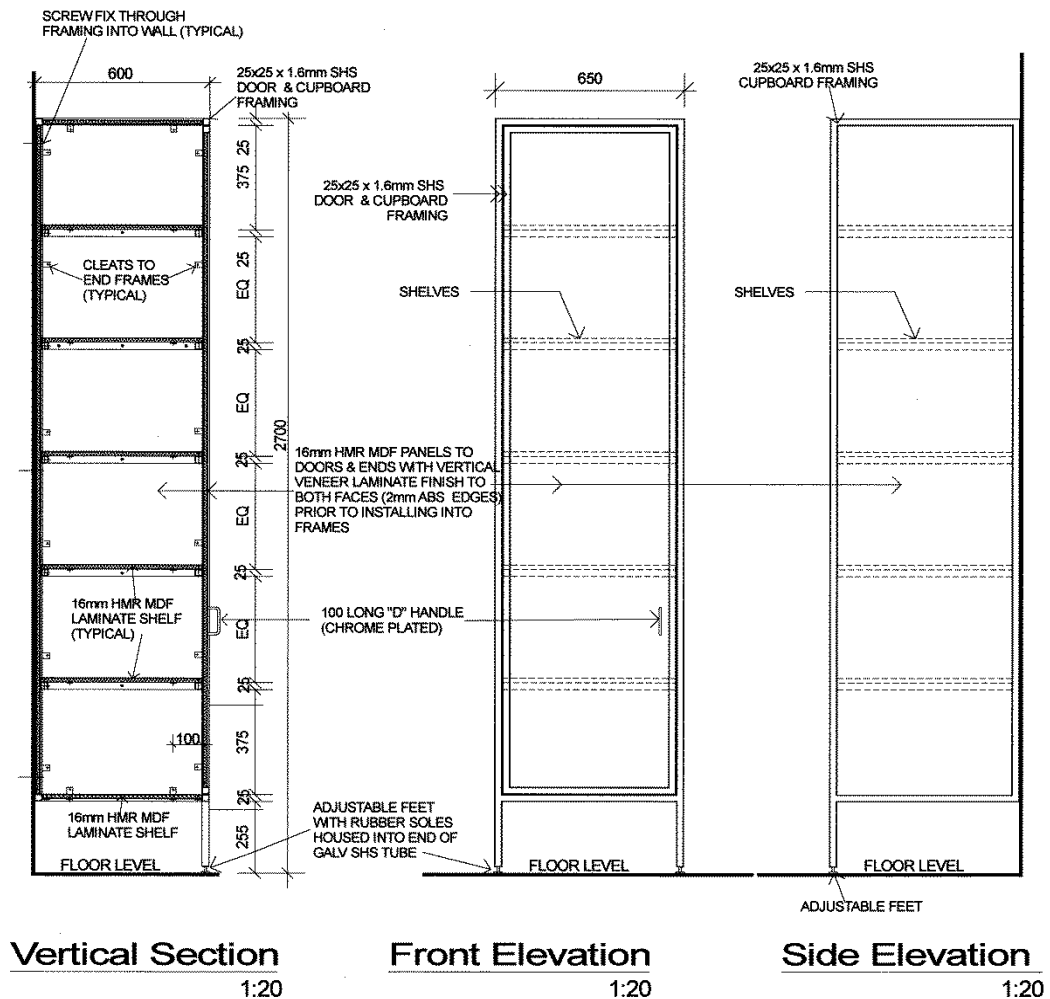
(f) L3 Linen or Pantry Cupboard Detail



ISSUE DATE October 2013 SCALE N.T.S		DEPARTMENT OF HOUSING	DETAIL LINEN OR PANTRY CUPBOARD DETAIL	DETAIL No. L3
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(g) L3A Metal Framed Pantry Cupboard



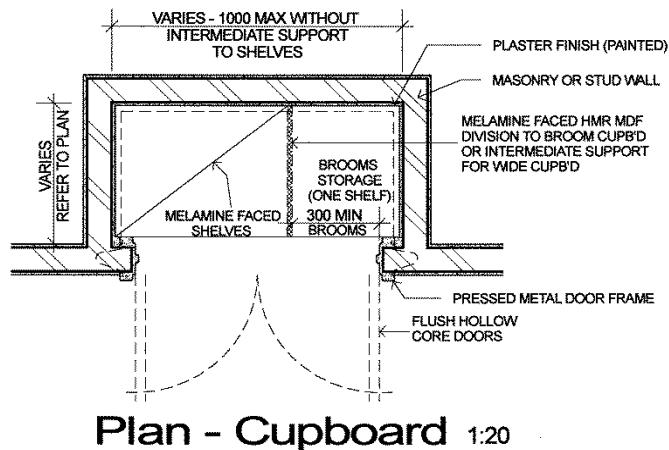
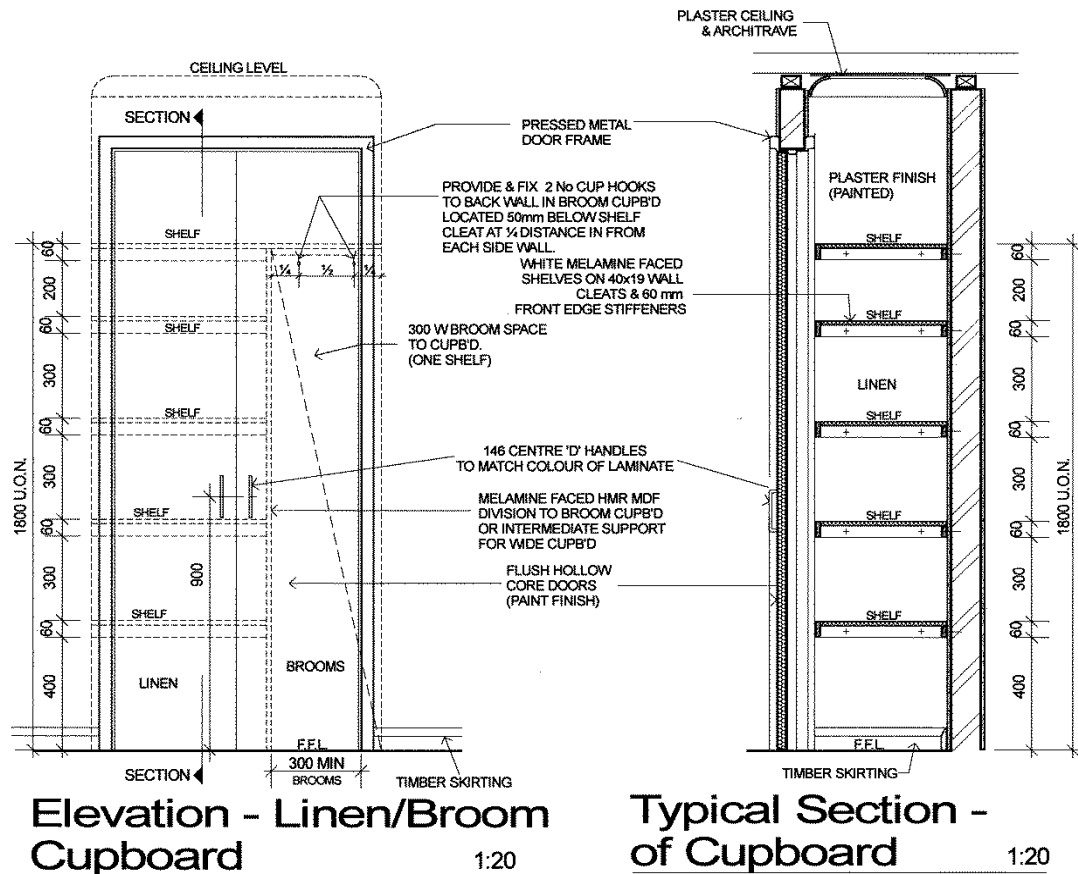
NOTE:

1. STEEL SHS FRAMEWORK TO BE MITRED & WELDED AT CORNERS AND TO BE PAINT FINISHED (GLOSS ENAMEL) AFTER FABRICATION. REFER SCHEDULE FOR COLOURS & D.O.H.W. SPECIFICATION.
2. DOORS SHALL BE HUNG ON HEAVY DUTY PIANO HINGES. PROVIDE MAGNETIC CATCHES TO DOORS WITH HANDLES. MOUNTED ON TIMBER BLOCKS & SCREW FIX BLOCK TO SHS FRAME.
3. PROVIDE 100mm LONG CHROME PLATED "D" HANDLES TO EACH DOOR OR DRAWER OR PROVIDE CHILD PROOF CATCH WHERE INDICATED ON CONSTRUCTION DRAWINGS. REFER DETAIL L12.
4. ENSURE THAT MID SHELF CAN BE REMOVED IF NECESSARY BY REMOVAL OF SCREWS FROM UNDERSIDE.
5. PROVIDE 2mm THICK ABS EDGING TO EXPOSED EDGES OF SHELVES, DOORS, DRAWERS AND OTHER FACE EDGES.
6. PROVIDE 25 x 20 x 3mm CLEATS TO FRAME FOR ATTACHING PANELS. CLEATS LOCATED 100 IN FROM CORNERS & MAX 400 APART
7. PROVIDE SQUARE EDGES TO BENCH TOPS.
8. BASIN SHALL HAVE WASTE OUTLET, BAR GRATE & PLUG.


ISSUE DATE October 2013 SCALE N.T.S.	 DEPARTMENT OF HOUSING	DETAIL METAL FRAMED PANTRY CUPBOARD DURABLE CONSTRUCTION	DETAIL No. L3 A
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(h) L4A Linen/Broom Cupboard Detail

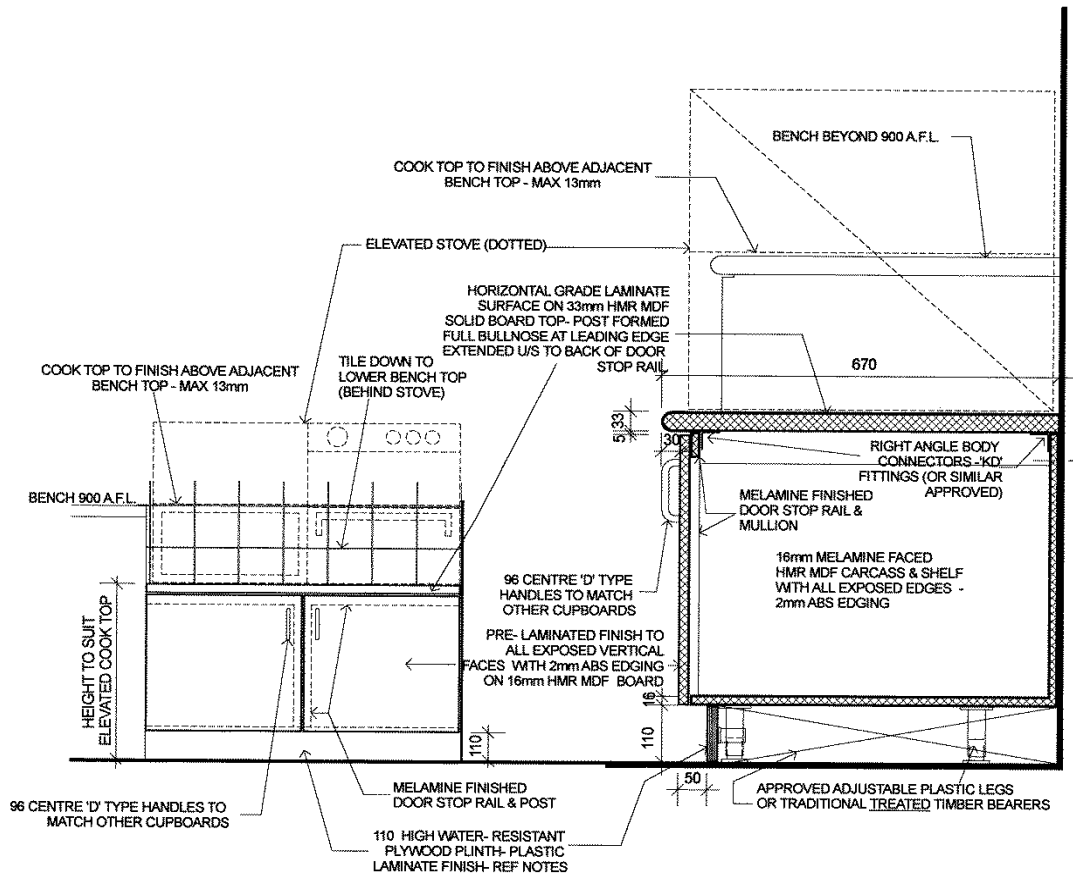


- NOTES:
1. USE ONLY APPROVED PRE-FINISHED WHITE MELAMINE FACED HMR MDF BOARDS FOR SHELVES & DIVIDER. PROVIDE 2mm THICK ABS EDGING TO EXPOSED EDGES OF SHELVES.
 2. REFER TO DOCUMENTS OR SPECIFICATION FOR DOOR FURNITURE OR PROVIDE 146 CENTRE 'D' HANDLES TO MATCH COLOUR OF LAMINATE.
 3. EACH DOOR SHALL BE FITTED WITH MINIMUM 2 No BUTT HINGES AND SUITABLE APPROVED SPRING LOADED BALL CATCHES MOUNTED TOP & BOTTOM TO EACH DOOR.
 4. PROVIDE MINIMUM 40mm x 18mm RAILS TO WALLS TO SUPPORT SHELVES AND 60mm HIGH WOODEN FRONT EDGE STIFFENERS HOUSED TO RECEIVE SHELF MATERIAL.
 5. PROVIDE 2 No 30mm CUP HOOKS TO BACK WALL OF BROOMS CUPBOARD WHERE SHOWN ON DRAWING.

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL LINEN/BROOM CUPBOARD DETAIL	DETAIL No. L4 A
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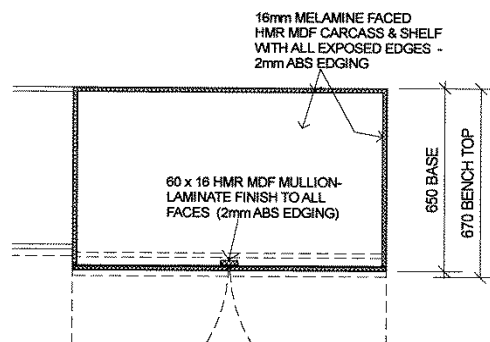


(i) L10 Base Cupboard for Elevated Stove



Front Elevation 1:20


Typical Section 1:10



Typical Plan of Base Cupboard 1:20

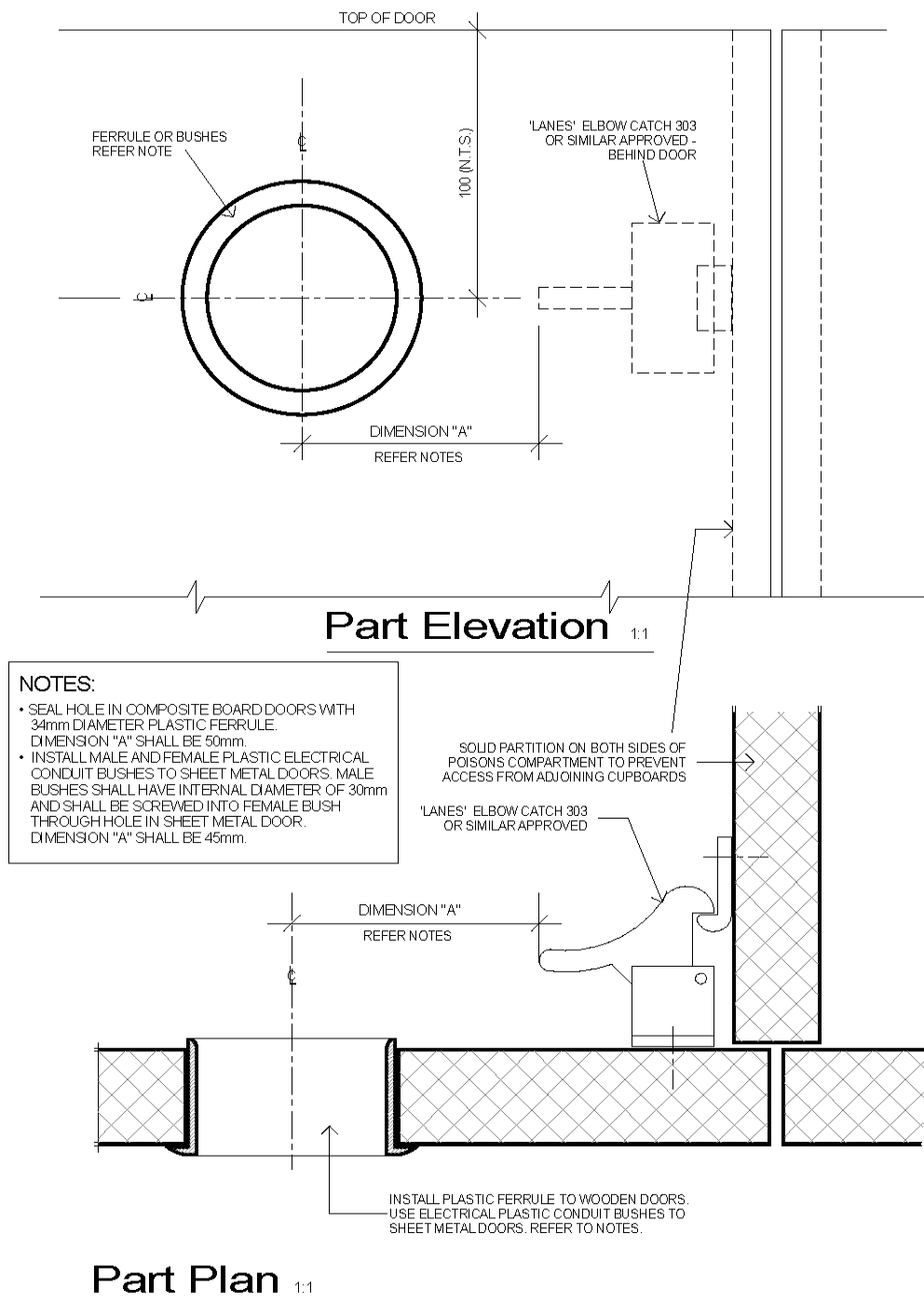
NOTES:


- PROVIDE POT DRAWERS WHEN INDICATED - DRAWER SIDES TO BE METAL 'MULTI-TECH' OR SIMILAR APPROVED WITH POWDER-COAT FINISH. MOUNTED ON SUITABLE APPROVED METAL RUNNERS. ALL OTHER DRAWER SURFACES SHALL BE 16mm PRE-LAMINATED HMR MDF. (END GRAIN FIXINGS ARE TO BE AVOIDED.) ALL EXPOSED EDGES TO BE 2mm ABS EDGING. DRAWER FACES TO MATCH CUPBOARD DOORS U.O.N.
- USE ONLY APPROVED PRE-FINISHED WHITE MELAMINE FACED HMR MDF BOARDS FOR CARCASS & SHELVES ETC.
- PROVIDE 2mm THICK ABS EDGING TO EXPOSED EDGES OF SHELVES, DOORS, DRAWERS AND OTHER FACE EDGES
- REFER TO DOCUMENTS OR SPECIFICATION FOR DOOR & DRAWER FURNITURE, SINK SIZE ETC.
- EACH DOOR SHALL BE FITTED WITH 2 No APPROVED SPRING LOADED FULLY CONCEALED HINGES
- REFER TO FINISHES SCHEDULES FOR EXTERNAL EXPOSED COLOURS OF DOORS, DRAWERS & TOPS.
- WALL FIXINGS ALL CUPBOARDS INCLUDING O/HEADS : ANCHORED TO WALL (TOP & BOTTOM) @ 50mm FROM ENDS & AT 600mm CENTRES BETWEEN HORIZONTALLY.
- PLINTH : SHALL BE OF 16mm WATER RESISTANT PLYWOOD WITH PLASTIC LAMINATED FINISH- 110mm HIGH SUPPORT FRAME SHALL BE APPROVED ADJUSTABLE LEGS OR TREATED TIMBER BEARERS.

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL BASE CUPBOARD FOR ELEVATED STOVE AGED PENSIONER UNITS	DETAIL No. L10
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(j) L12 Child Resistant Door Catch



DRAWN		ALL DIMENSIONS ARE IN MILLIMETRES	
APPROVED	 Department of Housing and Works	DETAIL CHILD RESISTANT DOOR CATCH FOR USE IN FAMILY UNIT DEVELOPMENTS	ISSUE DATE April 05
Review:			DETAIL No.
Redrawn:			L12
SCALE 1:1			



49. Shaving Cabinets

- (a) If an existing shaving cabinet cannot be repaired a mirror is to be installed in its place.

50. Roof Repairs

- (a) Where the Contractor is required to Replace or Supply and Install roof tiles, the Contractor must only use terracotta or cement roof tiles.
- (b) Where the Contractor is required to locate and repair a leak to a roof, the Contractor advise the Principal of the location and cause of the leak.
- (c) When fixing tiles, the Contractor must:
 - (i) Fix every tile in two courses above the gutter line;
 - (ii) Fix every tile in two courses each side of a ridge;
 - (iii) Fix every tile within **1200 mm** of a verge; and
 - (iv) Fix every second tile elsewhere.
- (d) The Contractor must Fix full tiles with **60 mm x 2.8 mm** galvanised nails. Cut tiles must be Fixed with **75 mm** springhead protected nails driven through a pre-drilled central hole.
- (e) Where the Contractor is required to re-bed roof ridge or hip tiles, the Contractor must Remove all old pointing and bedding prior to re-bedding.
- (f) Capping and verge tiles must be bedded on **40 mm** common cement mortar. Mortar rebated must be **5 mm** off the face of ridge tile and gable masonry.
- (g) Pointing must be finished with **5 mm** thick waterproof flexible roof tile pointing compound such as Elasto-max.

51. Ventilation (walls and roof)

- (a) Vents to internal walls are to be fitted Flush to a wall or ceiling surface and are required to have insect mesh Installed.
- (b) When Replacing or Supplying and Installing a roof Whirlybird, the Contractor must use a **300 mm** Powder coated CSR Edmonds Windmaster. Colour must Match roof. Roof Whirlybird must be positioned directly above ceiling exhaust fan and Securely fastened. The Contractor must leave the roof weatherproof.

52. Gyprock and Plasterboard Wall and Ceiling Lining

52.1 Asbestos

- (a) Where the Contractor is required to Remove existing ACM sheeting, the Contractor must wet Remove and double wrap each sheet in **200 µm** polythene black plastic per asbestos sheet and affix asbestos warning duct tape.



- (b) See further clause 8.2(g) of the General Specification.

52.2 Patch Hole

- (a) Where the Contractor is required to Patch a hole in plasterboard sheeting the finish must be Flush to existing surface, sanded and then painted with Sealer.
- (b) The Contractor must Remove and reinstate existing mouldings where necessary, unless otherwise directed and the cost of this is deemed to be included in the price of the Task.

52.3 Wall Studs, Noggins, and Plates

- (a) Where rotten, damaged or insufficient timbers are present, new timbers are to be Installed. Where possible, new timber can be adjoined to existing timbers and firmly Fixed for the full length and at each end.

52.4 Collapsed Ceiling

- (a) Where the Contractor is required to Replace a collapsed ceiling, the Contractor must refit insulation batts.

52.5 Plasterboard

- (a) Where the Contractor is required to Replace or Supply and Install plasterboard sheeting, the Contractor must ensure internal angles of walls are fitted with **35 mm** width x **35 mm** height x **0.6 mm** thick galvanised steel backing strips Fixed at **300 mm** centres. The Contractor must ensure that on external angles of walls the feather stop is fitted to the metal bull-nose.
- (b) The radii of internal angles are to be **6 mm**.
- (c) Joins in boards are to be **75 mm** from studs and board clearance above floor is to be **10 mm**. Joints must be Flushed using a plaster based bonding compound and sanded to boards.
- (d) The Contractor must Flush to existing surface, fill and sand all joins and fixing holes and then paint all raw plaster and sheeting with Sealer.

52.6 Gyprock

- (a) Where the Contractor is using gypsum instead of plasterboard, the Contractor must ensure that the internal angles of walls are taped and sealed and the external angles of walls have corner beads. Gyprock sheeting must be Fixed Flush and sanded.
- (b) Where used to overlay brickwork, the Contractor must use **6 mm** drywall Gyprock.
- (c) The Contractor must Flush to existing surface, fill and sand all joins and fixing holes and then paint all raw plaster and sheeting with Sealer.



52.7 Aquachek

- (a) Gyprock Aquachek sheeting must be used in kitchens behind sink and bench cupboards.
- (b) The Contractor must Flush to existing surface, fill and sand all joins and fixing holes and then paint all raw plaster and sheeting with Sealer.

52.8 Tomb-up and Resecure Ceiling

- (a) Where the Contractor is required to tomb-up and resecure ceilings, the Contractor must:
 - (i) Remove dust from top of sheets;
 - (ii) ensure that the sheets are propped;
 - (iii) ensure that the sheets are moistened;
 - (iv) ensure that split joints are raked before jacking up;
 - (v) ensure sheets are screw Fixed and strapped; and
 - (vi) ensure joints and fixing holes are Flushed and sanded before applying Sealer paint to all raw plaster.
- (b) The task applies to all ceiling types, including Plasterboard and Plasterglass ceilings. The correct and most effective method of resecuring the ceiling is to be undertaken for the material in place.

52.9 Plaster Ceiling Vent

- (a) Plaster ceiling vents are to be fitted with insect mesh, Fixed, patched, Flushed and sanded prior to applying Sealer paint.

52.10 Cornice and Overlay

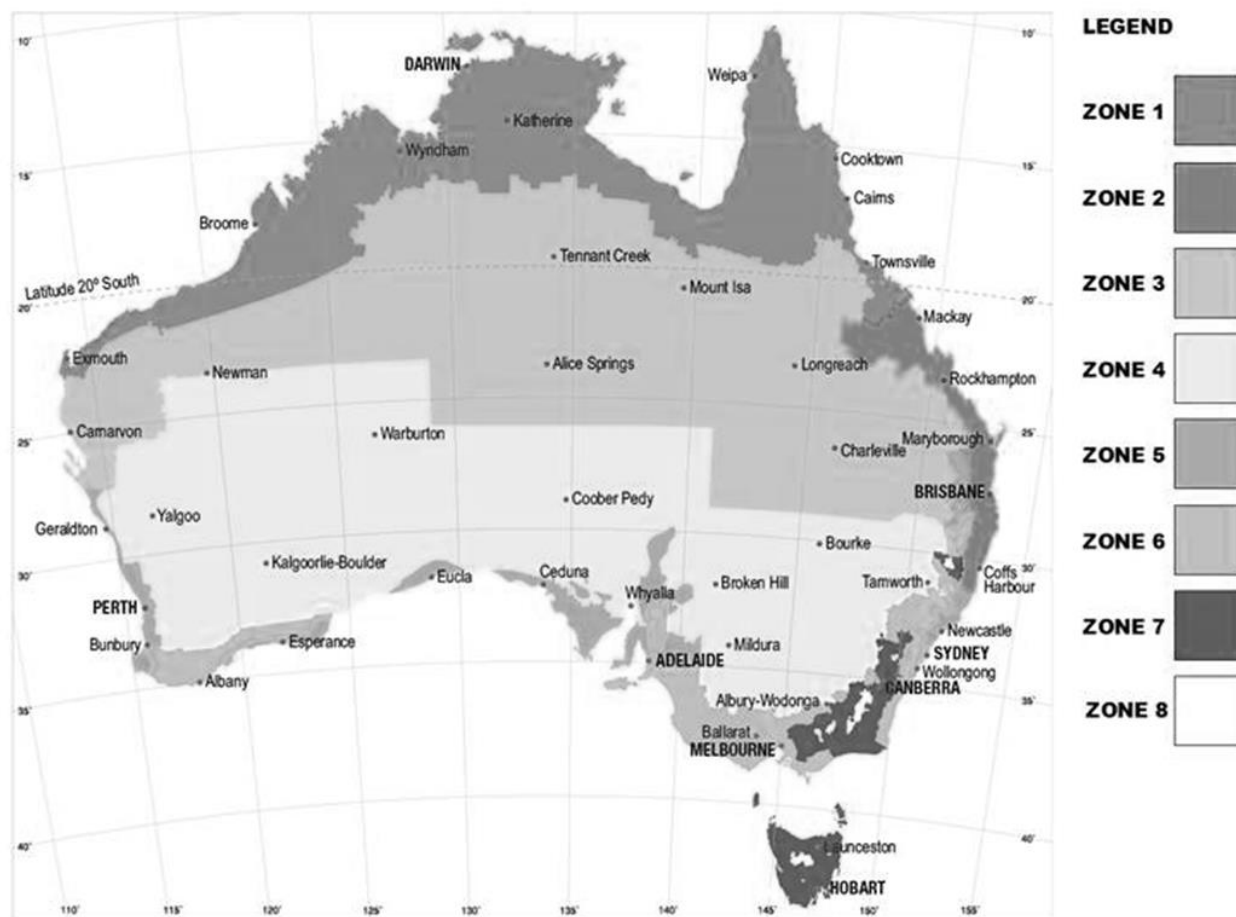
- (a) Replace or Supply and Install CSR (part number 129) **28 mm** furring channels at **450 mm** centres. Secure new ceiling sheeting to furring channel and fit cornice. Furring channels to be levelled before Installing new sheeting.
- (b) When Replacing, securing or Supplying and Installing ceiling cornice or plaster vents, the Contractor must Patch, Flush and sand before applying Sealer paint. This Task includes paint ceiling vent and cornice with a Sealer.

52.11 Thermal Insulation

- (a) All thermal insulation and installation must meet current BCA requirements to pass a 6 Star Thermal Rating.
- (b) In Climate Zones 1-7 the ceiling cavity total thermal systems rating must be a minimum of R5.1 and the wall cavity total thermal systems rating must be a minimum of R2.8 (see diagram below or refer to www.yourhome.gov.au/australian-climate-zones).



- (c) Where the Contractor is required to install insulation to a ceiling cavity the insulation must be at least R4.0 rated glasswool batts. Batts must be laid in open position between ceiling joists with batts cut to friction fit where required. A gap of 50mm between glasswool batts and all types of down lights, flues, flume vents or cover ceiling vents must be maintained. Recessed halogen downlights must have a fixed guard attached in ceiling to maintain 50mm clearances. The halogen downlight transformer must not be covered by batts but must be fixed to ceiling battens above insulation. Cables should be clipped to side of timbers and must not be fully surrounded by glasswool batts for more than 300mm.
- (d) Where the Contractor is required to install insulation to a wall cavity of 90mm, the insulation must be at least R2.5 rated glasswool batt.
- (e) For further information please contact **s.williams@insulation.com.au** or **m.windsor@insulation.com.au** or visit: www.insulation.com.au.



53. High Impact Resistant Lining

- (a) High impact resistant lining must only to be used when re-lining all walls in a Room.
- (b) The cost of removing and replacing skirting and moulding is deemed to be included in the price of the Task.



54. Fibre Cement Sheeting

54.1 General

- (a) Where the Contractor is required to Replace or Supply and Install fibre cement sheeting, the Contractor must also Remove and Resecure any features and mouldings where necessary, Seal all gaps and joints, and paint with Sealer.

54.2 Cover plates

- (a) PGI cover plates used to Patch holes in ACM sheeting must be neatly shaped and Fixed to the existing surface using a weather proof sealant and/or adhesive. Maximum size of plate must be **300 mm x 300 mm**. Where the hole cannot be covered by the plate, the sheet must be replaced.

54.3 Villaboard and HardieFlex

- (a) The cost of joiners and corner mouldings is deemed to be included in the price of the Task.
- (b) Where required to Replace or Supply and Install Villaboard or HardieFlex, the Contractor must Remove and Resecure any features and moulding, and Seal gaps and joints.
- (c) **6 mm** Villaboard must be used in all bathroom, laundry, toilet, shower room walls and external walls to Replace existing material in framed constructions. It is not to be used on eave-linings or ceilings.
- (d) **4.5 mm** HardieFlex material must be used for all other Rooms to Replace existing material in framed construction, including eave-linings and ceilings.
- (e) Sheets must be Fixed horizontally with full edge and end supports. The Contractor must ensure that all vertical joints coincide with the centre of studs and horizontal joints coincide with the centre-line of the noggin line. Joints to sheeting are to be finished with the appropriate cover moulds to joints or where sheets have recessed edges, tape, grout, Flush and sand joint level and sealed ready for painting.
- (f) Damaged sheeting must be neatly cut back to timber framing.
- (g) The Contractor must ensure that new material is Fixed to be weatherproof.

54.4 Joiners and Mouldings

- (a) All joiners and mouldings must be made from PVC and firmly Fixed and all gaps sealed with paintable silicon.
- (b) The Tasks for joiners and corner mouldings are to be used only when replacing damaged joiners and cover mouldings.

55. Colorbond Wall Cladding

- (a) Where the Contractor is required to clad the outside of a building with Colorbond coated corrugated iron, this Task includes the removal and disposal of ACM.



- (b) Sheeting must have a minimum thickness of **0.42 mm**.
- (c) Fixings, flashings, mouldings and trims etc. must be Colorbond and Match the colour of the sheeting.
- (d) Insulation is to be placed on the external studwork before flashings and sheeting are Fixed.
- (e) All wall penetrations (doors, windows, pipes, air conditioner panels etc.) must be flashed and weatherproofed.
- (f) All wall flashings must be renewed prior to Installing sheeting.
- (g) Expansion joints, mouldings, joiners and trim finishes (angles and channels) must be Installed to the manufacturer's recommendations.
- (h) The Contractor must Refit and Fix Removed mouldings as required.
- (i) The area of sheeting required is calculated by subtracting the areas not to be clad such as door and windows from the gross area of the wall.
- (j) The Principal's Nominated Brands of cladding are:
 - (i) Lysaght – for further information about Lysaght products please visit: www.lysaght.com.au; and
 - (ii) Colorbond – for further information about Colorbond products please visit: www.colorbond.com.au.
- (k) Colour and profile will be specified on the Works Order.

56. Skirting, Architraves and Mouldings

- (a) All new mouldings must be cleanly finished and free from machine marks or other defects, pre-primed or painted with a Sealer.
- (b) Pre-primed MDF mouldings are permissible for internal uses such as for architraves, skirtings, quads and scotias.
- (c) External mouldings are to be dry dressed hardwood such as Karri or Jarrah.
- (d) When securing, Replacing or Supplying and Installing skirtings, architraves and mouldings, the Contractor must Seal any gaps at joints with a paintable silicon sealant.

57. Flooring, Decking and Floor Structure

57.1 General

- (a) Where the Contractor is required to Replace or Supply and Install timber flooring or decking, the Contractor must ensure that flooring finishes **19 mm** clear of brick walls, is well seasoned, well cramped up, double nailed and punched. Broken or splintered edges or nail holes are not acceptable.
- (b) The Contractor must Remove and refix mouldings and quad as required.



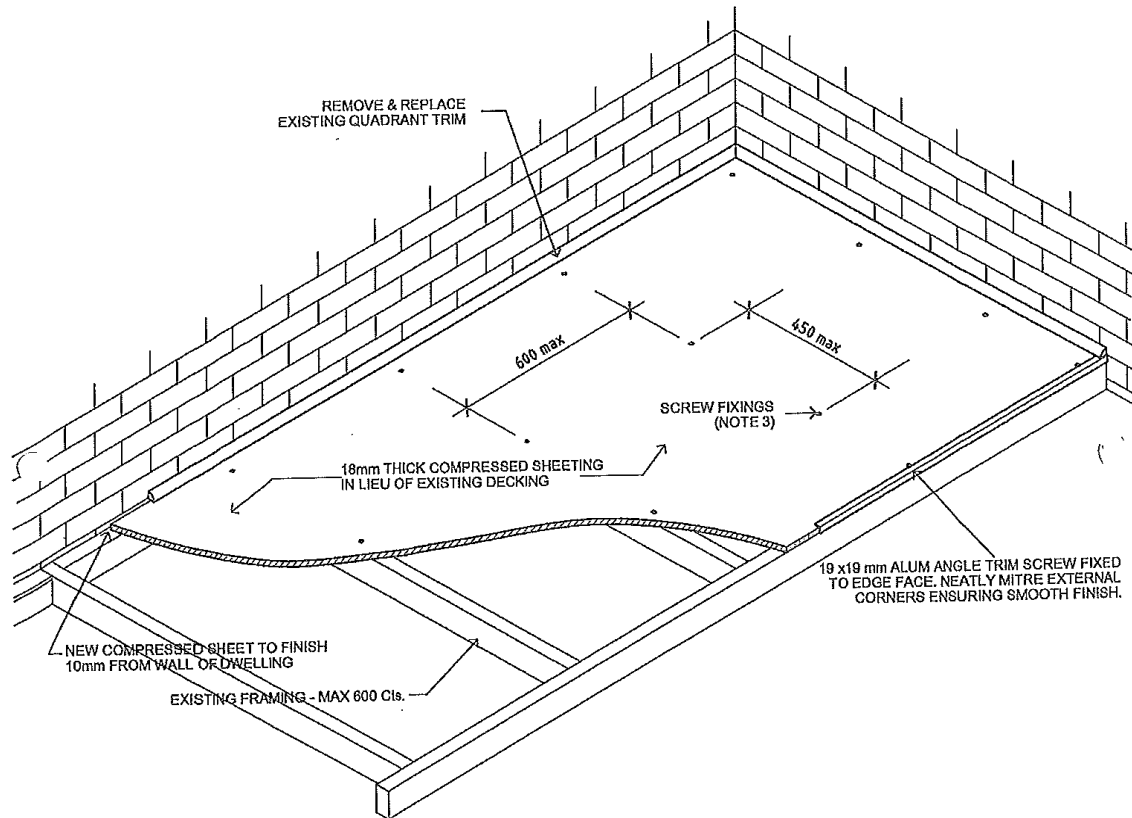
- (c) Where required to level a timber floor, the Contractor must jack and pack between stumps or piers and bearers. The Contractor must pack with non-shrinking and long lasting material.
- (d) Reeded decking must be Fixed smooth side up and oiled with linseed oil or similar.
- (e) Where the Contractor is required to Replace or Supply and Install James Hardie compressed fibre sheeting to verandah or porch, the Contractor must only use HardiePanel trimmers, with aluminium L angle to exposed edges and painted with two coats of non-slip paving paint: see clause 57.2 Verandah Flooring Detail. Sheeting must be fitted finish **10 mm** clear of walls.
- (f) Where the Contractor is required to Replace or Supply and Install compressed sheeting to a verandah deck, the Contractor must Secure sheeting to timber joist with 10 gauge x **50 mm** long brass wood screws counter sunk Flush with top face of sheet and at maximum **450 mm** centres between screws. Sheeting is to be Fixed in lengthwise direction so spanning across the joist.
- (g) Where the Contractor has Installed compressed verandah sheeting, the Contractor must arrange for the sheeting to be painted with a non-slip paint.
- (h) Aluminium L angle edge strips are to be mitred on corners and screw Fixed to top face and edge.
- (i) Inspection traps in floors must be made by cutting out the necessary amount of floorboards on top joists to allow access beneath the floor. Traps must be formed by slightly splaying the ends of boards to allow for future easy removal; boards are to be screwed back in place. The Contractor is responsible for organising the lifting and relaying of existing floor coverings.

57.2 Verandah Flooring Detail

See over page:




(a) G4M Verandah Flooring Detail



VERANDAH SHEETING NOTES:

1. NEW SHEETING IS TO BE 18mm THICK COMPRESSED HARDIPANEL OR SIMILAR APPROVED & CONFORMING WITH AS 2908.2 - 1992.
2. FIX SHEETS TO EXISTING TIMBER JOISTS SPACED AT 600 MAX Cts. - ENSURING THAT LENGTH OF SHEET SPANS ACROSS JOISTS.
3. FIX SHEETS USING COUNTERSUNK #10 x 50mm BRASS WOODSCREWS - MAKING CERTAIN THAT TOP OF SCREW HEADS FINISH FLUSH WITH SHEET SURFACE. - SPACE SCREWS EQUALLY ALONG JOISTS AT MAX. 450mm Ctrs. AND NO MORE THAN 50mm FROM ENDS OR CORNERS. WHERE IT IS NECESSARY TO ABUT SHEETS, THEN LOCATE SCREWS 12mm FROM THE EDGE OF BOTH ABUTTING SHEETS.
4. SHEETING IS TO FINISH 10mm FROM WALLS OF DWELLING, & EXISTING QUADRANT IS TO BE REMOVED, REPLACED & GIVEN A PAINT FINISH AS SPECIFIED ELSEWHERE.
5. THE EXPOSED END OF THE SHEETING IS TO BE FINISHED WITH A 19 x 19 x 1.6mm ALUMINIUM ANGLE FIXED TO THE FACE EDGE WITH SCREW FIXINGS. EXTERNAL CORNERS TO BE MITRED WITH ANY SHARP EDGES MITRED TO A SMOOTH FINISHED.
6. NEW SHEETING IS TO BE FINISHED WITH A NON-SLIP PAVING PAINT ('WATTYL' NON-SLIP PERMO-PAVE OR SIMILAR APPROVED), AND APPLIED WITH A ROLLER AS PER THE MANUFACTURER'S SPECIFICATIONS
7. ALL SURFACES ARE TO BE THOROUGHLY WASHED WITH AN APPROVED CLEANING AGENT, AND RINSED WITH CLEAN WATER PRIOR TO APPLYING PAINT.

DRAWN		DETAIL		ALL DIMENSIONS ARE IN MILLIMETRES	
APPROVED	 Government of Western Australia Department of Housing	VERANDAH FLOORING DETAIL		ISSUE DATE	Nov 05
SCALE				DETAIL No.	G4M
1:20					



58. Concrete Paving, Brick Paving and Paving Slabs

58.1 General

- (a) Compaction of areas to be covered by pedestrian paving must have a relative density of 50 per cent of the first **600 mm** of substrate directly beneath the paving.
- (b) Compaction of areas to be covered by driveways, crossovers, car stands and drainage areas must have a relative density of 70 per cent of the first **600 mm** of substrate directly beneath the paving.
- (c) When using compaction equipment, the Contractor must ensure that Adjacent structures remain undamaged.
- (d) Paving must be laid to Match existing pattern and laid on a compacted Bed and level with existing paving.
- (e) Paving must be laid with falls away from buildings and structures and towards any soak wells or drains.
- (f) Concrete must be transported, placed and compacted so as to:
 - (i) limit segregation or loss of material;
 - (ii) limit premature stiffening; and
 - (iii) produce a monolithic mass between planned joints and the extremities.
- (g) The Contractor must completely fill the formwork to the intended level, expel entrapped air and closely surround all embedded reinforcement.
- (h) The Contractor must be aware that **75 mm** concrete paving is not to be used for driveways, crossovers or car stands. These must be undertaken by Quoted Works.

58.2 Weather Conditions

- (a) When the ambient temperature is in excess of **32 °C** but less than **38 °C** the Contractor may use a retarding admixture with ready mixed concrete and cool reinforcement with fine cold water spray in advance of placing concrete.
- (b) Concrete temperatures must not exceed **32 °C** when being placed. Concrete must not be employed when the ambient temperature exceeds **38 °C** or when rain may result in damage to the concrete.
- (c) Concrete must be covered with an impervious membrane until cured.

58.3 Brick Paving and Paving Slabs

- (a) The Contractor must ensure that prior to laying paving, all Debris, excess and protrusions such as tree roots are Removed.



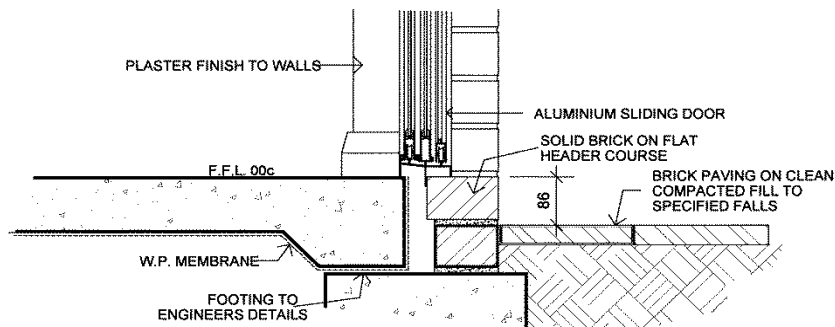
- (b) Relaying includes pulling up defective paving, re-levelling with new sand, compacting and relaying paving.
- (c) Sand must be laid to form a firm foundation. The allowance provided for in the Task is **0.3 m³** per **1.0 m²** of paving or approximately **40 mm**.
- (d) Edging and header bricks must be **full size** and Mortar bedding must be **150 mm x 100 mm** and per Detail H6: see clause 58.4 Paving Detail.
- (e) Clay paving in vehicle traffic areas must have a minimum thickness of **50 mm** and concrete paving slabs must be a minimum **38 mm** in thickness.
- (f) Paving must be laid to Match existing pattern where applicable and laid on a compacted Bed and level with existing paving.
- (g) Paving must be laid with falls away from buildings and structures and towards any soak wells or drains.

58.4 Paving Detail

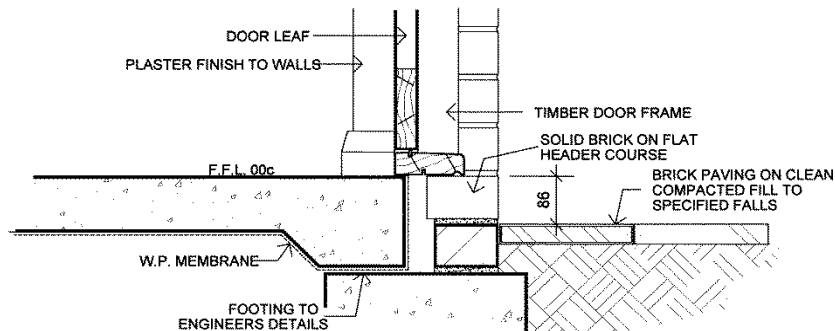
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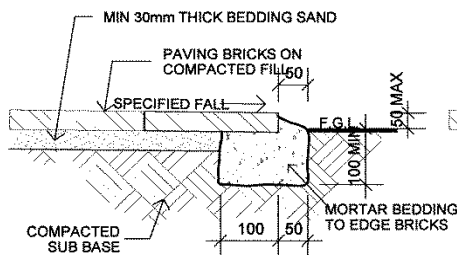
(a) H6 Brick Paving and Sill Detail



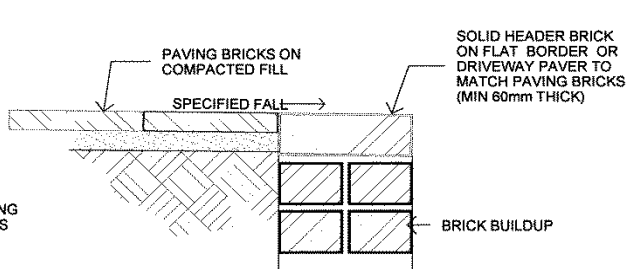
**Aluminium Sliding Door/
Paving Detail** 1:10




**Timber Door Threshold/
Paving Detail** 1:10



**Ground Level
Edge Paving Detail** 1:10



**Brick Buildup/
Edge Paving Detail** 1:10
(BALUSTRADE NOT SHOWN)

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL BRICK PAVING AND SILL DETAIL	DETAIL No. H6
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59. Stumps, Steps, Handrails, Fascias, Barge boards, Scribe Fillets and Vermin Battens

59.1 Timber Stumps

- (a) Where the Contractor is required to Replace or Supply and Install a timber stump, the Contractor must jack-up and level bearers prior to fitting new stumps. Bearers are to be Fixed with **13 mm** galvanised cup head bolts.
- (b) Stumps and sole plates are to be sealed with an appropriate timber preservative.
- (c) Sole plates are to be sealed and rammed onto solid ground.
- (d) Timber stumps must be Jarrah and have the following dimensions: **100 mm** width x **100 mm** depth and a maximum **1500 mm** height.

59.2 Metal Stumps

- (a) Where the Contractor is required to Replace or Supply and Install a metal stump the Contractor must jack-up and level bearers prior to fitting new stumps.
- (b) Metal stumps must be galvanised steel and have the following dimensions: **50 mm** width x **50 mm** depth and a maximum **1500 mm** height.
- (c) Stumps must be rust proof treated up to **100 mm** above ground level.
- (d) The Contractor must use **75 mm** width x **75 mm** depth x **10 mm** height brackets.
- (e) Metal stumps must be set **300 mm** into a concrete pad of the following dimensions: **250 mm** width x **250 mm** depth x **450 mm** height.
- (f) Metal stumps must be fitted to the bearer with a **13 mm** galvanised bolts.

59.3 Steps

- (a) All treads are to be made from straight grain Jarrah, be free from warp and be well oiled.
- (b) There must be a **13 mm** gap between half treads.
- (c) Half treads must be **125 mm x 38 mm**.
- (d) A full tread consists of two half treads.
- (e) New steel frame steps include a pair of stringers as per Detail G11 and G21 (see clause 59.6 Steps Detail), set into concrete footings with a minimum **230 mm** diameter x **300 mm** deep, rustproofed and painted.

59.4 Handrails

- (a) All handrails must be made from GWI pipe, flange Fixed with bolts and screws and set into concrete footings with a minimum **230 mm** diameter x **300 mm** deep, rustproof and painted.



59.5 Metal Fascia

- (a) Where the Contractor is required to Replace or Supply and Install metal fascia the Contractor must ensure, wherever possible, that the profile and colour of the fascia matches that of the existing fascia unless otherwise nominated by the Principal.
- (b) Internal and external corners to be pop riveted in a minimum of four points (two points at each side of the corner).
- (c) Fascia brackets are to be Fixed to every rafter with a minimum of three galvanised screws per bracket and securely clipped to the fascia.

59.6 Timber Fascia

- (a) Where the Contractor is required to Replace or Supply and Install timber fascia the Contractor must ensure they use either pre-treated and pre primed pine or Weathertex.
- (b) For more information about Weathertex products please visit www.weathertex.com.au.
- (c) Corners to be Fixed with a minimum of 4 galvanised screws (two points at each side of the corner).
- (d) Fascia to be Fixed to each roof rafter with a minimum of two galvanised screws per rafter.

59.7 Barge Board and Scribe Fillets

- (a) Where the Contractor is required to Replace or Supply and Install a timber barge board or scribe fillet the Contractor must ensure they use either pre treated and pre primed pine or Weathertex.
- (b) For more information about Weathertex products please visit www.weathertex.com.au.
- (c) The barge board should be Fixed to each tile batten with galvanised screws and so that it is level with the top of the tile battens.

59.8 Vermin Battens

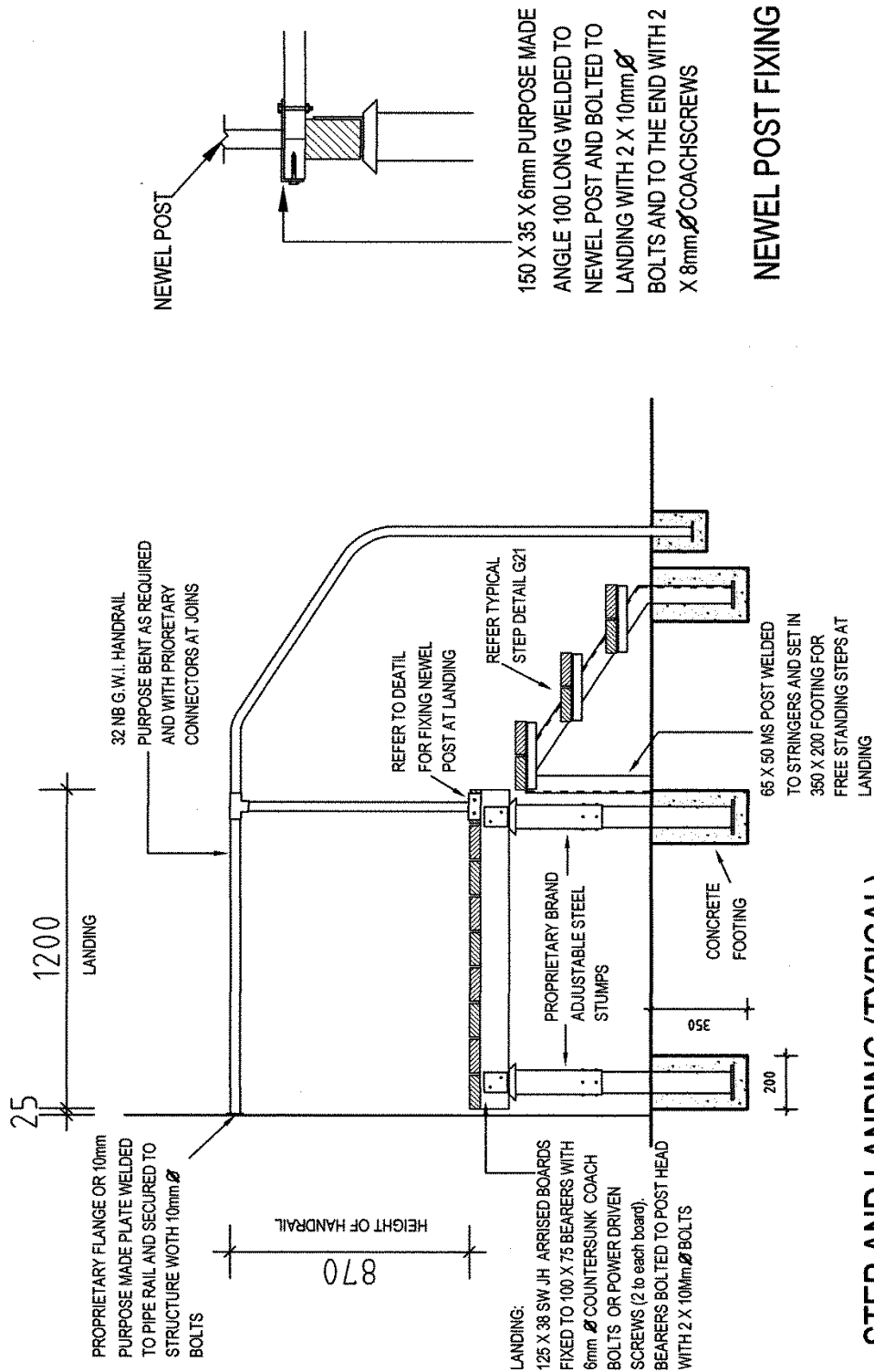
- (a) Where the Contractor is required to Replace or Supply and Install a vermin batten, the Contractor must use only Jarrah.
- (b) Holes must be drilled for nails to avoid splitting the timber.
- (c) Vermin battens are to be Fixed with **50 mm** galvanised nails.

59.9 Steps Detail


See over page:



(a) G11 Steps and Landing Detail

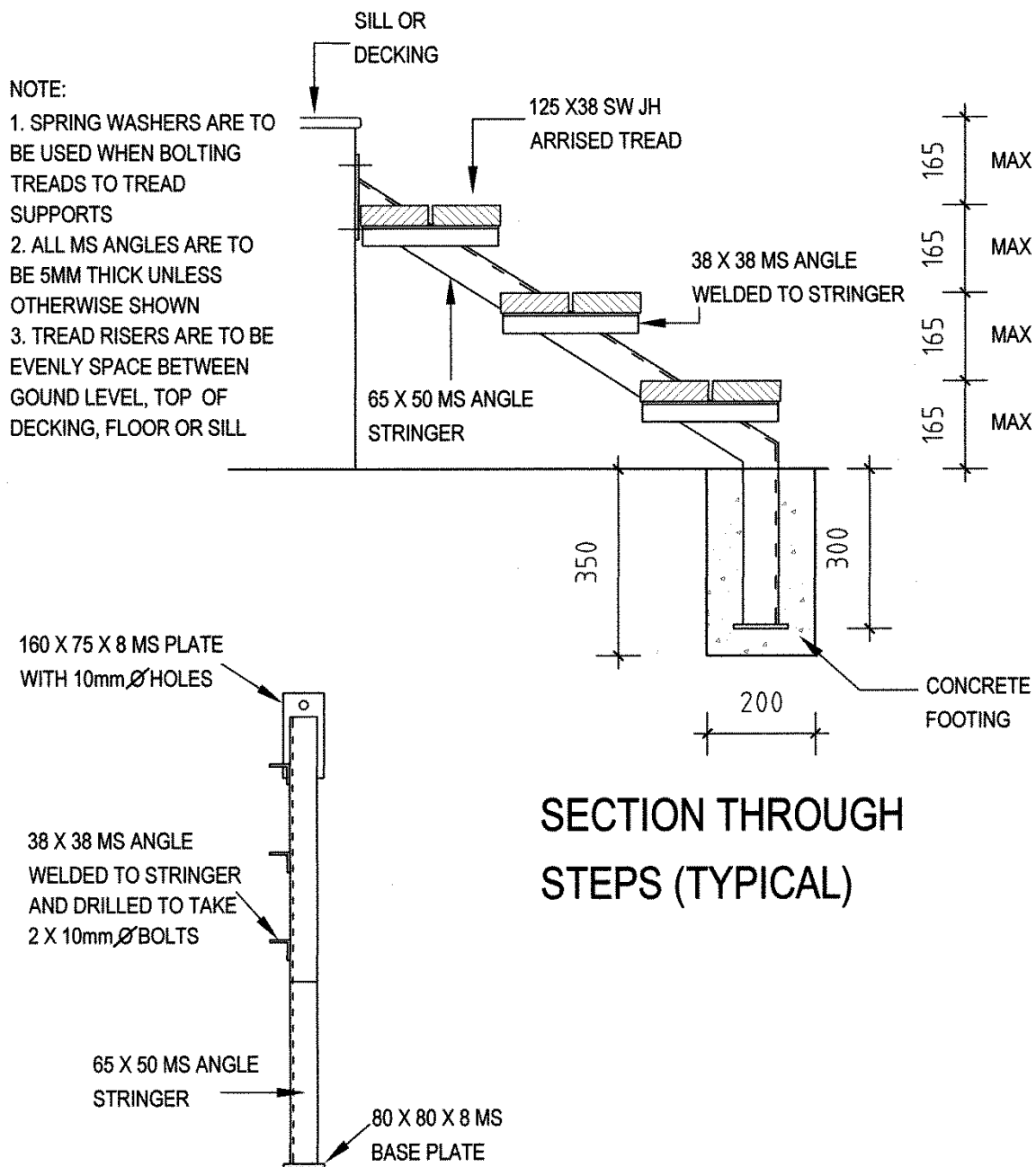


STEP AND LANDING (TYPICAL)


ISSUE DATE October 2013 SCALE N.T.S	DEPARTMENT OF HOUSING 	DETAIL STEPS AND LANDING DETAIL	DETAIL NO. G11
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(b) G21 Step Details



STEP STRINGER DETAIL

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL STEP DETAILS	DETAIL No. G21
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60. Clothes Lines

60.1 General

- (a) Where the Contractor is required to overhaul, tighten, Replace or Supply and Install gears or gear boxes on rotary hoists, the Contractor must pack and lubricate the gears.
- (b) All hoists must be set in to 750 mm x 250 mm diameter concrete footings
- (c) Where the Contractor is required to Replace or Supply and Install an extend-a-line post and arm, the Principal's preferred manufacturers are Hills and Austral Clothes Hoists.
- (d) Where the Contractor is required to Replace or Supply and Install an Extend-a-line the Principals preferred manufacturers are Hills and Austral Clothes Hoists, to be installed as follows:
 - (i) Cabinet is to be galvanised and powder coated steel;
 - (ii) Plastics are to be UV stabilised and of engineering grade; and
 - (iii) Extend-a-lines are required to have a minimum of 39 lineal metres of line space.
- (e) Where the Contractor is required to Replace or Supply and Install a rotary hoist the Principals preferred manufacturers are Hills and Austral Clothes Hoists, to be installed as follows:
 - (i) Rotary hoists are to be of heavy duty galvanised steel construction;
 - (ii) Components are to be of cast aluminium; and
 - (iii) Wire is to be either plastic coated **4 mm** steel core wire or 7 strand Galvanised wire.
- (f) Where the Contractor is required to Replace or Supply and Install a paraline the Principals preferred manufacturers are Hills and Austral Clothes Hoists, to be installed as follows:
 - (i) Paralines are required to have a minimum of 21 lineal metres of line space;
 - (ii) Powder coated and galvanised steel tubing is to be used; and
 - (iii) Plastic components are to be of engineering grade.
- (g) For further information about Hills products please visit: **www.hills.com.au**.
- (h) For further information about Austral products please visit: **www.australclotheshoists.com.au**.
- (i) Where the Contractor is required to Replace or Supply and Install Hanging wire to the above, the Contractor must use:



- (i) plastic coated **4 mm** steel core wire; or
 - (ii) 7 strand galvanised wire.
 - (j) Paralines and extend-a-lines are not to be wall mounted unless:
 - (i) the existing paraline is wall mounted; or
 - (ii) the Principal instructs accordingly on the Works Order,and must be mounted to ground-mounted posts.
 - (k) Posts must be **2550 mm** total length and **50 mm** diameter. Galvanised pipe must be set **750 mm** deep into a **250 mm** diameter concrete footing. Arm to be **1000 mm** long with a **50 mm** diameter. Galvanised steel pipe with 4 holes at **50 mm, 350 mm, 650 mm** and **950 mm** to take **1.25 mm Hanging** wire. Arm to be welded to post and both painted.
-

61. Wall and Floor Glazed Tiling

61.1 Sealant and Grout

- (a) Where the Contractor is required to Seal or reseal Fixture joints, grout or re-grout tiles, tile or re-tile a wall or floor, the Contractor must Remove any existing sealant, rake out damaged grout, Remove damaged tiles and prepare the area. Gaps between tiles must be filled with a flexible grouting compound that matches the colour of the tiling, unless otherwise stated by the Principal. Gaps between Fixtures and tiles must be filled with a white silicone sealant, unless colour is otherwise nominated by the Principal. The removal and cleaning of excess sealant and/or grout from tiles, cupboards and surrounding areas following application, is deemed to be included in the Task.

61.2 Wall Tiles

- (a) Where replacing tiles to Wet Area walls, the Contractor must Install water proof membrane before affixing new tiles. Apply a minimum of two coats, second coat to be applied at right angle to first coat once dried. The Contractor must photograph the membrane prior to tiles being Installed.
- (b) Contractors must ensure a **2 mm** joint between adjoining wall tiles. Tiles are to be Fixed with **2 mm** thickness of adhesive applied with a notched trowel.
- (c) Wall tiles must be **200 mm x 200 mm or 200 mm x 400 mm** white gloss, or where possible, match to existing if only some tiles are being replaced.
- (d) The top tile must be a full tile with cut tiles placed at the bottom.
- (e) Where the Contractor is required to tile a wall, the Principal's Preferred Suppliers are:
 - (i) Crosby Tiles – for further information about Crosby Tiles please visit: www.crosbytiles.com.au; and



- (ii) Johnson Tiles – for further information about Johnson Tiles, please visit: www.johnsontiles.com.au; and
- (iii) European Ceramics – for further information about European Tiles please visit: www.europeanceramics.com.au

61.3 Floor Tiles

- (a) Concrete floors in living (dry) areas must be levelled by grinding or levelling with a levelling compound such as K45 or K15 and feather finished.
- (b) Where the Contractor is required to fit floor tiles on timber flooring, the Contractor must first lay James Hardie ceramic tile underlay – for further information on James Hardie products, please visit: www.jameshardie.com.au
- (c) All floor tiles must be matte or natural finished, ceramic, full bodied, vitrified tiles with colour throughout the entire tile. Floor tiles must have a slip rating of not less than R10 for Wet Areas and R9 for dry areas.
- (d) Wet Area floor tiles must have the following dimensions: **up to 300mm x 300mm** maximum, with a minimum thickness **7 mm** or where possible match to existing if only some tiles are being replaced.
- (e) Living (dry) area floor tiles must have the following dimensions: **up to 455 mm x 455 mm**, with a minimum thickness **7 mm** or where possible match to existing if only some tiles are being replaced.
- (f) Where the Contractor is required to tile a floor, the Principal's Preferred Suppliers are:
 - (i) Crosby Tiles – for further information about Crosby Tiles please visit: www.crosbytiles.com.au; and
 - (ii) Johnson Tiles – for further information about Johnson Tiles, please visit: www.johnsontiles.com.au.
 - (iii) European Ceramics – for further information about European Tiles please visit: www.europeanceramics.com.au.
- (g) Wet area floors must be prepared so that water drains to existing grates that are Flush with the top of the newly laid tiles. Floor grates are to be fitted with a puddle flange (including in shower recesses) and grate caps are to be fitted Flush to the tile finish.
- (h) Where replacing tiles in a Wet Area the Contractor must install water proof membrane before affixing new tiles. Apply a minimum of two coats, second coat to be applied at right angles to first coat once dried. The Contractor must photograph the membrane prior to tiles being installed.
- (i) Where Tiling work in Wet Areas meets walls, the Contractor must finish with a skirting tile to the wall.
- (j) The Contractor must ensure a **3 mm** joint between adjoining floor tiles. Tiles are to be Fixed with **5 mm** thickness of adhesive with flexible additive applied with a notched trowel.



61.4 Shower Double Brick

- (a) This Task is deemed to include all carpentry and Tiling work. Separate tasks will be issued for plumbing works.
- (b) This Task is for three walls, each **1800 mm** high and up to **1000 mm** wide and a floor area up to **1000 mm x 1000 mm**.
- (c) Where the Contractor is required to waterproof and re-tile a shower recess on a double brick construction, a plumber must disconnect and reconnect taps and shower rose. Tilers are not to undertake these Tasks.
- (d) The Contractor must Remove shower screen, curtain rail, ceramic floor and wall tiles (including all those on hob) from shower recess to a height of **1800 mm** above floor level. Screed, render and prepare shower base, hob and walls for new waterproof barrier (membrane) and tiles.
- (e) The Contractor must Install bond breaker or polymer woven cloth or poly-tape to all joins, edges and corners. Apply membrane to shower base, hob and all recess walls up **1800 mm** above floor level.
- (f) Waterproof membranes must be selected from the following Nominated Brands:
 - (i) Crommelin Wetite – for further information about Crommelin products please visit: www.crommelin.com.au;
 - (ii) Davco K10 plus – for further information about Davco products please visit: www.parexdavco.com.au; and
 - (iii) Ardex WPM 001 or WPM 155 – for more information about Ardex products please visit: www.ardexaustralia.com.
- (g) Apply a minimum of 2 coats of waterproof membrane, with the second coat to be applied at right angle to first coat once dried. The Contractor must photograph membrane prior to tiles being Installed.
- (h) The Contractor must Supply and Install **200 mm x 200 mm** or **200 mm x 400 mm** glazed ceramic tiles and one soap holder to walls and hob to a minimum height of **1800 mm** above floor level with the final top row being full tiles. Tiles on hob are to be laid so cut edge is hidden in grout joint.
- (i) This Task is not to be used when shower is over bath or when brick walls are lined.
- (j) The Contractor must Supply and Install **up to 300 mm x 300 mm** slip resistant ceramic tiles to floor of shower recess.

61.5 Shower Framed Construction

- (a) This Task is deemed to include all carpentry and Tiling work. Separate tasks will be issued for plumbing works.
- (b) Where the Contractor is required to waterproof and re-tile a shower recess on a frame construction, a plumber will disconnect and reconnect taps and shower rose. Tilers are not to undertake these Tasks.



- (c) The Contractor must Remove shower screen, curtain rail, ceramic floor and wall tiles (including all those on hob) from shower recess to a height of **1800 mm** above floor level. Screed, render and prepare shower base, hob and walls for new waterproof barrier (membrane) and tiles.
- (d) Where necessary the Contractor must be Install up to **2400 mm** of Structural timber or a metal wall frame (whichever it is that needs to be replaced).
- (e) The Contractor must line up to three walls with **1800 mm** height x (up to) **1000 mm** width Villaboard sheets to a maximum **5.4 m²**. Villaboards are to be pressed into a continuous bead of waterproof silicon adhesive or sealant at all four edges.
- (f) Aluminium L angles at floor / wall join must be one continuous length **0.65 mm** thick x **50 mm** width x **50 mm** depth and cut at a **90°** angle and folded so that sections overlap.
- (g) Wall to wall aluminium L angle **0.65 mm** thick x **50 mm** width x **50 mm** depth to fully overlap floor to floor aluminium and all aluminium must be Fixed using flexible waterproof silicone adhesive or sealant. All joins are to be sealed.
- (h) Where new concrete Beds to floor are required, the concrete must be at least **12 mm** over the top of the floor aluminium L angles.
- (i) Apply a minimum of 2 coats water proof membrane, second coat to be applied at right angle to first coat once dried. The Contractor must photograph membrane prior to tiles being Installed.
- (j) Waterproof membranes must be selected from the following Nominated Brands:
 - (i) Crommelin Wetite – for further information about Crommelin products please visit: www.crommelin.com.au;
 - (ii) Davco K10 plus – for further information about Davco products please visit: www.parexdavco.com.au; and
 - (iii) Ardex WPM 001 or WPM 155 – for more information about Ardex products please visit: www.ardexaustralia.com.
- (k) The Contractor must Supply and Install **200 mm x 200 mm** or **200 mm x 400 mm** glazed ceramic tiles and one soap holder to walls and hob to a minimum height of **1800 mm** above floor level with the final top row being full tiles. Tiles on hob are to be laid so that cut edge is hidden in grout joint.
- (l) The Contractor must Supply and Install **up to 300 mm x 300 mm** slip resistant ceramic tiles to floor of shower recess.
- (m) This Task is not to be used when shower is over bath.

62. Towel Rails, Curtain Rails and Toilet Paper Holders

- (a) Where the Contractor is required to refix, Replace or Supply and Install a towel rail, curtain rail or toilet paper holder, the Contractor must neatly Patch any cracked, drummy or broken cement or plaster that occurs as result of performing this Task. The Patch must be Flush to the existing surface.



63. Brickwork and Masonry

63.1 General

- (a) All brickwork must be built soundly, in an approved bond and complete with all necessary cuttings and corbelling. All joints both Bed and perpend must be completely filled with mortar.
- (b) Where the Contractor is required to Replace bricks, the cost of preparation, cutting and mixing mortar is deemed to be included in the price for the Task.
- (c) Where more than 100 bricks require replacement this must be done as Quoted Works.
- (d) Brickwork must be cleaned once dry with a mix of 20 part water / 1 part acid.

63.2 Mortar Mix for Masonry in Contact with Soil

- (a) The Contractor must add damp course to mortar mix if masonry is to be in contact with sand or soil.

63.3 Mortar Mix

- (a) Mortar mixes for:
 - (i) clay bricks;
 - (ii) calcium silicate bricks;
 - (iii) concrete blocks; and
 - (iv) pointing fretting brickwork,must follow the manufacturer's instructions and use additives and colouring as required.

64. Numbers, Letters and Letterboxes

- (a) Where the Contractor is required to Replace or Supply and Install property numbers and/or letters, stick-on labels are not permitted.
- (b) Aluminium or chromed plastic numbers and/or letters must be screw Fixed to the letterbox, wall or door.
- (c) **90 mm** blue reflective Snap-Stix numbers and/or letter must be pop-riveted to the letterbox.
- (d) Letterbox stands must consist of a **1200 mm** length x **25 mm** diameter galvanised steel pipe letter box stand with a **150 mm x 150 mm x 2 mm** plate for fixing box. Stand to be set into **700 mm x 250 mm** concrete footing.
- (e) Metal letterboxes must be powder coated and have a hinged lid, hasp and staple and Fixed to pipe stand with galvanised bolts.
- (f) The Principal's Nominated Products for metal letterbox are:



- (i) Sandleford Dune; and
- (ii) Sandleford Crest.
- (g) For further information about Sandleford products please visit:
www.sandleford.com.au.

65. Air-Conditioner Frames and Panels

65.1 General

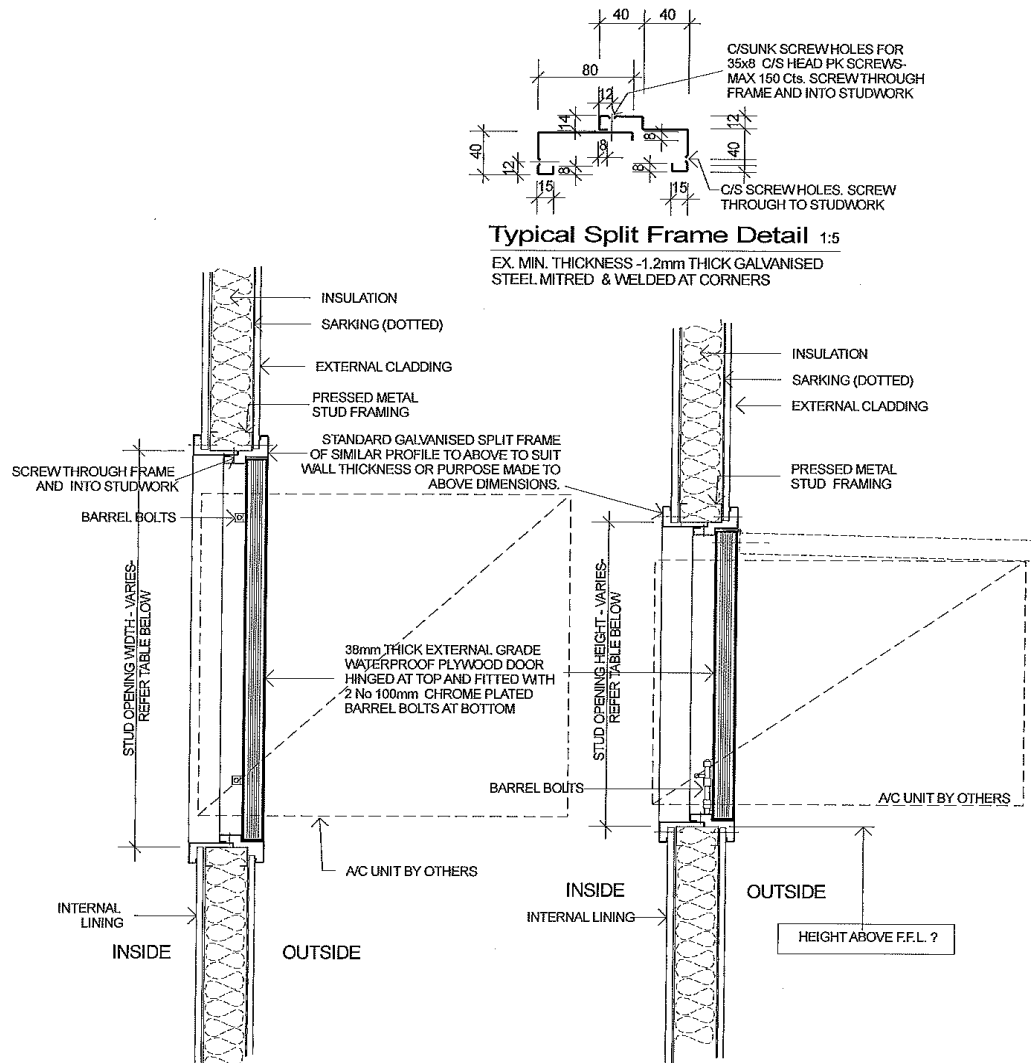
- (a) Where the Contractor is required to build an air conditioner frame, the Contractor must ensure the frame has all necessary mouldings, beams, barrel bolts, hinges and flashings using Detail L8A or L8B at clause 65.2 Air-conditioner Panel.
- (b) Air conditioning frames and panels must be painted with a Sealer using Detail L8A or L8B at clause 65.2 Air-conditioner Panel.
- (c) Air conditioner panel must be **18 mm** thick water resistant plywood. Panel to be hinged at top and have 2 x **75 mm** barrel bolts fitted at bottom.

65.2 Air-conditioner Panel

See over page:



(a) L8A Air-conditioner panel – steel framed buildings



Plan Section

1:10

Vertical Section

1:10

TABLE OF OPENING SIZES


STEEL WALL STUD OPENING:

- BED ROOMS - 520mm HIGH x 730mm WIDE
- LIVING/DINING - 560mm HIGH x 730mm WIDE

NOTES:

- USE SIMILAR APPROVED PROPRIETARY FRAME OR PURPOSE MAKE TO ABOVE DETAIL.
- FIX FRAME WITH RUST RESISTANT PROTECTED STEEL SCREWS DIRECTLY INTO STUDS.
- SCREW SPACING 150mm MAX CENTRES AND 100mm FROM CORNERS. FILL SCREW HEADS FLUSH AFTER INSTALLATION & PRIOR TO PAINTING.
- BUILDER TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF ANY WORK OR PRODUCTION OF SHOP DRAWINGS. REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT AND SEEK INSTRUCTION PRIOR TO PROCEEDING.
- DO NOT SCALE DRAWING.

ALL DIMENSIONS ARE IN MILLIMETRES

DRAWN	 Department of Housing and Works	AIR CONDITIONER PANEL STEEL FRAMED BUILDINGS	ISSUE DATE
APPROVED			April 05
Review:			DETAIL No.
Redrawn:			L8
SCALE	1:10		A



(b) L8B Air-conditioner panel – brick veneer construction

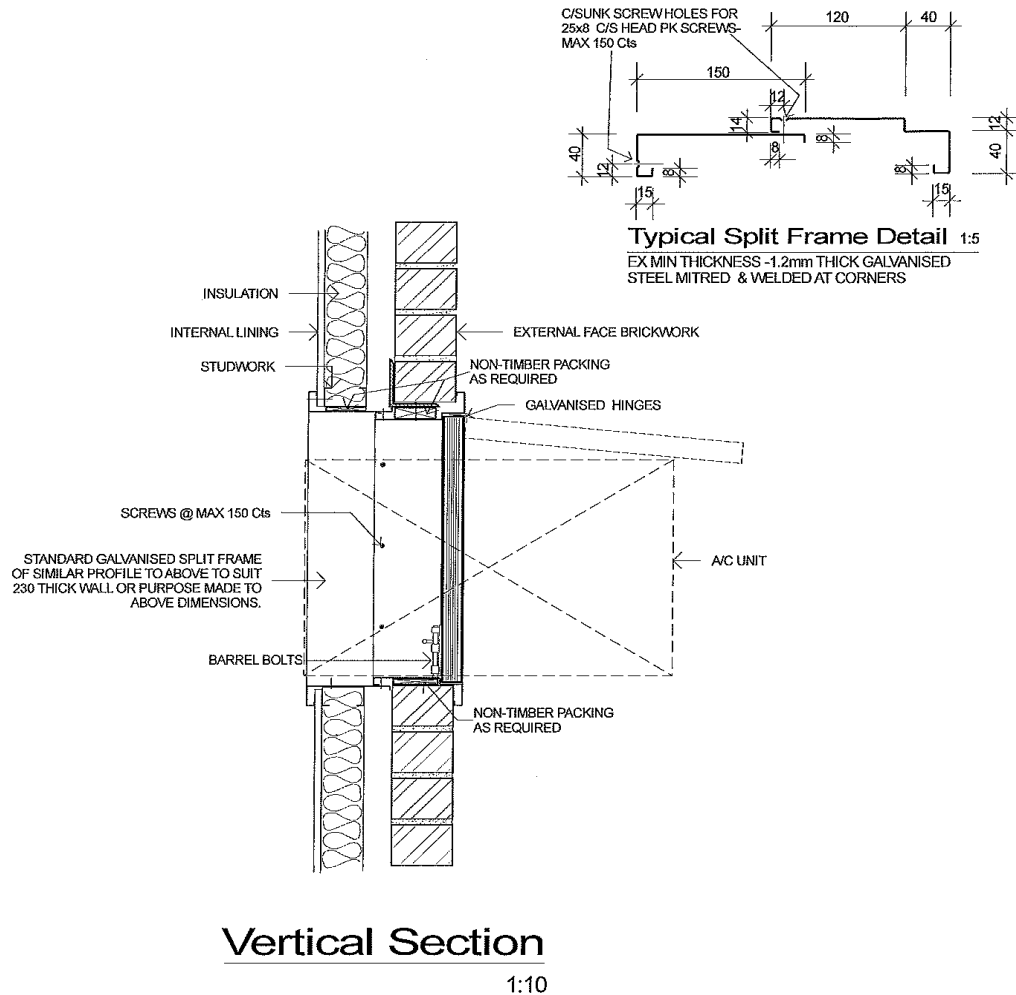


TABLE OF OPENING SIZES


STANDARD BRICK OPENINGS:

- BED ROOMS - 429mm HIGH x 610mm WIDE
- LIVING/DINING - 514mm HIGH x 730mm WIDE

NOTES:

- FIX FRAME WITH RUST RESISTANT PROTECTED STEEL SCREWS DIRECTLY INTO STUDS.
- SCREW SPACING 150mm MAX CENTRES AND 100mm FROM CORNERS. FILL SCREW HEADS FLUSH AFTER INSTALLATION & PRIOR TO PAINTING.
- BUILDER TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF ANY WORK OR PRODUCTION OF SHOP DRAWINGS. REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT AND SEEK INSTRUCTION PRIOR TO PROCEEDING.
- DO NOT SCALE DRAWING.

ALL DIMENSIONS ARE IN MILLIMETRES

DRAWN	 Department of Housing and Works	AIR CONDITIONER PANEL BRICK VENEER CONSTRUCTION	ISSUE DATE
APPROVED			April 05
Review:			DETAIL No.
Redrawn:			L8 B
SCALE	1:10		



66. Window Treatment, Brackets, Rods and Ends

- (a) Where the Contractor is required to remove a window treatment from a Site, the Contractor must ensure that any damage including but not limited to:
 - (ii) holes left by nails and screws; and
 - (iii) scrapes and scratches to painted surfaces, plaster or woodwork;caused by the installation of the window treatment is rectified.
- (b) Where the Contractor is required to install cleats and/or tensioning devices for securing curtain and blind cords at a GROH Site, the Contractor must do so in accordance with *Trade Practices (Consumer Products Safety Standard – Corded Internal Window Coverings) Regulations 2010* (Cth).
- (c) The Principal's Nominated Products for window treatment are Smart Home Products:
 - (i) Bracket stayed **100 mm** white HH100WP; and
 - (ii) **16 mm** rod finial acorn white HH254WP.
- (d) For further information about Smart Home Products, please visit:
www.smarthomeproducts.com.au.

CLEANING AND GARDENING

67. Cleaning and Gardening General

67.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to cleaning and gardening maintenance:
 - (i) **AS/NZS 1892.1 – 1996** Portable ladders – metal;
 - (ii) **AS/NZS 1892.2 – 1992** Portable ladders – timber;
 - (iii) **AS/NZS 1892.3 – 1996** Portable ladders – reinforced plastic;
 - (iv) **AS/NZS 1892.5 – 2000** Portable ladders – selection, safe use and care;
 - (v) **AS/NZS 3350.2.54 – 1997** Safety of household and similar electrical Appliances – particular requirements – surface cleaning appliances employing liquids;
 - (vi) **AS/NZS 3350.2.65 – 1997** Safety of household and similar electrical Appliances – particular requirements – air cleaning appliances;
 - (vii) **AS/NZS 3733 – 1995** Textile floor coverings – cleaning maintenance of residential and commercial carpets; and
 - (viii) **AS/NZS 4849.1 – 2003** Upholstery cleaning – fabric upholstery.



- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

67.2 Pesticide Licenses

- (a) Where the treatment of grasses and weeds requires a Contractor to use pesticides, only Personnel who hold a Certificate III in Pest Management may undertake these works.
- (b) For more information about pesticides licenses please visit:
www.public.health.wa.gov.au/3/1137/2/pesticide_licenses.pm.

67.3 Definitions

Basic Clean

Means up to 2 hours labour and supply of cleaning Materials for a Medium Clean of items nominated on a Works Order. Can only be claimed once per property.

Clean Room

Means to clean all surfaces, Fixtures and fittings within the property. The only items not included in clean Room are shower recesses, stoves, wall ovens and cooktops.

Component

Means all Fixtures, fittings and Appliances but excludes shower recesses, stoves, wall ovens and cooktops.

Heavy Clean

Means scrubbing to Remove a heavy build-up of grime, stains, cobwebs, dust and marks before rinsing and wiping down surfaces to Remove the water, soap and dirt resulting from scrubbing. Can only be used in conjunction with a Medium Clean.

Medium Clean

Means washing to Remove moderate build-up of grime, stains, cobwebs, dust and marks before rinsing and wiping down surfaces to Remove the water, soap and dirt resulting from washing.

Wash

Means to clean using water or an appropriate cleaning product usually such as soap, detergent or bleach, by immersing, soaking, dipping and rubbing, before rinsing and wiping a surface.

68. Cleaning and Gardening Quality

68.1 Materials and Workmanship

- (a) The Contractor must ensure that on completion of cleaning, the cleaned surface is free from;
 - (i) dirt, unsoiled and unstained;
 - (ii) foreign or extraneous matter; and



- (iii) pollution.
- (b) The Tasks are deemed to include the provision of all cleaning equipment and consumables (detergents, sponges, soaps etc.).
- (c) A Basic Clean Task is constituted by a Medium Clean of all items at the Site specified by the Principal.
- (d) A Medium Clean requires the following outcomes:
 - (i) ceilings, walls, floors, doors, windows, frames and architraves are clean;
 - (ii) ceiling fans, exhaust fans, light fittings, power points, light switches and circuit breaker boxes are clean;
 - (iii) external and internal surfaces of linen cupboards, trough cabinets, shaving cabinets, vanity cupboards, built in and walk in robes and kitchen cupboards are clean and free from dust, dirt and stains;
 - (iv) hard floor coverings are washed and carpets are vacuum cleaned;
 - (v) heaters, fireplaces, solid fuel heaters and hot water units are clean and free from moderate dust, grime and stain build-ups;
 - (vi) all mould treated in accordance with clause 2.7 Mould;
 - (vii) plumbing Fixtures, bench-tops, ceramic tiles and stoves (including surrounds and canopy) are clean and free from moderate grease, grime and stain build-ups;
 - (viii) an allowance of up to **0.5 m³** household waste to be Removed;
 - (ix) verandahs and porches inclusive of walls, floors, ceilings doors, fly-doors, windows, barrier doors, cyclone screen and flyscreens, woodwork, and metal work are washed and free from marks, cobweb, dust and grime build-ups, paths, pavers, slabs and decking are swept of a moderate build-up of sand, leaves and dust; and
 - (x) window tracks are vacuumed and windows washed.
- (e) Where the Contractor is required to carry out a Medium Clean of a Site, the Contractor should be guided by the Principal's expectation that the following time periods will be necessary to complete the required Tasks:
 - (i) for the whole Site:
 - A. 10 hours for a bedsitter or one and two bedroom properties;
 - B. 11 hours for a three bedroom property;
 - C. 12 hours for a four bedroom property;
 - D. 15 hours for a five bedroom property; and
 - E. 16 hours for a six or more bedroom property.



- (f) The Medium Clean of Room Task includes all components and Fixtures within the Room.
- (g) Where the Contractor is required to carry out a Heavy Clean, this is additional cleaning 'extra over' the cleaning required by a Medium Clean.
- (h) A Heavy Clean requires the following outcomes:
 - (i) ceilings, walls, floors, doors, windows, frames and architraves are clean;
 - (ii) ceiling fans, exhaust fans, light fittings, power points, light switches and circuit breaker boxes are thoroughly clean;
 - (iii) external and internal surfaces of linen cupboards, trough cabinets, shaving cabinets, vanity cupboards, built in and walk in robes and kitchen cupboards are clean and free from heavy dust, dirt and stain build-ups;
 - (iv) hard floor coverings are Scrubbed and carpets are vacuum cleaned: see clause 74 Vinyl and Carpet Floor Coverings;
 - (v) heaters, fireplaces, solid fuel heaters and hot water units are thoroughly Scrubbed and free from heavy dust, grime, ash and stain build-ups;
 - (vi) plumbing Fixtures, bench-tops, ceramic tiles and stoves (including surrounds and canopy) are Scrubbed and free from heavy grease, grime, calcium and pindan-dust stain build-ups;
 - (vii) verandahs and porches inclusive of walls, floors, ceilings, doors, fly-doors, windows, barrier doors, cyclone screen and flyscreens, woodwork, and metal work are thoroughly Scrubbed and free from heavy marks, cobweb, grime and pindan dust build-ups; and
 - (viii) window tracks are vacuumed and washed.
- (i) Where the Contractor is required to carry out a Heavy Clean of a Room, the Contractor must take a minimum time of:
 - (i) 2 hours for a small Room (under **15 m²**);
 - (ii) 2 and a half hour for large Room (**15 m²** to **30 m²**); and
 - (iii) 3 hours for an extra-large Room (over **30 m²**);
- (j) The Heavy Clean of a Room Task includes all components and Fixtures within the Room except the shower recess in a bathroom or ensuite, and the stove, cook top and oven in a kitchen. The relevant Task must be issued in addition to the Heavy Clean Room Task if the aforementioned component requires heavy cleaning
- (k) No hoses are to be used for washing of internal surfaces and all excess water is to be Removed from surfaces immediately.



68.2 Health, Safety and Environment

- (a) Where the Contractor is required to use electrical or fuel powered equipment, the Contractor must exercise all care to minimise all risks to occupants, the public or themselves.
- (b) Contractors are to take all required steps to negate any risk of electrocution when washing internal surfaces of the Site.
- (c) For further information about OSH in the cleaning industry please visit:
http://www.commerce.wa.gov.au/worksafe/PDF/Infokits/Cleaning_industry.pdf.

69. Basic Clean and Furniture Move

- (a) Where the Contractor is required to perform a Basic Clean, the Contractor must Medium Clean only those items nominated on the Works Order. The Basic Clean Task does not include any Heavy Cleaning.
- (b) Where the Contractor is required to move furniture, the Contractor must collect and deliver the furniture specified on the Works Order from the pick-up point to the drop-off point specified on the Works Order. This Task requires two people per Works Order and is charged per person.

70. Removal, Packing and Storage of Furniture, Utensils and Personal Possessions

- (a) Maintenance Works and Services requiring the removal, packing and storage of items may only be undertaken pursuant to a Quoted Works Order.
- (b) Where the Contractor is required to pack and Relocate furniture and other personal possessions to a storage facility on behalf of the Principal, the Contractor will be provided with an itemised list of items to be packed if necessary and stored.
- (c) Separation and packing of personal documents must be undertaken by the Contractor and will be paid by the Principal per Site where such documents are evident.
- (d) The Contractor must separate out items of value, including sentimental value, including but not limited to such items as:
 - (i) financial records;
 - (ii) identification documents;
 - (iii) official records;
 - (iv) photographs; and
 - (v) any other documents that can be reasonably expected that a person would want to keep.



- (e) Possessions and documents must be boxed, sealed and box/es permanently marked with:
 - (i) Tenant name;
 - (ii) Site address; and
 - (iii) date.
- (f) Packing and removal to storage will be paid per cubic metre, based upon completed loading of the vehicle.
- (g) The Contractor must ensure that it has in place insurance for the possessions for the period from the removal from Site until possessions are claimed or Disposed of.
- (h) The Contractor will be reimbursed the cost of removal and storage by providing the Principal with a copy of the service provider tax invoice. The cost of removal and storage reimbursed by the Principal under this paragraph includes the costs of any insurance premiums paid by the Contractor, except where the removal and storage is covered by the Contractor's general insurance policy.

71. Clean Property

- (a) The clean property Tasks involve:
 - (i) cleaning all surfaces, Appliances and Fixtures within the Site and within any porches or verandahs;
 - (ii) vacuuming of carpets; and
 - (iii) removal of up to **0.5 m³** of waste from the property, outbuildings or yard.
- (b) See further clause 68.2 Health, Safety and Environment.

72. Clean Room

- (a) The Medium Clean and Heavy Clean Room Tasks include cleaning all surfaces, Appliances and Fixtures within the specified Room.
- (b) See further clause 68.2 Health, Safety and Environment.

73. Clean Room Component

- (a) Heavy Clean Room Component Tasks will be issued in conjunction with:
 - (i) a Basic Clean Task; or
 - (ii) a Medium Clean Site Task.
- (b) Heavy Clean Room Component Tasks will not be issued with a Heavy Clean Room Task where the specified Component is within the same Room:



- (c) Where there are more than three Heavy Clean components in one Room, a Heavy Clean Room Task will be issued instead of multiple Heavy Clean Room component Tasks.
- (d) Where the Contractor is required to Heavy Clean:
 - (i) stove or cooktop and wall oven, the Contractor must Scrub to Remove heavy build-up of grease and cooking residue on all internal and external surfaces of stove or cooktop and wall oven, followed by wash and wipe of all surfaces including cooking top, grill, oven, shelves and trays;
 - (ii) kitchen sink, bench tops and internal and external cupboards, the Contractor must Scrub all internal and external surfaces of sink, bench tops and cupboards to Remove heavy build-up of food residue, grime, marks and stains then wash and wipe all surfaces;
 - (iii) a wardrobe, a linen cupboard, a broom cupboard or a pantry, the Contractor must Scrub, wash and wipe all internal and external surfaces to Remove heavy grime, marks and stains; and
 - (iv) shower recess, the Contractor must Scrub to removal heavy build-up of grease, soap residue etc. and all internal surfaces of the shower; the Contractor must treat all mould in accordance with clause 2.7 Mould, followed by wash and wipe of all surfaces.
 - (v) For GROH appliances including fridges, freezers and/or washing machines, the Contractor must Scrub to Remove any heavy build-up of grease, dirt, food residue, stains and dust from all internal and external surfaces followed by a complete wash and wipe of all surfaces.

74. Vinyl and Carpet Floor Coverings

- (a) Where the Contractor is required to Strip and Polish a vinyl floor, the Contractor must ensure that this involves:
 - (i) preliminary cleaning of the floor covering;
 - (ii) Scrubbing with recommended mixture of water/stripper;
 - (iii) removing slurry and rinse with clean water;
 - (iv) applying two coats of metal cross-linked acrylic floor finish; and
 - (v) polishing with domestic or industrial floor polishing machine.
- (b) Strip and Polish vinyl floor Tasks must only be issued in conjunction with a Basic Clean Task, a Clean Room Task or a Clean Site Task.
- (c) Where the Contractor is required to Heavy Clean a carpet, the Contractor must ensure that this involves vacuuming and either:
 - (i) steam cleaning; or



- (ii) shampooing,
- whichever is most appropriate for the type and level of staining.
- (d) Heavy Clean carpet Tasks must only be issued in conjunction with a Basic Clean Task, a Clean Room Task or a Clean Site Task.

75. Windows and Glazing

- (a) Window and glazing cleaning Tasks will only be issued in conjunction with:
 - (i) a Basic Clean Task; or
 - (ii) a clean Room Task if the windows are not in the specified Room.
- (b) Where the Contractor is required to clean the external surface of a window, and where the window is above ground level, the Contractor must do so using appropriate safety equipment and/or extendable window cleaning tools.
- (c) Where the external surface of a window is inaccessible due to height or barrier screens, the Contractor must only clean the internal surface and notify the Principal.

76. External Cleaning and Waste Removal

- (a) The Heavy Clean driveway and carport floor Tasks will only be issued in conjunction with:
 - (i) a Basic Clean Task;
 - (ii) a Clean Room Task; or
 - (iii) a Clean Site Task.
- (b) Where the Contractor is required to Heavy Clean a driveway or carport floor, the Contractor must ensure that oils, greases and other staining are lifted through the application of a suitable cleaning product and then washed clean.
- (c) Waste must be Removed from Sites in accordance with clause 8.1(d) of the General Specification.
- (d) Tenant bins provided by Local Governments are solely for the collection of municipal household waste and cannot be used by Contractors while performing the Principal's Maintenance Works and Services.
- (e) Basic Clean and Medium Clean Site Tasks include the removal of **0.5 m³** of waste. Waste removal Tasks are issued for the removal of waste over **0.5 m³**.
- (f) Removal of waste in volumes greater than **0.5 m³** or of weights greater than **40 kg** must be performed by at least two persons. The Contractor must determine the price using whichever unit results in a lower price.
- (g) Where a Contractor is to Remove hollow items such as wardrobes and cupboards, the Contractor must divide the item's volume by 3 and determine an appropriate volume for the removal of the item. For example, a wardrobe has a



volume of **1.5 m³** and is a hollow item. The volume must be divided by 3 which results in the price being calculated as if the wardrobe had a volume of **0.5 m³**.

- (h) Offensive and sensitive materials include soiled nappies, rotting food, faeces and animal carcass. SOR Task for the removal and disposal of offensive and sensitive material is not to be used in conjunction with Plumbing and Drainage Tasks.
- (i) Where the Contractor is required to remove and dispose of sharps, such as needles and syringes, the Contractor must place sharps in an approved rigid-walled, puncture resistant sharps plastic container with a screw-top lid and dispose of in accordance with the Department of Health guidelines.

77. Gardening

77.1 Lawn Mowing

- (a) Where the Contractor is required to mow and slash a lawn, the Contractor must mow and slash grass, including any weeds found outside of any garden beds. The Contractor must then edge the lawn using an edge cutter and brush cutter leaving the area clean and tidy.
- (b) All mowers and edger cutters and brush cutters must be fitted with guards.
- (c) All mowers must be fitted with a catcher or grass collection facility at all times. All grass cuttings are to be Removed from the Site by the end of the day. Grass catcher must be emptied regularly and when full. No cuttings are to remain on the lawn area following mowing.
- (d) Grass cuttings and other green wastes are not to be placed in the Tenant's bin.
- (e) Where grass and weeds are found to be in a condition other than stated on the Works Order e.g. overgrown or overgrown and wet, the Contractor must treat the matter as if the Task had been described incorrectly for the purposes of clause 4.6 of the General Specification.
- (f) The cost of edge cutting and brush cutting is incorporated into the price of the slashing and mowing Tasks.
- (g) The Contractor must ensure that mowing and edging equipment is cleaned before leaving each Site to prevent the spread of weeds.

77.2 Edge Cutting and Brush Cutting

- (a) Edges around shrubs, trees, poles, buildings, fences lines and sprinkler surrounds must be trimmed and cleared using either an edger or a brush cutter each time mowing is carried out.
- (b) Edging must be at least **10 mm** from pathways, kerbing and driveways.
- (c) Special care must be taken when using brush cutters so as not to cause any ring barking of trees or shrubs.
- (d) Damage caused by mowing or brush cutters is not the responsibility of the Principal.



77.3 Herbicides

- (a) Only non-residual glyphosate herbicides may be used.
- (b) The Contractor must be aware that the application of herbicides is not normally permitted along fence lines, building lines, valve boxes, sprinklers (except inside surrounds), garden beds or garden edges. The application of herbicides to these features must be authorised by the Principal's Representative.

78. Gutter, Valley and Downpipe

78.1 Clean-out to Asbestos Roof

- (a) Where the Contractor is required to clean out gutters, valleys and downpipes to asbestos roofs, the Contractor must use only those Tasks that are appropriate for asbestos roofs.
- (b) The Contractor must place clean-out waste into an appropriate asbestos storage bag with an asbestos warning imprinted upon it or affix asbestos warning duct tape to the storage bag.
- (c) Contractors must comply with clause 8.2(g) of the General Specification when working with ACM.

ELECTRICAL

79. Electrical General

79.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to electrical maintenance:
 - (i) **AS 1670.6 – 1997** Fire detection, warning, control, and intercom system – System design, Installation and commissioning – Smoke alarms;
 - (ii) **AS 1824.1 – 1995** Insulation Coordination – Definitions, principles and rules;
 - (iii) **AS 1824.2 – 1985** Insulation Coordination – Application guide;
 - (iv) **AS 3786 – 2014** Smoke alarms;
 - (v) **AS/NZS 3000 – 2018** Wiring Rules;
 - (vi) **AS/NZS 3008 – 2009** Electrical Installations – Selections of cables;
 - (vii) **AS/NZS 3019 – 2007** Electrical Installations – Periodic verification;
 - (viii) **AS/NZS 3190 – 2011** Approval and Test specification – Residual current devices (current-operated earth-leakage devices);



- (ix) **AS/NZS 3350.1 – 2002** Safety of household and similar electrical Appliances – General requirements; and
- (x) **AS/NZS 4417.1 – 2012** Regulatory compliance mark for electrical and electronic equipment.
- (b) Where amendments to the above standards exist, the Contractor must comply with the latest amendments.

80. Electrical Quality

80.1 Materials and Workmanship

- (a) Where the Contractor is required to Replace or Supply and Install Appliances, the Contractor must affix a sticker to the Appliance clearly showing the date of Installation and the signature of the Installer. The Contractor is also required to engrave “**HA**” onto the side or rear of the Appliance. Contractor must use an engraving tool and letters must be **10 mm** high.
- (b) With the exception of works issued as ESD Remediation works, all minor works must require copies of Electrical Safety Certificates to be returned with the Works Order. All major works must require copies of Preliminary and Completion Certificates to be returned with the Works Order.
- (c) All electrical cable must be multi-stranded copper, PVC insulated and sheathed.
- (d) Where an Unsafe situation is identified, the Contractor must fulfil all requirements under the Electricity (Licensing) Regulations.
- (e) Cable for all lighting circuits must be **1.5 mm²** two core and earth standard cable, twin active or SDI cable.
- (f) Cable for all power circuits must be **2.5 mm²** two core and earth standard cable.
- (g) All security lighting must be Installed in **2.5 mm²** two core and earth standard cable.
- (h) Cables for upright and elevated stoves must be Installed in **6 mm²** (minimum) two core and earth standard cable.
- (i) Wall ovens must be Installed in **2.5 mm²** (minimum) two core and earth standard cable.
- (j) Hotplates must be Installed in **4 mm²** or greater where manufacturer's specifications require, two core and earth standard cable.
- (k) Mains cable must be minimum **16 mm²** single phase twin core.
- (l) Mains cable 3 phase will be a minimum **10 mm²** four core.
- (m) Main earth cable will be **6 mm²** building wire.
- (n) No conduit or duct must be run on the surface of any wall or ceiling unless permitted by the Principal. All conduits must be Securely fastened in position.



- (o) Plastic sheathed wiring in lieu of conduits will be permitted provided that the wiring is arranged so that it can be readily withdrawn if desired and that all runs must be brought back to an accessible part of the roof.
- (p) All Electrical Testing must be:
 - (i) undertaken using a Metrel InstalTest 3017 with and Data Logging capability (4000 Test memory) so that all tests results are recorded and include:
 - A. the Principal's Works Order number;
 - B. the person performing the test;
 - C. the date of the test;
 - D. the type of test; and
 - E. the result of the test.
 - (ii) Test results must be made available to the Principal upon request.
- (q) The Metrel InstalTest 3017 needs to be calibrated every 12 months and a Calibration Certificate made available for inspection by the Principal upon request.

81. Disability Modifications

- (a) The Principal's Nominated Brand for the Deaf and hearing impaired (Smoke Alarm) Strobe light and Vibration pad module is Brooks and Product number is EIB170 RF.
- (b) The module must be installed with the Principal's approved Brooks smoke alarms, EIB166e or EIB3016 (hard wired) EIB650iC (10 year battery operated) with radioLINK.
- (c) The module may only be installed at the discretion of the Principal.
- (d) The module must be installed to the manufacturer's specifications and upon installation, the Contractor must leave all documentation at the Premises and demonstrate how it operates to the tenant.
- (e) Once the module has been installed the letter "H" must be written on the right hand side of the smoke alarm that has the radioLINK module inside. The letter "H" must be visible from ground level.

82. Electrical Safety Devices

82.1 Safety Devices – General

- (a) For this clause 82a Safety Device is a safety switch, smoke alarm or main earth device.
- (b) Where the Contractor is required to:



- (i) Replace;
- (ii) Supply and Install;
- (iii) move (as applicable); or
- (iv) Repair (as applicable),

a Safety Device issued as ESD Remediation works, a Repair Report (in the form specified by the Principal) must be completed and returned with the Payment Claim.

- (c) Where the Contractor is required to perform any electrical works (other than those on the Principal's list of exclusions) issued as Emergency, Urgent, Routine or Priority works, a Compliance Certificate (in the form specified by the Principal) must be completed and returned with the Payment Claim.

82.2 Numbering

- (a) Safety Devices must be numbered clearly, accurately and legibly using a permanent marker.
- (b) The Contractor must number all Safety Switches, starting top left and working to right, then down each row as follows:
 - (i) Power RCBOs must be numbered P# (where # represents the number starting at 1); e.g. P1, P2
 - (ii) Light RCBOs must be numbered L# (where # represents the number starting at 1); e.g. L1, L2
 - (iii) RCDs and all RCBOs covering other sub-circuits in the switchboard must be numbered O# (where # represents the number starting at 1); e.g. O1, O2
- (c) The Contractor must write the smoke alarm expiry date on the front of the device as MM-YY (where MM is a two digit representation of the expiry month and YY is a two digit representation of the expiry year e.g. 03-21).
- (d) Only smoke alarms in Passages and Bedrooms are required to be numbered as follows:
 - (i) the Contractor must number the smoke alarms on the front of the device so as to be visible from floor level; and
 - (ii) the number will be placed to the left of the Contractor's written expiry date.
- (e) The numbering of smoke alarms in Bedrooms and Passages must be unique from each other and as such must be numbered as follows:
 - (i) Bedrooms will be B# (where # represents the number starting at 1); e.g. B1, B2



- (ii) Passages will be P# (where # represents the number starting at 1); e.g., P1, P2
- (f) No writing is to be placed over the smoke alarm sensor.
- (g) Where there is an error in numbering any devices, the Contractor must use methylated spirits (or equivalent) to remove the mistake.

82.3 Safety Switches

- (a) Properties must meet the minimum number of Safety Switches as defined in the Electricity Regulations.
- (b) The Contractor must ensure that:
 - (i) all necessary sub-circuits are protected by a Safety Switch;
 - (ii) trip time must not exceed **40 ms** for all Safety Switches;
 - (iii) all newly installed Safety Switches are rated at **30 mA** with **6 kA** or greater rating;
 - (iv) all existing Safety Switches are rated at **30 mA** with **4.5 kA** or greater rating;
 - (v) every light or ceiling fan circuit is covered by a **10 A** RCBO or 10 A Circuit Breaker if connected to 40A RCD;
 - (vi) every **10 A** GPO circuit is covered by a **16 A** RCBO or 16 A Circuit Breaker if connected to 40A RCD;
 - (vii) every **15 A** GPO circuit is covered by a **16 A** RCBO or 16 A Circuit Breaker if connected to 40A RCD; and
 - (viii) a **40A** RCD protects a maximum of three sub-circuits..
- (c) The Contractor must ensure that there are no recalled Safety Switches.
- (d) Where the Contractor is required to Replace or Supply and Install an RCD Safety Switch, the Principal's Nominated Brands are:
 - (i) ABB model FH202 AC-40/0,03;
 - (ii) Clipsal model RCD240/30;
 - (iii) Legrand model TX3 4115 10; and
 - (iv) NHP model MOD6 RCCB 2 4030
- (e) Where the Contractor is required to Replace or Supply Install a double pole RCBO Safety Switch, the Principal's Nominated Brands are:
 - (i) ABB models:
 - A. DS201BS C10 AC30;



- B. DS201BS C16 AC30;
- C. DS201BS C20 AC30;
- D. DS201BS C25 AC30; and
- E. DS201BS C32 AC30.

(ii) Clipsal models:

- A. RCBM210/30;
- B. RCBM216/30;
- C. RCBM220/30;
- D. RCBM225/30; and
- E. RCBM232/30.

(iii) Legrand models:

- A. 4110 00;
- B. 4110 02;
- C. 4110 03;
- D. 4110 04; and
- E. 4110 05.

(f) Where the Contractor is required to Replace or Supply Install a single pole RCBO Safety Switch, the Principal's Nominated Brands are:

(i) ABB models:

- A. DSN201 C10 AC30;
- B. DSN201 C16 AC30;
- C. DSN201 C20 AC30;
- D. DSN201 C25 AC30.

(ii) NHP models:

- A. M6-RCB-D-10-30-C;
- B. M6-RCB-D-16-30-C;
- C. M6-RCB-D-20-30-C;
- D. M6-RCB-D-25-30-C; and
- E. M6-RCB-D-32-30-C.



- (iii) Legrand models:
 - A. 6027 82;
 - B. 6027 83;
 - C. 6027 84;
 - D. 6027 85; and
 - E. 6027 86.
- (iv) Clipsal models:
 - A. 4RCBE210/30S40;
 - B. 4RCBE216/30S40;
 - C. 4RCBE220/30S40;
 - D. 4RCBE225/30S40; and
 - E. 4RCBE232/30S40.
- (v) For more information on these devices visit:
 - A. www.clipsal.com.au;
 - B. www.hpm.com.au; and
 - C. www.abbaustralia.com.au.
 - D. www.legrand.com.au; and
 - E. www.nhp.com.au.
- (g) Where the Contractor is required to Replace or Supply and Install a new Safety Switch, the Contractor must test the new Safety Switch in accordance with AS/NZS 3017.

82.4 Smoke Alarms

- (a) The Contractor must ensure that smoke alarms are not older than 9 years and 6 months (commencing from the date of manufacture) or within 6 months of the replace by date specified by the manufacturer on the device.
- (b) The location of the smoke alarm must be determined according to the requirements of the National Construction Code.
- (c) The Contractor must ensure that, when Supplying and Installing a new Smoke Alarm, the expiry date for smoke alarms is not less than 9 years and 6 months from the time of installation.
- (d) Where the Contractor is required to Replace or Supply and Install a hardwired smoke alarm, the Principal's Nominated Products are:



- (i) Brooks EIB166e or EIB3016; and
 - (ii) PSA LIF5800RL/2 or LIF6000RL.
- (e) Where the Contractor is required to Replace or Supply and Install a battery powered smoke alarm, the Principal's Nominated Products are:
 - (i) Brooks EIB650iC; and
 - (ii) PSA LIFPE10, LIF10YPEW or LIF6000DCW.
- (f) Where the Contractor is required to Supply and Install a smoke alarm wireless interconnection module, the Principal's Nominated Products are:
 - (i) Brooks EIB100MRF (for EIB166e smoke alarms);
 - (ii) Brooks EIB3000MRF (for EIB3016 smoke alarm);
 - (iii) Brooks EIB600MRF (for EIB650iC smoke alarm); and
 - (iv) PSA Wireless Base LIFWMB, LIFWMB2 or LIF6000WB.

82.5 Anti-Tilt Bracket

- (a) The Contractor must fit an anti-tilt bracket to upright stoves, in accordance with manufacturer's installation specifications.
- (b) For elevated stoves, the anti-tilt bracket is to be supplied and fitted in accordance with clause 88 (c).



83. Supply and Install or Replace - General Light and Power

83.1 General

- (a) The Tasks under this clause 83 are for the Supply and Installation of general light and power items where none exist already.
- (b) Replacement power outlets must always be double power outlets, unless it is 15A power outlet, in which case, it must be a single power outlet.
- (c) Where the Contractor is required to Replace a light switch or power points, the Contractor must only use Clipsal or HPM Fixtures.
- (d) Where the Contractor is required to Replace a prismatic bulkhead light fitting, the Contractor must only use HPM product number 616.
- (e) Where the Contractor is required to Replace a light fitting including batten holders and fluorescent fittings, the Principal's Nominated Brands are Clipsal, HPM, Pierlite or Davis fittings.
- (f) Where the Contractor is required to repair an existing halogen downlight, the components, including the transformer, lampholder and cable, gimble or lamp, must be tested and replaced where required, using appropriate SORs; and
- (g) Where the Contractor is instructed by the Principal to replace a halogen down light with an LED downlight, the Contractor must Install a Lumitex "Barricade" LED downlight or an approved alternative product.
- (h) Where the Contractor is required to Replace an exhaust fan, the Principal's Nominated Products are:
 - (i) Wall Exhaust Fans:
 - A. Clipsal 7106A (**200 mm** auto-switched);
 - B. Clipsal 7108A (**200 mm** pull-cord switched);
 - C. Clipsal 7006A (**150 mm** auto-switched); or
 - D. Clipsal 7008A (**150 mm** pull-cord switched);
 - (ii) Window Exhaust Fans:
 - A. Clipsal 7105A (**200 mm** auto-switched);
 - B. Clipsal 7107A (**200 mm** pull-cord switched);
 - C. Clipsal 7005A (**150 mm** auto-switched); or
 - D. Clipsal 7007A (**150 mm** pull-cord switched);
 - (iii) Ceiling Exhaust Fans:



- A. Clipsal CE250 (**250 mm**);
 - B. Clipsal CE200 (**200 mm**);
 - C. HPM R621/1 (**200 mm**); or
 - D. HPM R621/2 (**250 mm**); and
- (iv) Ceiling Fan and Light Combination:
- A. HPM R620 (**250 mm**).

Ceiling sweep fans must be Clipsal AirFlow “ACES” model with three metal blades. The size of ceiling fan to be installed is:

- (v) **1400 mm** in living areas (e.g. lounge rooms) is; and
 - (vi) **1200 mm** in all other Rooms (e.g. bedrooms, kitchen etc.).
- (i) The light fitting attached to a Clipsal AirFlow “ACES” model ceiling fan must be Clipsal Oyster Light Kit, model number OYWHT.
- (j) Where the oyster light attached to a ceiling fan is faulty and the sweep fan is functioning correctly, only the oyster light is to be replaced.
- (k) Damaged or missing ceiling sweep fan regulator control knobs are to be replaced and the regulators are only to be replaced if faulty.
- (l) For further information about:
- (i) Clipsal products please visit www.clipsal.com.au
 - (ii) HPM products please visit www.hpm.com.au
 - (iii) Peirlite products please visit www.peirlite.com
 - (iv) Davis products please visit www.davislighting.com
 - (v) Lumitex products please visit www.lumitex.com.au



- (m) Detail Q1 Installation of Ceiling Fans

84. Wiring

- (a) All existing cabling that has been disconnected due to fault or non-compliance, must be Removed from the Site and Disposed of. All new cabling in the roof space must be Installed according to the Wiring Rules.
- (b) When cabling to an existing power point requires replacing and the existing power point is located on the skirting board, the location of the power point must be Removed from the skirting board and raised and Installed **300 mm** above floor level. Any hole left on the skirting board must be covered by a blanking plate.
- (c) Rewire Tasks are deemed to include all cables, Fixtures, fittings and Fixings to perform the Task.
- (d) When replacing electrical cabling within a property, the “Loop In, Loop Out” method must be used, limiting the use of junction boxes within the roof space.
- (e) The Contractor must notify the Principal where it identifies the following cable types:
 - (i) Vulcanised India Rubber (VIR);
 - (ii) Infinity/Olsent;
 - (iii) Ecables;
 - (iv) SKL; or
 - (v) any other Recalled cable types.

85. Main Entry and External Lighting

- (a) Where the Contractor is required to Fix a main entry light (front or rear of a property), the Contractor must ensure that the light globe, casing, lens, lamp holder, wiring and internal switch are in full working order and make replacements and Adjustments where necessary.
- (b) Where the Contractor is required to Replace a main entry light, the Principal's Nominated Product is HPM Bulkhead weatherproof light fitting 616 – for further information about HPM products please visit: www.hpm.com.au.
- (c) Where the Contractor is required to Replace or Supply and Install sensor lighting, the fittings used must have the following characteristics:
 - (i) a single unit;
 - (ii) two Par 38 **120 W (minimum)** globes; and
 - (iii) a motion sensor.



86. Security and Common Lighting at Complexes

86.1 General

(a) Rectify fault to security lighting – Minor

Where security lighting is reported faulty, and 'Rectify fault to security lighting – minor' has been issued, the Contractor must:

- (i) test PE Cell and override switch, inspect site and assess the function of all security lights (this is exempt for High Density Apartment Complexes);
- (ii) in the case of High Density Apartment Complexes, the contractor must only inspect the impacted floor or circuit where the fault was identified.
- (iii) if upon attending the Site the required work is limited to replacing up to 3 lamps, internal components (including control gear i.e. ballast, capacitor and starters), lamp holder or internal control cabling and silicone sealant (to prevent water ingress) of up to and including 3 light fittings, or replacing or rewiring the internal control cabling of the security lighting circuits within the switchboard, then the Contractor is to complete the required work.
- (iv) if upon attending the Site the required work exceeds the works stated in clause 86.1 (a) (iii), proceed in accordance with clause 4.7(b) of the General Specification. (including where light fittings need to be replaced and /or security lighting control components within the switchboard or PE Cell need to be replaced), using an appropriate SOR.
- (v) Once the requirements of clause 86.1 (a) (i) to (iv) have been met, the "Security Lighting Maintenance Report" must be completed detailing extent of works carried out. The expected outcome included on this form is that all security lighting is operational upon completion of this Task.

(b) Rectify fault to security lighting – Major (Cabling faults)

Where security lighting is reported faulty, and 'Rectify fault to security lighting – minor' has been issued, but the Contractor finds upon attending the Site that the nature of the fault/s relate to security lighting cabling (external to switchboard and external to light fittings), then the Contractor may in accordance with clause 4.7(b) of the General Specification request the addition of 'Rectify fault to security lighting – major' Task to the original works order.

Where 'Rectify fault to security lighting – major' has been added to a works order, the Contractor must use appropriate test equipment (including, but not limited to, continuity tester, insulation resistance tester and/or cable locator) to locate and identify the nature of the fault. Once the location and the nature of the cable fault has been identified, the Contractor may in accordance with clause 4.7A of the General Specification request appropriate SORs to rectify the cable fault, including replacement cable, conduit and conduit fittings.



Once the cable fault/s have been rectified, an assessment of the function of the security lighting must be performed (including testing of the PE Cell and Override switch). Where the replacement of additional lamps, light fittings or components are deemed required, the Contractor may proceed in accordance with clause 4.7(a) of the General Specification.

If the nature of the locate fault task cannot be rectified using appropriate SORs, the Contractor must refer to clause 86.1 (c) part (v).

Once 'Rectify fault to security lighting – major' task has been completed, detail of work carried out must be recorded on the "Security Lighting Maintenance Report".

- (c) Where security lighting to common services has extensive damage, or the work required goes beyond what is required under clause 86.1 (a) & (b), the Contractor must proceed in accordance with clauses 4.7(b) and (c) of the General Specification, including by reporting the following to the Principal:
 - (i) a scope of work which includes: extent of equipment and cabling required;
 - (ii) location of damaged equipment and cabling;
 - (iii) estimated cost of Materials; and
 - (iv) estimated labour.
 - (v) Where the above option is to be exercised, the Contractor must isolate and tag out faulty sections and reenergise as much of the security lighting as possible, where is it safe to do so, before leaving the Site.
- (d) Photo Electric Cells (PE Cell) – also known as Light Sensitive Switch.
 - (i) PE Cells must be:
 - A. HPM PE170/10; or
 - B. Eye Lighting International NEMA Base type Daylight Switch.
 - (ii) When a photo electric cell that is used to control complex security lighting is present, the following must apply:
 - A. a PE Cell cannot be replaced unless a Work Order has been issued stating that either all lighting is functioning continuously, or that all security lighting is not functioning; and
 - B. when replacing a PE Cell, the base must also be replaced.
- (e) Control Circuitry
 - (i) Where more than one piece of equipment (e.g. RCD/MCB, PE Cell, override switch, electrical contactor) is the cause of the fault, the Contractor must provide photographs and Test results to the Principal.



- (ii) Where the Contractor is required to Replace or Supply and Install contactors or relays, the Principal's Nominated Products are:
 - A. ABB ESB20 single module contactor; and
 - B. ABB B6-30-10-01 mini contactor.
 - (iii) The use of any electrical contactors or relays to control complex security lighting must be approved by the Principal prior to Installation.
- (f) **Bollard Heads**
 - (i) Replacement bollard heads must be of Edison Screw configuration and includes replacement lamp.
 - (ii) The head must be of the same diameter as the base and Match in colour.
 - (iii) Where a Matching colour cannot be obtained, painting with exterior quality paint is required.
 - (iv) Where unable to obtain a suitable bollard head, the Contractor must treat the event as a Hold Point: see clause 4.8 of the General Specification.
 - (v) When a bollard pole requires replacement, the Contractor must use a Crompton EX2000B/KIT.
 - (vi) TYPE 1 – Bollard heads must be:
 - A. Crompton EX2000; or
 - B. Domus BL-100,which suits approximately **80 mm** diameter pole and is the Principal's nominated bollard style.
 - (vii) TYPE 2 – Circular aluminium bollard head must be:
 - A. Thorn "Chartor" (part number CB616) to suit approximately **140 mm** diameter pole; or
 - B. Truelight "Bollite" (part number TL7) to suit approximately **130 mm** diameter pole.
 - (viii) TYPE 3 – must include the bollard head, lamp, pole and cement and be Crompton EX2000-KIT.
 - (ix) Where a Type 2 bollard pole is rusted or damaged and needs to be completely replaced, a Type 3 fitting must be used.
- (g) **Roadway light fittings:**
 - (i) If the replacement of roadway lighting is required the Contractor must contact the Principal for direction on how to proceed.



- (ii) TYPE 4 - Typical streetlight containing High Intensity Discharge (HID) lamps. If the replacement of streetlighting is required, the Contractor must contact the Principal for direction on how to proceed.
 - (iii) TYPE 5 – Pole top streetlight with 360 degree opaque acrylic diffuser containing HID lamps. If the replacement of a pole top streetlight is required, the Contractor must contact the Principal for direction on how to proceed.
- (h) Exterior Wall Light
 - (i) Replacement Exterior Wall light includes replacement lamp.
 - (ii) TYPE 6 - Type 6 Exterior wall light fittings refers to wall mounted light fittings for exterior use on complex security lighting circuits and does not include to Prismatic Bulkheads (HPM 616).
 - (iii) Exterior wall lights must be one of the following:
 - A. Crompton EXC333 Grilled Recessed Bricklight;
 - B. Crompton EX7200 Bunkerlight;
 - C. Crompton MBV mini weatherproof vandal resistant bulkhead light; or
 - D. Philips Julux JL100 weatherproof exterior light.
- (i) Poles for Car Park or Roadway Lighting
 - (i) It is the Principal's intention to progressively Replace bollard security lighting with pole lighting and the Contractor must contact the Principal where the Contractor considers replacement of bollards with pole lighting an advantage to the Principal.
 - (ii) Any replacement or Installation of pole lighting will be performed as Quoted Works.
 - (iii) Pole lighting must have the following characteristics:
 - A. a minimum of **5.0 m** above ground level and **1.0 m** in ground;
 - B. if the pole is buried directly in the ground then the pole must be painted with black protective bitumen coating, applied by brushing on (no aerosol sprays to be used) from bottom of pole to minimum 100mm above ground level. Photographs of application must be available for inspection by HA to ensure black bitumen protective coating has been applied;
 - C. a minimum 3 x **20 kg** bags of concrete must be used at the base;
 - D. a **90 mm** diameter steel galvanised or 8 sided taper hot dip galvanised pole;



- E. an inspection cover no less than **300 mm** above ground level;
 - F. a **500 mm** spigot to be welded no more than **200 mm** from the top of the pole at an angle appropriate to the fitting used and amount of throw required to provide adequate lighting; welded section must be coated with rust preventative paint;
 - G. a galvanised cap on top of pole to prevent water ingress to pole; and
 - H. if the replacement of a light fitting for a pole light is required, the Contractor must contact the Principal for direction on how to proceed.
- (iv) For further information about HPM products please visit:
www.hpm.com.au
 - (v) For further information about Eye Lighting International products please visit: www.eyelighting.com
 - (vi) For further information about ABB products please visit:
www.abbaustralia.com.au
 - (vii) For further information about Crompton products please visit:
www.crompton.com.au
 - (viii) For further information about Domus products please visit:
www.domuslighting.com.au
 - (ix) For further information about Thorn products please visit:
www.thorn.lighting.com.au
 - (x) For further information about Truelight products please call: **Truelight International (08) 9434 1991**.
 - (xi) For further information about Sylvania products please visit:
www.sla.net.au
 - (xii) For further information about Philips products please visit:
www.philips.com.au
 - (xiii) For further information about Rexel products please visit:
www.rexel.com.au

87. Television and Telephone

- (a) Where the Contractor is required to Replace or Supply and Install a TV antenna, the Contractor must ensure that the antenna is suitable for the Site's location.
- (b) The Principal's Nominated brands for television antennas are:
 - i. Hills– for further information about Hills products please visit: www.hills.com.au; and



- ii. Matchmaster – for further information about Matchmaster products please visit; www.Matchmaster.com.au

If the antenna is not suited to the area. The Contractor must source a suitable alternative antenna.

- (c) The Contractor must use an antenna signal strength tester to ensure the antenna is appropriate.
- (d) Where the Contractor is required to rectify a television reception fault, the Contractor must locate and identify the fault and rectify in accordance with clause 4.7A of the General Specification including using the appropriate SORs. Television signal must be confirmed using a signal strength meter upon completion of works.
- (e) This task includes adjustment of television antenna where required. Where the antenna is situated on a second storey roof or above, the Contractor must in accordance with clause 4.7A of the General Specification provide an estimate of labour to rectify fault and contact the Principal from site for approval to proceed.
- (f) Where the television reception fault cannot be rectified using scheduled SORs, the Contractor must in accordance with clause 4.7A of the General Specification provide an estimate of materials and labour to rectify fault and contact the Principal from site for approval to undertake repairs.
- (g) The Principal's Nominated Brands for television and telephone Fixtures are:
 - (i) Clipsal – for further information about Clipsal products please visit: www.clipsal.com.au; and
 - (ii) HPM – for further information about HPM products please visit: www.hpm.com.au.
- (h) If the Contractor deems the cost of replacing a faulty or damaged telephone cable is less than the cost of locating and repairing the fault the cable must be replaced.
- (i) Telephone Test equipment (including Linesman's Handset (also known as Buttinski or Test set)) must be used to determine if a phone line is faulty.
- (j) The Personnel undertaking telephone cable Maintenance Works and Services must be registered with the Australian Communications and Media Authority (ACMA).
- (k) The Principal prefers that a Modular Telephone Wall Plate with RJ11 socket outlet be used when replacing a damaged telephone outlet.

88. Stoves, Cooktops and Ovens

- (a) Where the Contractor is required to renew or Supply and Install a stove, cooktop or oven, the Departments Nominated Brands are:
 - (i) Chef – for further information about Chef Products please visit: ; www.chefAppliances.com.au; and



- (ii) Westinghouse – for further information about Westinghouse products please visit: www.westinghouse.com.au.
- (b) Electric upright stove must be a free standing one piece Appliance and must incorporate the following characteristics:
 - (i) A cooking hob with four elements;
 - (ii) A Fixed upstand with a splashback;
 - (iii) A grill beneath the hob;
 - (iv) A removable vitreous enamel grill shelf with at least two height positions;
 - (v) An oven with at least three height positions;
 - (vi) A removable oven shelf;
 - (vii) A removable oven door with a window; and
 - (viii) Finished in white enamel or stainless steel to all surfaces – areas of brown or black are permitted.
- (c) Elevated stoves must have an alongside grill and cooktop and must be secured to the wall by 2 L shaped powder coated brackets 75mm x 75mm and 40mm width securely fixed to the wall with plugs and screws and pop riveted (white) to the stove, so as to prevent the elevated stove from moving on the benchtop. Section of bracket that is secured to the wall is to be fixed facing downwards.
- (d) Electric cooktops must incorporate the following characteristics:
 - (i) Four burners;
 - (ii) finished with white enamel or stainless steel to all solid surfaces – areas of brown or black are permitted; and
 - (iii) Control dials must be to the front or side of the cooktop.
- (e) Electric wall ovens must incorporate the following characteristics:
 - (i) Grill element to the top of the oven;
 - (ii) A removable vitreous enamel grill shelf with at least two height positions;
 - (iii) An oven with at least three height positions;
 - (iv) A removable oven shelf; and
 - (v) A removable oven door with a window.
- (f) Electric Rangehoods must incorporate the following characteristics:
 - (i) Finished with white enamel or stainless steel to all solid surfaces – areas of brown or black are permitted;



- (ii) Control dials must be to the front; and
- (iii) Removable filters.
- (g) Rangehoods must be 600mm wide and replaced like for like (flued or un-flued)
- (h) If existing Rangehood is 900mm wide refer to Principal for direction on whether to replace like for like or replace with 600mm wide. Replacement of 900mm rangehoods is not considered part of this task.
- (i) Where there is no existing wiring for the Appliance, the Contractor must install individual circuit to be wired back to switchboard in single phase **6 mm** cable and protected by circuit protective device. The Contractor must Install complying switch and connect from switch to stove with cable enclosed in flexible conduit. The Contractor may claim the appropriate SoR items for this work in accordance with clause 4.7 of the General Specification.
- (j) Where there is power to the Site but no power to the cooking appliance, a fault to wiring or components, the Contractor must locate and identify the fault, then use the appropriate SORs to repair, in accordance with clause 4.7A of the General Specification. Functions of cooking appliance must be tested for correct operation upon completion of works order and results of test recorded on works order.
- (k) For further information about Westinghouse products please visit www.westinghouse.com.au

89. Electric Room Heaters

- (a) Where the Contractor is required to renew or Supply and Install a convection Room heater, the Principal's Nominated Brand is DeLonghi – for further information about DeLonghi products please visit: www.delonghi.com.au
- (b) Heater must be wall mounted.
- (c) Where the nominated heater is not available due to production limits, the Contractor must locate and nominate an alternative product for the Principal's approval.
- (d) Copies of electrical certificates must be supplied to the Principal upon request.

90. Hot Water Units

- (a) The Contractor is responsible for the disconnection and reconnection of the unit and any safety or commissioning Tests or checks.

91. Switchboard and Mains Connection Fixtures

- (a) The external switchboard must be steel meter box with Din Rail kit with minimum of **10 module capacity** includes single **80 A** main switch.
- (b) The internal switchboard must be surface or Flush mounted with minimum of **10 module capacity** includes single **80 A** main switch.



- (c) Where disconnections and reconnections of Supply Authority mains cabling is required, fees will be paid by the Principal.
 - (i) The fee cannot be increased by the Contractor and a copy of the invoice must be returned with the Works Order.
- (d) Where the Contractor is required to Replace or Supply and Install a riser bracket, the Contractor must allow a minimum **2700 mm** clearance above ground level.
- (e) Sites that have existing circuit breakers on hardwired Appliances do not need upgrading as they were approved at the time of construction or when the Appliance was Installed. If an upgrade of a switchboard is required the Contractor must comply with current standards.
- (f) After undertaking any electrical works at a Site, the Contractor must label the switchboard in accordance with the Wiring Rules.
- (g) After undertaking any main earth works at the Site, the Contractor must ensure that the location of the main earth is written on the switchboard.

ESTATE MANAGEMENT

92. Estate Management General

92.1 General

- (a) Estate Management is divided into two distinct sections:
 - (i) Complex Cleaning; and
 - (ii) Grounds Maintenance.

92.2 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to estate management:
 - (i) **AS 1678.10.001 – 1998** Emergency procedure guide – Transport – Pesticides;
 - (ii) **AS 2727 – 1997** Chainsaws – Guidance to Safe Working;
 - (iii) **AS 3000 – 2007** Electrical Installations (known as the Australian/New Zealand Wiring Rules);
 - (iv) **AS 3632 – 1993** Powered rotary lawnmowers – Blades and blade mounting attachments;
 - (v) **AS 3792.1 – 1990** Ride-on lawnmowers – Powered rotary ride-on mowers;
 - (vi) **AS 4057 – 1992** Powered walk-behind and hand-held lawn trimmers and lawn edge trimmer – Mechanical safety requirements and test methods;



- (vii) **AS 4373 – 2007** Pruning of amenity trees;
 - (viii) **AS/NZS 1891.4 – 2009** Industrial fall-arrest systems and devices – Selection, use and maintenance;
 - (ix) **AS/NZS 1892.1 – 1996** Portable ladders – metal;
 - (x) **AS/NZS 1892.2 – 1992** Portable ladders – timber;
 - (xi) **AS/NZS 1892.3 – 1996** Portable ladders – reinforced plastic;
 - (xii) **AS/NZS 1892.5 – 2000** Portable ladders – Selection, safe use and care;
 - (xiii) **AS/NZS 2161.10 – 2005** Occupational protective gloves – Protective gloves against chemicals and micro-organisms – Terminology and performance requirements;
 - (xiv) **AS/NZS 2284 – 1979** Safe working with elastomeric hose and hose assemblies for steam-cleaning machines;
 - (xv) **AS/NZS 3350.2.54 – 1997** Safety of household and similar electrical Appliances – particular requirements – surface cleaning appliances employing liquids;
 - (xvi) **AS/NZS 3350.2.65 – 1997** Safety of household and similar electrical appliances – particular requirements – air cleaning appliances;
 - (xvii) **AS/NZS 3733 – 1995** Textile floor coverings – cleaning maintenance of residential and commercial carpeting;
 - (xviii) **AS/NZS 4849.1 – 2003** Upholstery cleaning – fabric upholstery;
 - (xix) **AS/NZS ISO 22608 – 2004** Protective clothing – protection against liquid chemicals – Measurement of repellency, retention and penetration of liquid pesticide formulations through protective clothing Materials;
 - (xx) **ISO 10517 – 2009** Powered hand-held hedge trimmers – safety;
 - (xxi) **ISO 5395.1 – 2013** Garden equipment – Safety requirements for combustion-engine-power lawnmowers – Part 1: Terminology and common test; and
 - (xxii) **ISO 5395.2 – 2013** Garden equipment – Safety requirements for combustion-engine-powered lawnmowers – Part 2: Pedestrian-controlled lawnmowers;
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.



92.3 Pesticide Licenses

- (a) Where the treatment of grasses and weeds requires a Contractor to use pesticides, only Personnel who hold a Certificate III in Pest Management may be on Site.
- (b) For more information about pesticides licenses please visit:
www.public.health.wa.gov.au/3/1137/2/pesticide_licenses.pm

92.4 Definitions

Baluster

Means a vertical post that supports the Banister of a stairway.

Banister

Means the handrail of a stairway.

Bulky Waste

Means waste types that are too large to be accepted by municipal household waste collections.

Cleaning Performance Inspection Report

Means the report prepared by the Contractor under clause 93.1 (c) – (f).

Common Ground

Means the areas of a Complex that are shared by all Tenants and visitors and are not part of an individual dwelling Unit or storage area allocated to a dwelling Unit, and include driveways or paved areas leading to or between the Units.

Complex

Means a set of grouped dwellings.

Damp Dust

Means to Remove dust by wiping with a damp cloth.

Estate

Means the Site that encompasses Common Grounds, Complexes, grounds and shared facilities.

External Cleaning

Has the meaning provided in clauses 95 to 97.

Machine Scrub

Means to Remove dirt, grime and marks using an electric scrubbing machine.

Polish

Means to shine using a polishing machine.



Riser

Means the vertical part between each tread of a stairway.

Spandrel

Means the triangular space underneath a stairway.

Spot Clean

Means to clean only parts of an entire surface.

Stringer

Means the Structural part of a stairway that supports the Treads and Risers.

Tread

Means the part of a stairway that is stepped on.

Unit

Means a dwelling.

Wash

Means to clean using water or an appropriate cleaning product usually such as soap, detergent or bleach, by immersing, soaking, dipping and rubbing, before rinsing and wiping a surface.

92.5 Health, Safety and Environment

- (a) Where the Contractor is required to use electrical or fuel powered equipment, the Contractor must exercise all care to minimise all risks to occupants, the public or themselves.
- (b) For further information about OSH in the cleaning industry please visit:
http://www.commerce.wa.gov.au/worksafe/PDF/Infokits/Cleaning_industry.pdf
- (c) The Contractor must ensure that appropriate signage is displayed when undertaking cleaning Tasks.
- (d) Where the Contractor needs to handle sharps (i.e. needles and syringes) the Contractor should adhere to the Department of Health guidelines:
http://www.public.health.wa.gov.au/3/463/2/safe_disposal_of_needles_and_syringes.pm

93. Complex Cleaning Quality

93.1 Materials and Workmanship Complex Cleaning

- (a) The Principal will, if necessary, supply the Contractor with keys and an access security card for the purpose of entering and Securely locking the Site.
- (b) In carrying out the cleaning of Complexes, the Contractor must:



- (i) take all reasonable steps to keep the keys and access security cards Secure and not copy any key or cards or divulge security codes of electronic security/surveillance systems to unauthorised persons;
 - (ii) immediately report the loss of any keys and access security cards to the Principal, with any costs resulting from keys or access security cards being lost by the Contractor being borne by the Contractor including but not limited to replacement of keys/access cards and cost of re-keying;
 - (iii) not label any key/access card with any name that will identify the Site;
 - (iv) pay the amount of any call-out charge imposed on the Principal by their security contractor if any security system is activated as a result of a breach of the Contractor's obligation;
 - (v) ensure that when entering a locked Room, for the purpose of carrying out the obligations under this Contract, the Room is re-locked upon leaving;
 - (vi) take all reasonable precautions to ensure as little disturbance as possible to the area being maintained and the routine of other activities therein performed, and promptly Remove all Materials and equipment when the daily work has been completed; and
 - (vii) perform the External Cleaning of Complexes and Maintenance Works and Services between the hours of 8.00 a.m. and 5.00 p.m. on the days specified for cleaning, including Saturdays, Sundays and Public Holidays.
- (c) The Contractor must, at least one month before the Full Service Delivery Date, and in consultation with the Principal, develop a Cleaning Performance Inspection Report based on the template at annexure 177.1 Complex Cleaning Inspection Report.
- (d) The Contractor must undertake inspections in accordance with the Cleaning Performance Inspection Report on a monthly basis.
- (e) The Contractor must certify that inspections have been carried out in accordance with the Cleaning Performance Inspection Report on a monthly basis, and provide such certification to the Principal.
- (f) The Principal may conduct inspections of External Cleaning of Complexes. If the Principal produces rating of “totally unsatisfactory” or “unsatisfactory needs attention” against any item of service in the Complex Cleaning Performance Inspection Report or Complex Grounds Maintenance Performance Report, the Principal may issue a Defect DRC in accordance with clause 11.1 of the General Specification.
- (g) For the purposes of the Defect DRC in paragraph (f), the specified time period for External Cleaning of Complexes and Maintenance Works and Services is 72 hours.



94. Complex Cleaning

94.1 Frequency of Works

- (a) All Complexes are to be maintained, at all times, in a clean, tidy and hygienic state, consistent with the required frequency of service as set out below and shown on the individual Complex listings at the Pricing Schedule, Schedule 14 to the Conditions of Contract.
- (b) Where specified, the following Complex Cleaning work must be carried out daily (refer to the Pricing Schedule, Schedule 14 to the Conditions of Contract) except as indicated:
 - (i) internal corridors, entrance halls, foyers, lifts, stairways and landings on first visit of each week;
 - (ii) external stairways, walkways and landings;
 - (iii) parking, pathways, drying and all paved areas;
 - (iv) bulk bins and bin areas;
 - (v) outside toilets (where applicable);
 - (vi) laundry Rooms (where applicable);
 - (vii) cobwebs;
 - (viii) fire equipment; and
 - (ix) repairs, graffiti and vandalism.
- (c) Where specified, the following Complex Cleaning work must be carried out on Saturdays, Sundays and Public Holidays at 32 Dumond Street, Bentley (Brownlie Towers):
 - (i) Stairways and landings (6 stairways)
 - A. inspected and all rubbish Removed; and
 - B. swept and mopped if required.
 - (ii) Ground floor pathways and walkways (including areas in front of shops)
 - A. inspected and any items or rubbish Removed.
 - (iii) Lift areas (both blocks – Brownlie Towers “A” and “B”)
 - A. any malfunction of lifts reported to Housing Direct 1300 137 677;
 - B. all rubbish Removed;
 - C. lift areas swept and mopped;



- D. bins emptied and all rubbish Removed from the area; and
 - E. outside of lifts swept and mopped.
- (iv) Chute Rooms (both blocks – Brownlie Towers “A” and “B”)
 - A. On all floors checked and any blockages Removed.
- (v) Discarded Shopping Trolleys
 - A. discarded shopping trolleys collected and stacked – see also clause 96 Graffiti and Vandalism.
- (d) Where specified, the following Complex Cleaning work must be carried out monthly:
 - (i) vinyl floors in internal corridors, entrance halls, lifts and stairways and landings to be buffed and polished on the first visit on or after the first day of each month.
- (e) Where specified, the following Complex Cleaning work must be carried out at the following frequency:
 - (i) Internal corridors, entrance halls, lifts and stairways and landings
 - A. vinyl or linoleum floor coverings to be stripped and polished every six months in August and February on the first visit on or after the first day of those months;
 - B. carpeted areas are to be shampooed or steam cleaned in July and December on the first visit immediately following the first day of the month; and
 - C. Contractor to provide and use floor dryers at the Contractors cost.
- (f) The following Complex Cleaning work must be carried out at the following frequency in addition to the requirements set out at paragraphs (a) – (e):
 - (i) 70 Goderich Street, East Perth
 - A. rubbish bins put on verges for collection days Wednesday and Friday and returned to bin areas after collection; and
 - B. bins cleaned and disinfected as required or at least every 8 weeks.
 - (ii) 107 Goderich Street, East Perth
 - A. rubbish bins placed on the verge for collection day every Tuesday and returned Wednesday after emptying;
 - B. bins cleaned and disinfected as required or at least every 8 weeks; and



- C. cleaning of foyer, lifts, floors, grounds and car park to be undertaken on Monday and Thursdays.
- (iii) 49 Smith Street, Highgate (Stirling Towers)
 - A. lifts and laundry areas maintained in clean condition; and
 - B. front foyer area maintained clear of junk mail.
- (iv) 350 Stirling Street, Highgate (Stirling Towers)
 - A. undertaken in conjunction with 49 Smith Street, Highgate;
 - B. entry foyer, stairs and landings maintained free of stains, rubbish and marks.
- (v) 93 Thomas Street, Subiaco (Wandana)
 - A. all tiled floors in "A" block swept and mopped once a week;
 - B. B & C blocks stairwells kept clean of Debris and cobwebs; and
 - C. grounds kept free of rubbish.
- (vi) 32 Dumond Street, Bentley (Brownlie Towers)
 - A. A non-slip surface finish has been painted on all balcony walkways for both Blocks 'A' & 'B'. Extra physical labour is required to clean these surfaces. Items required to clean these walkways include a hard-bristle broom, a heavy duty floor washer machine and a high pressure water hose.

94.2 Internal Corridors, Entrance Halls, Lifts, Stairways and Landings

- (a) The Contractor must Remove all cobwebs from cornicing, ceilings, light fittings, vents and eaves.
- (b) Where the Contractor is required to clean internal floors including stairways and landings, the Contractor must vacuum or sweep and mop using a suitable liquid floor cleaner, ensuring all reasonable care is taken to Remove excess residue so as to prevent slip hazards. This includes the Treads, Risers, Stringers (where possible) and Spandrels, Banisters and Balusters.
- (c) Where required to inspect chute rooms for blockages, the Contractor must inspect chute Rooms on all floors and any blockages must be Removed. Where blockages are not easily Removed the Contractor must inform the Principal by contacting Housing Direct on 1300 137 677.
- (d) Lifts are to be cleaned of all litter, lift floors are to be mopped using a suitable liquid floor cleaner, lift walls and control panels are to be cleaned to Remove, graffiti, marks, stains or other blemishes.
- (e) See also clause 96 Graffiti and Vandalism.



94.3 Laundry Rooms

- (a) Where the Contractor is required to clean a laundry room, the Contractor must empty bins, sweep and mop the floor, wipe shelving, Appliances, doors, walls, window sills, furniture and fittings and leave in a clean and tidy condition.
- (b) The Contractor must also clean all laundry windows. See clause 94.5 Complex Windows and Glass for further detail.

94.4 Complex Floors

- (a) Where the Contractor is required to:
 - (i) sweep or vacuum a vinyl, ceramic, tile or concrete floor, the Contractor must ensure that on completing the Task, the surfaces must be free of visible dust, loose dirt and litter; all dust, loose dirt and litter must be collected and Disposed of appropriately;
 - (ii) damp mop a vinyl, ceramic, tile or concrete floor, the Contractor must ensure that on completing the Task, the surfaces are free of all marks and dirt (especially in joints, corners and edges), visibly clean and without streaks.
 - (iii) machine Scrub a vinyl, ceramic, tile or concrete floor, the Contractor must ensure that on completing the Task, the surfaces are free of visible dirt, marks, grime, residue cleaner and any build-up (especially in joints, corners and edges) and display a uniform appearance;
 - (iv) machine buff a vinyl floor, the Contractor must ensure that on completing the Task, the surface is free from scuff marks and displays a uniform appearance;
 - (v) dry strip a vinyl floor, the Contractor must ensure that on completing the Task, the surface must be free from all loose dirt, scuff marks, old Sealers, old polishers, and other residues ensuring floors will remain free of build-up and in a condition ready for the Seal to be applied;
 - (vi) Seal a vinyl floor, the Contractor must ensure that on completing the Task, the surface must display a uniform appearance, be slip resistant and in a condition that will protect the floor;
 - (vii) polish a vinyl floor, the Contractor must ensure that on completing the Task, the surface must be free from scuff marks and display a uniform appearance;
 - (viii) strip a vinyl floor, the Contractor must ensure that on completing the Task, the surface must be free from all loose dirt, scuff marks old Sealers, old polishes and other residues ensuring floors will remain free of build-up and in a condition ready for the Seal to be applied; and
 - (ix) shampoo or dry clean a carpeted floor, the Contractor must use the minimum amount of water possible and to Remove as much water as possible from the carpet; the Contractor must ensure that on



completing the Task, the carpet must be free of dust and dirt, stains and marks.

94.5 Complex Windows and Glass

- (a) Where the Contractor is required to clean a window, the Contractor must ensure that on completing the Task, all surfaces, including window glass, frames, tracks, mullions and flyscreens are free from visible dust, dirt, cobwebs, dead insects, streaks and marks.
- (b) Where necessary, the Contractor must Remove flyscreens to access windows. Flyscreens must be reinstated.
- (c) Where barrier screens are not able to be Removed, the Contractor must hose down the screen and glass to Remove dust and Debris.
- (d) Where the Contractor is required to clean or wash glass partitions and door lites, the Contractor must ensure that on completing the Task, all surfaces are free from visible dust, dirt, smears and other marks leaving the surface visibly clean.

94.6 Grilles

- (a) Where the Contractor is required to Damp Dust a grille, the Contractor must ensure that the grille is free from dust and dirt to leave a clean, dry and uniform appearance.

94.7 Fire Equipment

- (a) The Contractor must Remove dust, cobwebs and general rubbish from Appliances and cabinets and report to the Principal any missing, damaged or vandalised equipment.
- (b) The Contractor must clear vegetation and growth from around fire hydrants.
- (c) The Testing of fire equipment is not part of these specifications.

95. External Complex Cleaning and Waste Removal

- (a) Where the Contractor is required to:
 - (i) clean external stairways and landings, the Contractor must vacuum or sweep and mop using a suitable liquid floor cleaner, ensuring all reasonable care is taken to Remove excess residue so as to prevent slip hazards; this includes the Treads, Risers, Stringers (where possible) and Spandrels, Banisters and Balusters;
 - (ii) hose, sweep and clean, the Contractor must ensure that external walls, eaves, brick walkways and concrete are hosed and swept, removing cobwebs, dust, sand and litter, leaving the surfaces clean and reasonably dry;
 - (iii) clean car parks, pathways, drying areas and paved areas, the Contractor must ensure that any paper, sand, leaves, sticks, bottles,



cans, sharps and other Debris are Removed and that the areas are left clean and tidy; under no circumstances must the above be blown or swept onto lawns, garden areas or roadways;

- (iv) empty bins, the Contractor must ensure that the bins are free from dirt and litter and that liners are changed (and are of a comparable size to the bin (where they contain moist Materials, food or have tears/holes in them)); bulky green waste such as branches must be left neatly in an appropriate place such as a bin area for collection by lawn mowing or garden Personnel.
- (b) Waste must be Removed from Sites and Disposed of by the Contractor at an appropriate disposal facility. Tenant bins provided by Local Governments are solely for the collection of municipal household waste and therefore cannot be used by Contractors while performing the Principal's Maintenance Works and Services.
- (c) Where the Principal requires the removal of bulky waste from a Site this will be done by Quoted Works.

96. Complex Graffiti and Vandalism

- (a) Where the Contractor believes graffiti can be easily Removed by using conventional cleaning methods and products, the Contractor must ensure that the surface is left visibly clean and free from blemish.
- (b) The Contractor must report all incidents of graffiti and other vandalism to the Principal immediately by contacting Housing Direct on 1300 137 677.
- (c) Graffiti that cannot be easily be Removed by conventional cleaning methods must be reported to the Principal
- (d) The Contractor must ensure that any shopping trolleys found abandoned on Site are collected and stacked near to the bin area and where they cannot cause obstruction. Abandoned trolleys must be reported to the appropriate retailer.

97. Grounds Maintenance

97.1 Materials and Workmanship

- (a) The extent of the Grounds Maintenance required depends on the size, design and nature of the Complex.
- (b) The Contractor must maintain all Common Grounds.
- (c) The Principal may nominate an additional or lesser amount of Grounds Maintenance at a Site from those requirements listed at the Pricing Schedule, Schedule 14 to the Conditions of Contract.
- (d) The extent of Grounds Maintenance is grouped into seven classifications and is set out below:
 - (i) Class 1 – Adjoining Verges. This classification includes all adjoining local government verges only.



- (ii) Class 2 – Common Grassed Areas and Paved Areas plus Adjoining Verges. This classification includes the requirement of Class 1 plus grassed and paved areas to the Common Grounds of a Complex.
 - (iii) Class 3 – Common Garden Beds and Paved Areas plus Adjoining Verges. This classification includes the requirement of Class 1 plus:
 - A. garden beds and paved areas to the Common Grounds of a Complex; and
 - B. all trees, shrubs and bushes planted within the common garden beds of the complex.
 - (iv) Class 4 – Common Grassed Areas, Garden Beds and Paved Areas plus Adjoining Verges. This classification includes the requirements of Class 2 and Class 3.
 - (v) Class 5 – Common Grassed Areas, Garden Beds and Paved Areas excluding Verges. This classification includes all of the requirements of Class 2 and Class 3 but excludes Class 1.
 - (vi) Class 6 – Common Grassed Areas, Garden Beds and Paved Areas plus Adjoining Verges and Nominated Individual Yards. This classification includes all of the requirements of Class 4 plus, within the rear yards of Units (nominated at Schedule 2) at the Complex maintain:
 - A. grassed areas;
 - B. garden beds; and
 - C. trees, shrubs and bushes.
 - (vii) Class 7 – Total. This classification includes the requirements of Class 6 plus:
 - A. all Common Grounds to rear of all Units at the Complex; and
 - B. all partly or fully fenced rear yards of all Units at the Complex.
- (e) The classifications together with additional requirements or information are contained in the Pricing Schedule, Schedule 14 to the Conditions of Contract.
- (f) In carrying out Grounds Maintenance, the Contractor must:
 - (i) ensure no trees or shrubs are Removed or destroyed without the written approval of the Principal;
 - (ii) ensure that, apart from ride-on type mowers, no vehicles are driven or parked on any lawn or garden areas;
 - (iii) ensure that any dead shrubs or bushes are reported to the Principal and Removed from the lawn or garden;



- (iv) ensure that the Personnel do not damage any reticulation systems, and report any damage to the Principal;
 - (v) seek approval from the Principal for the type of fertiliser to be applied to lawns and gardens;
 - (vi) ensure that Grounds Maintenance is carried out with the minimum inconvenience to the occupants, and any cuttings, pruning material, leaves, garden refuse, sand or soil occurring from the works is cleaned up and Removed from the Site on the same day as the service and ensure that cuttings are not blown onto lawns, garden beds, porches or roadways; and
 - (vii) ensure that mowing and edging equipment is cleaned before leaving each Site to prevent transmission of weeds and disease.
- (g) Where the Contractor is reasonably aware that nominated areas are being maintained by a Tenant to the standards detailed in these specifications, the Contractor is only required to perform Grounds Maintenance in order to rectify a health and safety issue including but not limited to:
- (i) removing noxious and poisonous vegetation;
 - (ii) removing overhanging and low lying and branches; and
 - (iii) removal of sharps.
- (h) Where the Contractor is reasonably aware that nominated areas are no longer being maintained by a Tenant, the Contractor must resume maintenance of that area.
- (i) Where the Contractor believes that alterations made to grounds by a Tenant are inappropriate, may cause difficulties or present health and safety issues to other Tenants or the public, the Contractor must immediately inform the Principal.

97.2 Frequency of Works

- (a) The Contractor must undertake all Grounds Maintenance on each cycle unless otherwise stated in these specifications.
- (b) The Contractor must comply with the following service frequencies (cycles):
 - (i) south of 26th degree parallel:
 - A. every 4 weeks for 10 cycles during the 9 month period from December to August; and
 - B. every three weeks for 4 cycles during the 3 month period from September to November,for a total of 14 cycles per annum.
 - (ii) north of 26th degree parallel:



- A. every 4 weeks for 9 cycles during the 8 month period from March to October; and
 - B. every two weeks for 8 cycles during the period from November to February,
- for a total of 17 cycles per annum.
- (c) Cycles must commence on the dates supplied by the Principal and except for unforeseen circumstances, the cycles are to be uninterrupted until the whole of each Contract Area is completed.
 - (d) The Contractor must maintain a Cycle List showing actual dates on which Grounds Maintenance has occurred and the proposed future dates of work commencement at each Estate.
 - (e) Upon request the Contractor must supply the Principal with a copy of the Cycle List or advise the current position in respect to the progress of Grounds Maintenance.
 - (f) A copy of the Cycle List showing when Grounds Maintenance was completed at each Estate must be attached to each Payment Claim.

97.3 Lawn Mowing

- (a) Where the Contractor is required to mow lawns, the Contractor must mow grass, including any weeds found outside of any garden beds and paved areas. The Contractor must edge the lawn using an edge cutter leaving the area clean and tidy.
- (b) Only cylinder mowers are to be used on new turf and lawns of a generally high standard and buffalo lawns.
- (c) Ride on mowers must be limited to a **1200 mm** cutting deck. Ride on mowers are not to be used on individual lawn areas of less than **12 m²** (excluding verges) or on any lawn where their use may cause damage to the lawn, trees and other garden features.
- (d) All mowers and edger cutters and brush cutters must be fitted with guards.
- (e) All mowers must be fitted with a catcher or collection facility at all times. All grass cuttings are to be Removed from the Site by the end of the day. Grass catcher must be emptied regularly and when full. No cuttings are to remain on the lawn area following mowing.
- (f) Grass cuttings and other green wastes are not to be placed in the Tenant's bins.
- (g) Where lawn grass and/or weeds have grown taller than **100 mm**, the Contractor must slash the grass and/or weeds, then mow and then use an edge cutter to leaving the area clean and tidy.
- (h) Where grass and weeds are found to be overgrown or overgrown and wet, the Contractor must contact the Principal beforehand to agree on required work.



- (i) The Contractor must ensure that mowing and edging equipment is to be cleaned before leaving each Site to prevent the spread of weeds and disease.

97.4 Fertilising

- (a) The Contractor must supply all the fertiliser to be used on lawns and must apply according to the following instructions:
 - (i) Lawns south of the 26th parallel must be fertilised immediately following the first mowing in November of each year.
 - (ii) Lawns north of the 26th parallel must be fertilised immediately following the first mowing in September of each year.
- (b) The Contractor must supply all the fertiliser to be used on garden beds and must be apply during first maintenance cycle in November.
- (c) Any fertiliser used must be a slow release granular (i.e. non-liquid) product.
- (d) The Principal must be notified in writing five days prior to the application of fertiliser to enable inspections of the application.
- (e) Fertiliser must be applied at the rates specified by the manufacturer.

97.5 Edge Cutting and Brush Cutting

- (a) The Contractor must be aware that verges and garden beds are to be edged using an edge cutter, not a brush cutter (except where along brick paving headers adjoining lawn areas).
- (b) Edges around shrubs, trees, poles, buildings, fences lines and sprinkler surrounds must be trimmed and cleared using either an edger or a brush cutter each time mowing is carried out.
- (c) Edging must be at least **10 mm** from pathways, kerbing and driveways.
- (d) Brush cutting must include growth in and along roadside kerbing and all verge or Local Government pathways.
- (e) Special care must be taken when using brush cutters so as not to cause any ring barking of trees or shrubs.
- (f) Damage caused by mowing or brush cutters must be rectified at the Contractor's expense.

97.6 Garden Beds

- (a) Where the Contractor is required to maintain nominated garden beds, the Contractor must Remove all grass runners and weeds. Beds are to be raked to Remove all leaves, papers, bottles, cans, sticks and general Debris.
- (b) Brush cutters must not be used for the attempted removal of grasses and weeds from garden beds.
- (c) Garden Bed maintenance must be carried out within 24 hours of mowing work.



97.7 Common Non Grassed Areas

- (a) Parking areas, drives, pathways, clothes line or drying areas, rock spalls, gravel verges, bin areas, strip drains and open spoon drains are to be cleaned and to be kept free of leaves, twigs, grass, weeds, rubbish and litter by hand clearing, using a brush cutter and non-residual weed and grass killers during each cycle.
- (b) Strip drains must be cleared of grasses, weeds, Debris, leaves, litter and soil by hand clearing.
- (c) The Contractor is not required to clear soak wells and sumps, unless directed to do so by the Principal.
- (d) All leaves, pine needles, sticks, nuts, branches, sand and general garden Debris is to be Removed from car parks and drying areas and not to be blown onto lawns, garden areas or roadways.
- (e) Maintenance of non-grassed areas is to be carried out at the same time as the mowing or within 24 working hours of completion of mowing.

97.8 Herbicides

- (a) Only non-residual glyphosate herbicides may be used.
- (b) All parking areas, drives, pathways, drying areas, rock spalls, gravel verges, bin areas and open spoon drains are to be cleaned and kept free of all grass and weeds by using a brush cutter and a non-residual grass and weed killer during each cycle.
- (c) The application of herbicides is not permitted along fence lines, building lines, valve boxes, sprinklers (except inside surrounds), garden beds or garden edges except when authorised by the Principal.

97.9 Pruning

- (a) Shrubs and trees are to be pruned to prevent the possibility of any injury or nuisance. Special attention is to be given to potentially hazardous plants such as bougainvillea or plants overhanging pathways and driveways.
- (b) Lower limbs of mature trees or shrubs that are causing a nuisance or hang lower than **2.1 m** are to be Removed.
- (c) Suckers growing from the base of mature trees, bushes or shrubs are to be Removed.
- (d) Trees, bushes and shrubs in gardens and lawn areas are to be pruned at the appropriate time or times specific to the type of tree, shrub or bush, or upon request by the Principal.
- (e) Where vegetation is planted Adjacent to buildings, pruning must be undertaken so that the vegetation is kept below the height of gutters and at least **600 mm** clear of gutters.
- (f) If the magnitude of the pruning Task involves the removal of branches or limbs in excess of **80 mm** or positioned over **2.4 m** above ground level (all



measurements taken from the collar of the trunk), it will be treated as non-scheduled work outside the scope of this specification.

- (g) Any dead or diseased limbs or shrubs or bushes must be Removed. Where whole shrub or bushes are to be Removed, the Contractor must obtain written approval from the Principal prior to undertaking the Removal.

97.10 Reticulation

- (a) Where the Contractor believes that reticulation maintenance is required, the Contractor must report this to the Principal.
- (b) The Contractor must be vigilant and take extreme care when working in areas where reticulation systems are Installed.
- (c) Any damage found after the cycle that is clearly attributed to the Contractor's work (e.g. cut by lawnmower, edger or brush cutter) must be Repaired at the Contractor's cost.
- (d) The Contractor is to Repair or arrange the Repair of any damaged reticulation resulting from the works. Replacement parts must be the same brand and model as those damaged.
- (e) Where the Contractor observes damage or faults to reticulation systems, including evidence of dry areas indicating probable malfunction of reticulation system, the Contractor must immediately verbally report that damage to Housing Direct on 1300 137 677 and follow up with written confirmation to the Principal within 24 hours.
- (f) Reticulation frequency or watering times are not to be altered by the Contractor under any circumstances. However the Contractor may make a request for altering such frequency and that request will be considered by the Principal.

97.11 Clean Up

- (a) All work is to be carried out with the minimum inconvenience to the occupants, and any cuttings, pruning material, leaves, garden refuse, sand or soil occurring from the works must be cleaned up and Removed from the site on the same day as the cycle.
- (b) Cuttings are not to be blown onto lawns, garden beds, porches or roadways.
- (c) All garden refuse including pruning Materials and branches left by residents are to be Removed from the site at the completion of each cycle. This includes the emptying of any Contractor supplied garden refuse bags.
- (d) Whilst the use of garden refuse bags is at the Contractor's discretion, removal of any bags will not alter the requirement for the Contractor to Remove the garden refuse from the Site at each cycle.

97.12 Tenant Plantings and Alterations

- (a) The Contractor must advise the Principal of any plantings or changes to the garden works undertaken by Tenants that the Contractor considers to be



inappropriate, are causing or will cause future difficulty with undertaking the works specified.

FENCING

98. Fencing General

98.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to fencing maintenance:
 - (i) **AS 1170.2 – 2011** Structural Design Actions – Wind actions; and
 - (ii) **AS 1170.4 – 2007** Structural design actions – Earthquake actions in Australia.
 - (iii) **AS 3600 – 2009** Concrete Structures;
 - (iv) **AS 4678 – 2002** Earth Retaining Structures.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

98.2 Access to Land

- (a) Prior to issuing a Works Order relating to fencing, the Principal will make arrangements with the owner sharing the fence that requires repair, replacement, realignment or construction to enable the fencing work to proceed, whether by means of private agreement or notice under the *Dividing Fences Act 1961* (WA).
- (b) The Contractor must provide adequate warning to the Tenant prior to removing fences.

99. Fencing Quality

99.1 Materials and Workmanship

- (a) The Contractor must ensure that the Site is left safe, clean and tidy on both sides of the fence and that care is taken to minimise damage to plants, paths, paving and surrounding areas on either side of the fence.
- (b) Gates are to be fitted in accordance with relevant details: see clause 106.2 Gates Details.
- (c) Where the Contractor is required to straighten existing fencing, the Contractor must dig away soil to one side of the fence to facilitate straightening. The Contractor must ensure soils on both sides of the straightened fence are reinstated and compacted to Match existing ground level.
- (d) All fences and gate sheeting must be capped, no sheet edges (metal – top, bottom or sides) (hardi – top only) must be left exposed. All cost for capping is deemed included in the Task.



100. Remove

100.1 Fence Removal

- (a) When renewing or replacing a fence or part of a fence, all components, including material below ground level, must be Removed before Installing the new fence.
- (b) All removal and disposal fees are deemed included in the Task.

100.2 Asbestos Fence

- (a) Where the Contractor is required to Demolish and Remove an existing fence, the Contractor must identify if the fence is made from ACM.
- (b) The price for demolition and removal of asbestos sheets is paid per sheet and includes a cost component to cover the Contractor's cost of wetting, handling, transporting and disposing of the sheets.
- (c) The Contractor must comply with clause 8.2(g) of the General Specification when working with ACM.

101. HardieFence

- (a) HardieFence should only be used:
 - (i) to Repair sections of existing HardieFence;
 - (ii) where a private adjoining owner insists upon its use; or
 - (iii) to Replace a small section of broken ACM fence.
- (b) HardieFence sheet fencing is not to be used in cyclonic areas. For further information about cyclone areas see clause 6 Cyclonic Areas.
- (c) Where the Contractor is required to Replace or Supply and Install HardieFence sheeting, the Contractor must do so in accordance with the following:
 - (i) **0.75 m** high sheets must be set **450 mm** below ground level;
 - (ii) **1.80 m** high sheets must be set **600 mm** below ground level;
 - (iii) all sheets must overlie by at least one corrugation;
 - (iv) all sheets must be held together with spring clips and zinc coated capping;
 - (v) where necessary sheets are to be cut on a rake to allow for metal capping; and
 - (vi) capping must always be fitted.



102. Timber Fence

- (a) All new timber must conform with clause 8.1(d)(iii) of the General Specification.
- (b) Where the Contractor is required to Replace or Supply and Install timber fencing, the Contractor must ensure that all posts, rails and other wooden parts are either jarrah or T2 Blue treated pine with H4 – H5 Structural integrity.
- (c) All corner, gate and end posts for timber fencing must be **125 mm x 125 mm** and must be sunk to a depth of **600 mm**.
- (d) The Contractor must ensure that all cut edges and timber sunk below ground are sealed using an appropriate timber preservative to prevent rot.
- (e) Pickets must be of **75 mm x 19 mm** jarrah sawn and nailed to each rail with **50 mm** galvanised flat head nails.
- (f) All pickets must be affixed using two nails per rail per post.
- (g) When replacing timber posts, the posts must be set into **20 MPa** concrete and the amount of concrete must be sufficient for:
 - (i) height of fence post;
 - (ii) whether open or closed pickets or boards; and
 - (iii) Wind Category area.
- (h) When selecting a timber fencing product the Contractor must ensure that the product data sheet states “non-hazardous” and “non-dangerous” goods. The timber must be correctly marked with the treatment plant number, preservative code number and hazard class number.

103. Breezeway Fence

- (a) Breezeway fencing can only be used in cyclonic areas with Wind Regions C or D.
- (b) For further information about Wind Regions see clause 6 Cyclonic Areas.
- (c) Where the Contractor is required to Replace or Supply and Install breezeway fencing, the Contractor must ensure that a minimum of 10 per cent of the panel surface area is open, provided that this minimum area is uniformly distributed throughout the length and height of the fence.
- (d) The Principal's Nominated Brand of breezeway fencing is Stratco Style-Line Breezeway fencing – for further information about Stratco products please visit: www.stratco.com.au

104. Metal Wire Fence

- (a) Where the Contractor is required to Replace or Supply and Install metal wire fencing, the Contractor must ensure that all parts including posts, rails, wire, brackets and Fixings are galvanised.



- (b) The cost of up to **55 mm** diameter GWI posts is deemed to be included in the price of the Task.
- (c) Mesh must be Cyclone standard galvanised **2.5 mm** chain wire.
- (d) The Contractor must set posts in a minimum of **40 Kg** of **20 MPa** concrete footings. The amount of concrete must be sufficient for:
 - (i) height of fence; and
 - (ii) Wind Region.
- (e) The Principal's Nominated Brand of metal wire fencing is Cyclone galvanised chain wire. For more information about Cyclone galvanised chain link please visit: www.cyclonewire.co.nz/18/galvanised-chainlink

105. Colorbond, Stratco, Gramline and Neetascreen

105.1 General

- (a) Where reference in the SoR is made to Colorbond, the Contractor may use the following products:
 - (i) Colorbond;
 - (ii) Stratco;
 - (iii) Neetascreen; or
 - (iv) Gramline.
- (b) Where the Contractor is required to Replace or Supply and Install Colorbond, Stratco, Gramline or Neetascreen, the Contractor must ensure that the fencing has a suitable wind rating for the locality.
- (c) For further information about wind regions see clause 6 Cyclonic Areas.
- (d) Where fence plinths are required, the Contractor must ensure that:
 - (i) fence panels are Installed above the fencing plinths to ensure panels are above ground level;
 - (ii) fence panels are not immersed in either soil or concrete;
 - (iii) the maximum height allowed for Plinths is **300 mm**; and
 - (iv) it uses the Principal's Nominated Brand of fence plinths, being GramLine and Stratco – for further information about GramLine products please visit: www.gram.com.au or www.stratco.com.au
- (e) The Contractor must ensure that all Colorbond, Stratco, Neetascreen and Gramline fencing has plastic caps fitted to the posts.



- (f) Where the Contractor is required to Install plinths to the base of a fence, the Contractor must ensure that the length of the post is **300 mm** longer to accommodate the additional height and that the footing is **300 mm** deeper.
- (g) Where panels need to be cut to follow the contour of the land, the Contractor must procure **300 mm** longer sheets than required and all are cut neatly and accurately. The cost of the additional material and labour is deemed to be included in the Task.
- (h) For further information about Colorbond fencing please visit:
www.colorbond.com
- (i) For further information about Neetascreen fencing please visit:
www.lysaght.com/product/neetascreen

105.2 Wind Regions Areas A and B

- (a) In Wind Regions A and B, the Contractor must set posts in **20 MPa** concrete footings at **250 mm** diameter and **650 mm** deep.

105.3 Wind Regions Areas C and D

- (a) In Wind Regions C and D, the Contractor must use solid metal on posts and rail fencing (not panels), breeze through fencing or metal wire fencing.
- (b) The Contractor must provide the Principal with the following documents:
 - (i) written and drawn information that fully describes the fencing details, fencing supports and connections; such documents must be prepared and signed by a practising structural engineer; and
 - (ii) evidence of Local Government approval (where required).
- (c) The Contractor must be aware that in Wind Regions C and D a number of Local Government Authorities insist that where a fence is being Installed or replaced the Contractor must obtain an engineer's certificate and shire approval for that fence. Any fees relating to Local Government Authority certification are incorporated into the rate of the Tasks.

106. Gates

106.1 General

- (a) For technical details refer to clause 106.2 Gates Details.
- (b) Where the Contractor is required to Replace or Supply and Install gates, the Contractor must ensure that the D latch catch is in full working order, easy to operate and at **1000 mm** above ground level.
- (c) Contractors must use packing pieces of correct thicknesses where necessary to allow gates to swing correctly with an even clearance. Packing must be Fixed and finished to Match the gate.
- (d) Hinges must have an adjustable pin with a self-lubricating bush sleeve.

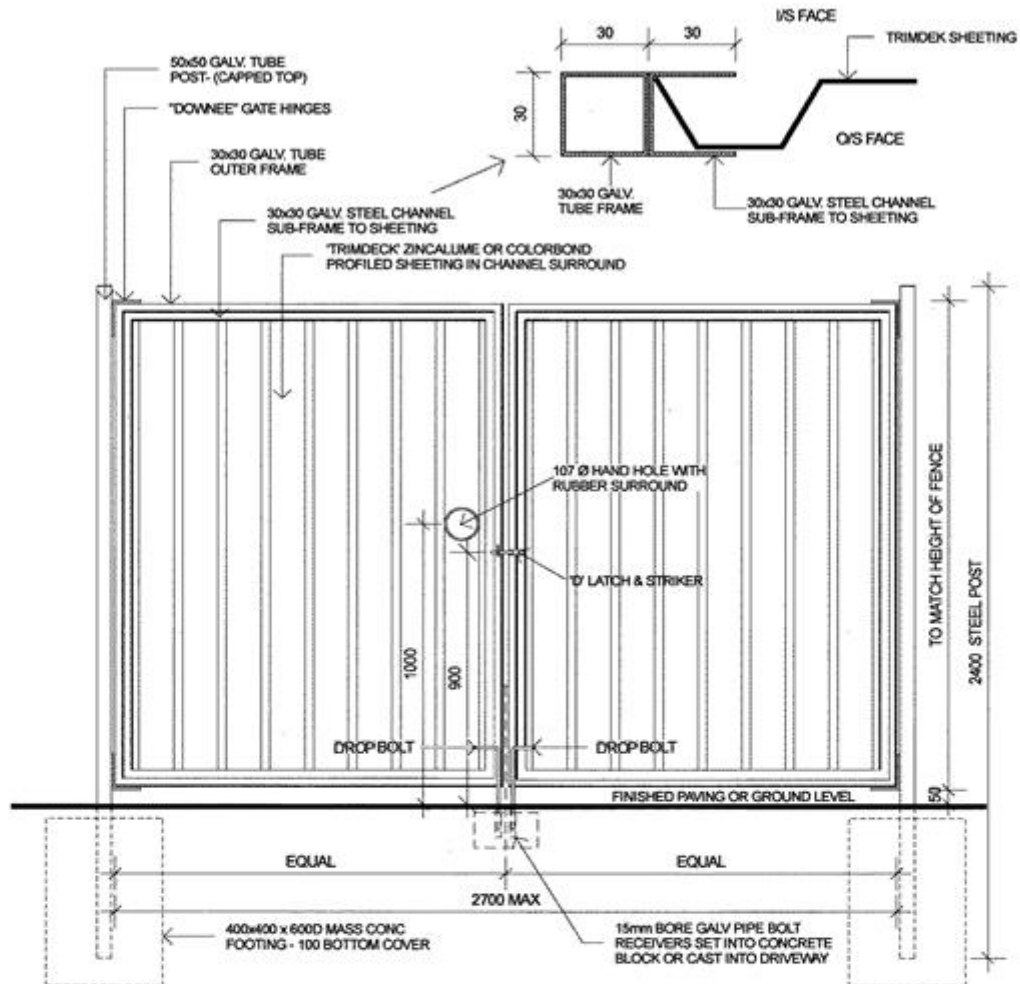


- (e) All double gates must have **400 mm x 12 mm** drop bolts and **15 mm** nominal bore galvanised pipe.
- (f) Gates must be manufactured using **30 mm x 30 mm** galvanised SHS (Square Hollow Sections) with fully welded joins.
- (g) Height of gates to be Supplied and Installed will Match the height of the adjoining or Adjacent fence with a maximum gap at the bottom of **50 mm**.

106.2 Gates Details



(a) D7 Trimwall Panel Gates (double or single)




Rear Elevation Of Gate

1:20

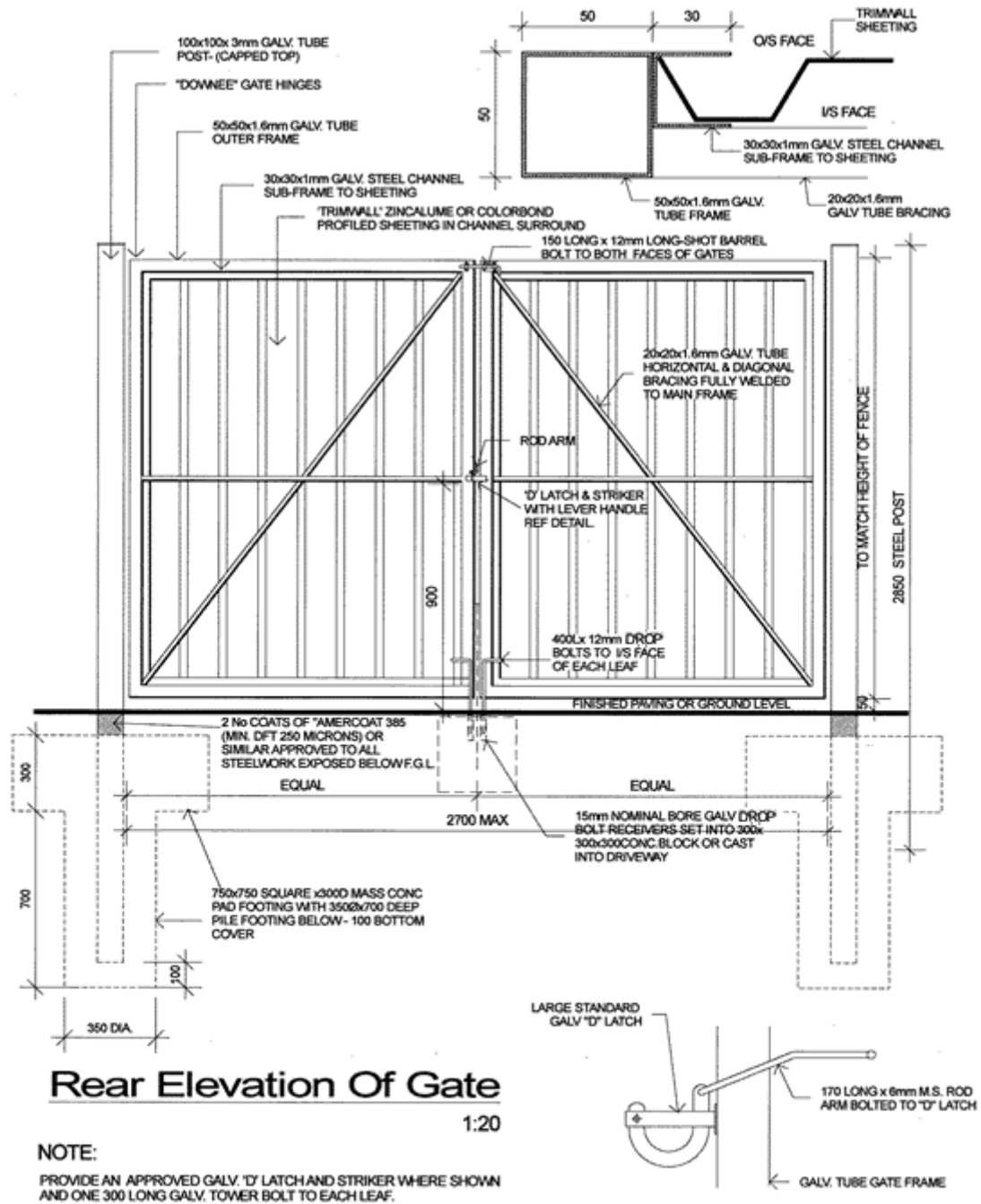
NOTE:


PROVIDE AN APPROVED GALV. "L" LATCH AND STRIKER WHERE SHOWN AND ONE 300 LONG GALV. DROP BOLT TO EACH LEAF.

ISSUE DATE October 2013 SCALE N.T.S.	 DEPARTMENT OF HOUSING	DETAIL TRIMWALL PANEL GATES (DOUBLE OR SINGLE)	DETAIL No. D7
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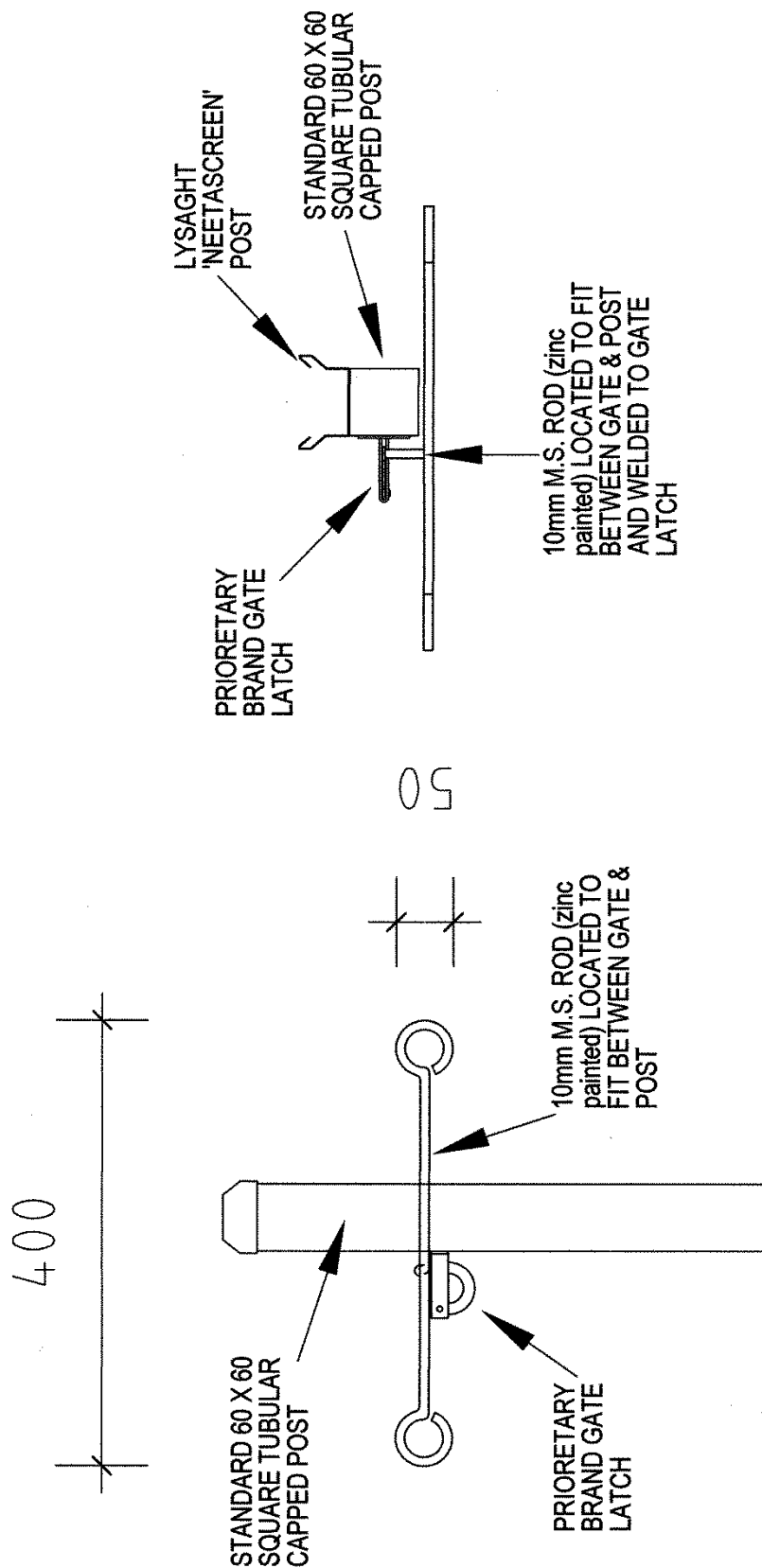
(b) D7A Elevation Trimwall Panel Double or Single Rear




ISSUE DATE October 2013 SCALE N.T.S.	 DEPARTMENT OF HOUSING	DETAIL TRIMWALL PANEL DOUBLE OR SINGLE GATES (CYCLONIC REGIONS)	DETAIL No. D7 A
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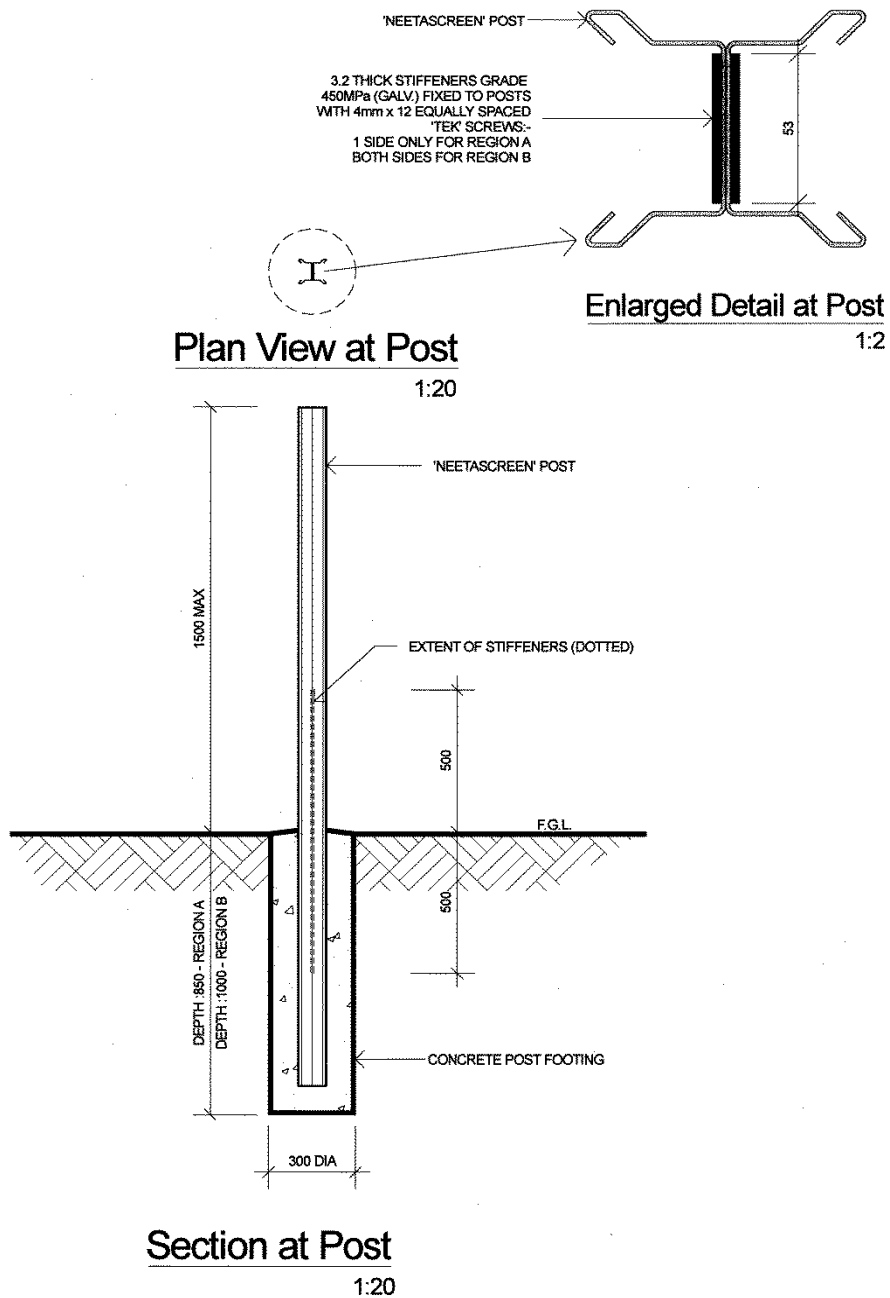
(c) D16 Modified gate latch



ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL MODIFIED GATE LATCH	DETAIL No. D16



(d) D13 Detail of Neetascreen Post Wind



ISSUE DATE October 2013		DEPARTMENT OF HOUSING	DETAIL DETAIL OF 'NEETASCREEN' POST FOR NORTHWEST WIND REGION A & B (TC2)	DETAIL No. D13
SCALE N.T.S				



107. Retaining Walls

- (a) The Contractor must ensure that any excavations caused as a consequence of Installing a high panel and post retaining wall are backfilled to ground level using clean sand.
- (b) The Contractor must carry out needle point compaction to Test the Structural integrity of the ground where required.
- (c) Retaining walls must be constructed from reinforced pre-cast concrete post and panel retaining.
- (d) Limestone block retaining walls are the subject of Quoted Works.
- (e) Timber sleeper retaining walls are prohibited.
- (f) In Wind Region D a number of Local Government Authorities insist that where a retaining wall is being Installed or replaced the Contractor must obtain an engineer's certificate and shire approval for that retaining wall. Any fees relating to Local Government Authority certification are deemed to be included in the price of the Tasks.

FIRE SERVICES

108. Fire Services Maintenance

- (a) The Principal requires routine and Preventative maintenance of fire services, which includes the carrying out of inspections, reporting of findings and where required, undertaking necessary Corrective maintenance and Repair works of fire services at specified Sites.
- (b) The Contractor must carry out annual fire services audits on all high rise and large estate Complexes with fire services. Such audits must be carried out in the presence of the Principal's appointed auditor.
- (c) The Contractor is required as a minimum to provide the following services:
 - (i) routine and Preventative inspections;
 - (ii) provision of Personnel who are appropriately trained and qualified to maintain the system operation within its functional capabilities;
 - (iii) report on findings and where necessary, provide detailed reports and costing for Repair work to the Principal's Representative;
 - (iv) maintenance of the fire services in accordance with relevant Australian Standards;
 - (v) maintenance and improvement of the system's performance, reliability and availability;
 - (vi) develop and maintain a maintenance record system;



- (vii) provision of a single point of communication and responsibility for inspection and maintenance; and
 - (viii) provision of an effective breakdown call out response and rectification service.
- (d) The Contractor must ensure the services provided are inclusive of all necessary Materials, labour, equipment and associated apparatus.
- (e) The equipment to be serviced and maintained are:
 - (i) pump sets;
 - (ii) fire hose reel systems and lay flat hoses;
 - (iii) fire hydrant Installations;
 - (iv) portable fire extinguishers and fire blankets;
 - (v) fire detection, warning and alarm systems (excluding systems within individual residential units unless otherwise specified);
 - (vi) maintenance procedures for maintaining the fire and smoke control features of air handling equipment;
 - (vii) smoke and fire door sets;
 - (viii) test the interface between the fire indicator panel and other field devices e.g. automatic doors, HVAC and smoke control systems; and
 - (ix) emergency lighting and exit signage.
- (f) Please see annexure 177.6 Fire Services Maintenance for further detail;
- (g) The Contractor must ensure that services performed under this clause are performed by personnel holding current membership of the Fire Protection Association of Australia.

FLOOR COVERING

109. Floor Covering General

109.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to floor covering maintenance:
 - (i) **AS 1860.1 – 2002** Particleboard flooring – specifications;
 - (ii) **AS 1860.2 – 2006** Particleboard flooring – installation;
 - (iii) **AS 3730.27 – 2006** Guide to the Properties of Paints for Buildings – clear coatings for interior floors;



- (iv) **AS 3958.1 – 2007** Ceramic Tiles – guide to the installation of ceramic tiles;
 - (v) **AS 4288 – 2003** Soft underlays for textile floor coverings;
 - (vi) **AS 4786.2 – 2005** Timber Flooring – sanding and finishing;
 - (vii) **AS/NZS 2455.1 – 2007** Textile Floor Coverings – installation practice – general;
 - (viii) **AS/NZS 2455.2 – 2007** Textile Floor Coverings – installation practice – carpet tiles; and
 - (ix) **AS/NZS 3733 – 1995** Textile Floor Coverings – cleaning maintenance of residential and commercial carpeting.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

109.2 Measurements

- (a) Measurements are to be issued to the next highest **0.5 m²** increment, for example:
- (i) **Up to 0.50 m²** claimed as **0.50 m²**
 - (ii) **0.51 m² – 1.00 m²** claimed as **1.00 m²**
 - (iii) **1.01 m² – 1.5 m²** claimed as **1.5 m²**
 - (iv) **1.51 m² – 2.0 m²** claimed as **2.0 m²**
 - (v) **2.01 m² – 2.5 m²** claimed as **2.5 m²**
 - (vi) **2.51 m² – 3.0 m²** claimed as **3.00 m²** and so on.

110. Floor Covering Quality

110.1 Materials and Workmanship

- (a) Where the Contractor is required to Replace an existing floor covering, the Contractor must carefully Remove any furniture and Appliances that stand upon the work area. Following the relaying of the floor covering, all Removed items must be reinstated to their original position and reconnected to the electricity supply (and gas supply where an Appliance connects to a bayonet), where necessary. The cost of this is included in price of the Task. Where gas Appliances require disconnecting and reconnecting to a gas supply a Works Order must be issued.
- (b) New floor coverings are not to be laid on top of existing floor coverings.
- (c) The cost of removing and refitting any existing quads or skirting is incorporated into the price of the Tasks.



- (d) Concrete floors must be levelled by grinding or levelling with a levelling compound such as K45 or K15 and feather finished.
- (e) Timber floor surfaces must be sanded and cleaned and any loose floorboards Secured before the application of underlay. The Principal's Nominated Brand is James Hardie underlay for vinyl and cork. For further information about James Hardie products please visit www.jameshardie.com.au
- (f) The Contractor must fit diminishing strips at joint of dissimilar floor coverings to protect exposed edges. The cost of the diminishing strip is included in the price of the Task to renew the floor covering when required.
- (g) The cost of cuts and wastage is deemed to be included in the price of the Task.
- (h) The Contractor must Match existing flooring colour, quality and type as closely as possible when patching and Repairing existing floor coverings.
- (i) The Principal will provide instructions on colour when Installing floor coverings to a whole Room or house.

110.2 Health Safety and Environment

- (a) Where the Contractor is required to Remove an existing floor covering or underlay, the Contractor must identify if the floor covering or underlay contains ACM.
- (b) All costs associated with removing ACM floor products such as PPE, disposal and fees are deemed to be included in the price of the Task.
- (c) See further clause 8.2(g) of the General Specification when working with ACM.

111. Vinyl Floor Tiles

- (a) Where the Contractor is required to refix, Replace or Supply and Install vinyl floor tiles, the Contractor must ensure that the floor surface is free from dirt, grime, oil, grease or glue and prepared and sealed.
- (b) Bumps and divots beneath new vinyl floor tiles are unacceptable.
- (c) Where the Contractor is required to replace vinyl floor tiles, it is to use 300mm x 300mm x 2mm composite tile
- (d) When replacing a whole room, the Contractor must match colour to the existing rooms as close as possible (within HA Colour Scheme), unless otherwise instructed by the Principal
- (e) When replacing individual tiles, the Contractor must match to existing as close as possible (within HA Colour Scheme), unless otherwise instructed by the Principal.
- (f) New vinyl tiles once laid are to be Scrubbed and polished, which must involve:
 - (i) preliminary cleaning of the floor covering;
 - (ii) Scrubbing with recommended mixture of water/stripper;



- (iii) removing slurry and rinse with clean water;
- (iv) applying two coats (30 minutes between coats) of metal cross-linked acrylic floor finish; and
- (v) polishing with domestic or industrial floor polishing machine.
- (g) The Principal's Nominated Brands are:
 - (i) Armstrong Nylex vinyl tiles – for further information on Armstrong products please visit: www.armstrong-aust.com.au; and
 - (ii) Polyflor vinyl tiles – for further information on Polyflor products please visit: www.polyflor.com.au.
- (h) The Contractor must note that vinyl non-slip nosing is to be fitted to the nosing or corner junction between the Tread and the Riser of each step.
- (i) Where the Contractor is required to lay vinyl floor tiles over timber floors, the Contractor must lay **5 mm** James Hardie underlay. For further information about James Hardie products please visit: www.jameshardie.com.au.
- (j) The Contractor must Remove and refit skirting and quads where required and any residual glue must be Removed from all new coverings, skirtings, quads and Adjacent surfaces.
- (k) Cut tiles are to be counted as one full tile, where the Task refers to numbers of tiles.

112. Vinyl Floor Sheeting

- (a) The Principal's preference is to use vinyl floor tiles, however, vinyl sheeting must be used to Replace and/or Repair existing vinyl floor sheeting. Vinyl sheeting must only be used if specified on the Works Order.
- (b) Where the Contractor is required to refix, Replace or Supply and Install vinyl floor sheeting, the Contractor must ensure that the floor surface is free from dirt, grime, oil, grease or glue and prepared and sealed.
- (c) Refixed sheeting joints and Fixings must be seam sealed.
- (d) Where the Contractor is required to Patch vinyl floor sheeting, the Contractor must cut out all damaged sheeting, prepare the floor surface and then cut fit and hot rod weld a new vinyl Patch into place.
- (e) Vinyl sheeting must not be used when an entire Room needs replacing. Vinyl tiles must be used.

113. Carpet

- (a) Where the Contractor is required to lay carpet to a Room with a walk in wardrobe or cupboard, the Contractor must lay Matching carpet to these areas as well.



- (b) Carpet must be Installed with underlay and smooth edge. Adhesive Installation is not permitted.
- (c) The Principal's Nominated Product for underlay is Bridgestone Airstep Natural Rubber Underlay – for further information please visit: www.airstep.com.au
- (d) All carpet is to be minimum **20 oz.** heavy duty loop pile.
- (e) The Contractor may lay carpet on top of vinyl floor tiles but any missing or damaged tiles must be replaced prior to the laying of the carpet.
- (f) Only the following brands are permitted for use in carpet covering maintenance:
 - (i) Tuftmaster Carpets – for further information about Tuftmaster products please visit: www.tuftmastercarpets.com.au;
 - (ii) Godfrey Hirst – for further information about Godfrey Hirst products please visit: www.godfreyhirst.com; and

114. Sanding and Finishing Timbers Floors

114.1 Raw Timber Sanding

- (a) Raw timber sanding is required under the following conditions:
 - (i) timber floorboards are “dished” and new floor covering cannot be Installed until floor is levelled;
 - (ii) carpet or vinyl adhesives and backing needs to be Removed before Installing new floor covering; or
 - (iii) the timber is badly stained and has grime that may pose a health risk to occupants.
- (b) The Contractor must Remove quads and refit after sanding. If there is no gap between the floor and skirting, the Contractor need not refit the quads.
- (c) Before sanding, the Contractor must ensure that all nails are punched and resulting holes are filled with putty.
- (d) Floors are to be prepared by completely sanding all surfaces to a fine paper finish ready for coating. Sanding must be tight up to skirtings or walls removing all foreign matter (adhesive, backing, grime) and levelling timber floor.
- (e) The Contractor must employ methods to capture and contain dust within the work area and to clean up all dust on completion of sanding.

114.2 Fine Sanding Polyurethane Floor Finish

- (a) Where the Contractor is required to fine sand a polyurethane floor finish, the Contractor must carry out the requirements of clause 114.1 Raw Timber Sanding in the first instance.
- (b) Floors are then to be finished with three coats of semi-gloss solvent based polyurethane, lightly sanded between each coat if required.



- (c) Floors are not to be used for 48 hours after the final coat and must remain protected to handover.

115. Adhesives

- (a) Only the following adhesives are permitted for use in floor covering maintenance:
 - (i) Polyflor, Kiesel – for further information about Kiesel products please visit: www.polyfor.com.au;
 - (ii) Roberts – for further information about Roberts products please visit: www.robertsaustralia.com.au; and
 - (iii) Mapei – for further information about Mapei products please visit: www.mapei.com

FORENSIC CLEANING

116. Forensic Cleaning General

116.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to forensic cleaning:
 - (i) **AS/NZS 4757 – 2002** Handling and destruction of drugs;
 - (ii) **AS 5388.1 – 2012** Forensic analysis – Recognition, recording, recovery, transport and storage of material;
 - (iii) **AS 5388.4 – 2013** Forensic analysis – Reporting;
 - (iv) **AS 2284 – 1979** Safe Working with elastomeric hose and hose assemblies for steam cleaning machines;
 - (v) **AS/NZS 3733 – 1995** Textile floor coverings – cleaning maintenance of residential and commercial carpeting;
 - (vi) **AS/NZS 4849.1 – 2003** Upholstery cleaning - fabric upholstery;
 - (vii) **AS/NZS 60335.2.65 – 2009** Household and similar electrical Appliances – safety – particular;
 - (viii) **AS/NZS 60335.2.79 – 2012** Household and similar electrical appliances – safety – particular requirements for high pressure cleaners and steam cleaners;
 - (ix) **AS/NZS 60335.1 – 2011** Household and similar electrical appliances – safety – general;
 - (x) Department of Health - Interim Guidelines for Notification and Risk Management after Detection of a Clandestine Drug Laboratory (Clan Lab); and



- (xi) *Environmental Protection (Controlled Waste) Regulations 2004 (WA)*
- (b) Where amendments to the above standards and regulations exist, the Contractor must be aware of the latest amendments.

117. Forensic Cleaning Quality

117.1 General

- (a) The Principal requires a uniform standard for all:
 - (i) biological or pathological cleaning; and
 - (ii) clandestine drug laboratory clean-up.
- (b) Forensic Cleaning will only be issued by the Principal as Quoted Works.

117.2 Materials and Workmanship

- (a) The chemical and organic contaminants and the hazardous circumstances in which they are encountered make Forensic Cleaning a high risk activity. The Principal requires that:
 - (i) only Personnel that are fully competent to undertake Forensic Cleaning undertake the Forensic Cleaning;
 - (ii) industry best practice is always followed, as relevant to the circumstances encountered; and
 - (iii) the safety of Personnel and third parties, both directly and indirectly, is of paramount importance.

117.3 Health, Safety and Environment

- (a) The safety of Contractor Personnel, third parties and the environment must be the first priority.
- (b) A Safe Work Method Sheet (SWMS) must be completed by the Contractor prior to commencement of any work at the Site.
- (c) Contamination or infection must not be spread from affected areas.
- (d) Care must be taken in the handling and disposal of Materials to avoid environmental degradation, potential spread or infection, as well as secondary contamination.
- (e) Areas outside of the affected area(s) must be protected during the Forensic Cleaning.
- (f) The Contractor must correctly Dispose of Materials and must comply with necessary licensing or environmental regulations and guidelines.
- (g) The Contractor is responsible for any infringements by the Contractor as a result of poor health, safety or environmental protection practices.



- (h) The Contractor must plan the cleaning for each Site taking into account items such as location, access, type and level of contamination.
- (i) Particular care must be taken with instructing all Personnel on the work to be done, including the standards required for Personal Protection Equipment.
- (j) The Site must be protected, have adequate hazard signage and be barricaded during the Forensic Cleaning, as required.

118. Forensic Cleaning

118.1 Equipment and Consumables

- (a) All cleaning equipment must be appropriate for the Forensic Cleaning.
- (b) All machinery, equipment, chemicals and Materials to carry out the Forensic Cleaning must be handled, transported and stored in accordance with the manufacturer's recommendations.
- (c) All equipment must be thoroughly cleaned and disinfected after use.
- (d) All cleaning and relevant neutralising chemicals must have Material Safety Data Sheets and must be the most appropriate for the neutralisation or cleaning of the contamination.

118.2 Decontamination and Disposal

- (a) Where floorcoverings or other parts of the Site are required to be Removed these must be wrapped in **2 mm** thick polythene sheeting, unless they can be decontaminated at the Site. The wrapping must occur before removal from the contaminated area.
- (b) The Contractor may recommend removal and disposal of items if this is considered a better option than attempting decontamination and cleaning (e.g. Remove and Replace carpet instead of attempting remedial work).
- (c) A biological or pathological clean Removes items that are not general rubbish and Debris and includes but is not limited to dead animals, faeces, blood products, body fluids, chemicals.
- (d) Any waste that is, or that might be suspected to be, contaminated with bodily substances should be Disposed of as clinical waste and must always be bagged and marked or tagged to ensure that its origin can be traced.
- (e) Contamination chemicals should be neutralised in situ, if possible. Where not, contamination chemicals must always be bagged and marked or tagged to ensure that its origin can be traced.
- (f) All contaminated waste must be Disposed of in an approved manner.
- (g) The Site must be left in a clean, hygienic state, free from all contamination material and waste, to a standard suitable for occupation at the completion of the Forensic Cleaning.



- (h) Following removal and clean-up, areas requiring a biological or pathological clean must be disinfected and deodorised. This must be undertaken by working from the corners of the Room back towards the door so these areas are not walked upon.
- (i) All Forensic Cleaning on drug labs must be undertaken to the national standards set out in Guidelines for Environment Investigation, Remediation and Validation of former Clandestine Laboratory Sites – 2011 to ensure public health risks are reduced to an acceptable level.

118.3 Record Keeping

- (a) The Contractor must keep a Daily Activity Record for each biological or pathology or clandestine laboratory clean up containing the following information:
 - (i) Site address;
 - (ii) location and type of contamination(s);
 - (iii) date of reporting;
 - (iv) names of Personnel;
 - (v) cleaning methods deployed at each location, including the Safe Work Method Statement;
 - (vi) safety and protection methods deployed;
 - (vii) results of any sampling and Testing undertaken;
 - (viii) any problems encountered during the Forensic Cleaning; and
 - (ix) dated and signed by the Personnel supervising the Forensic Cleaning.
- (b) The Contractor must supply the following to the Principal on completion of the Forensic Cleaning:
 - (i) a copy of each Daily Activity Record;
 - (ii) a copy of any sample or Test results done during the Forensic Cleaning;
 - (iii) a copy of the final Testing results demonstrating that the Forensic Cleaning has been satisfactorily Completed;
 - (iv) a copy of the plan for completing the Forensic Cleaning; and
 - (v) any other pertinent documents or information.
- (c) The Principal will provide the Contractor with such copies of records detailing the level, type and location of contamination it has received from the WA Police and others prior to commencement of the Forensic Cleaning.



- (d) The Principal will provide to the Contractor recommended remediation plans provided by the WA Police. The Contractor will rely on such plans using its own expertise and judgment.

118.4 Sampling and Testing

- (a) All sampling and Testing must be arranged as part of the Forensic Cleaning.
- (b) The sampling and Testing results must be made available at the Principal's request.
- (c) The Principal may have additional forensic Testing done, at its own cost, to ascertain whether the work undertaken complies with legislation and best practice.

GAS

119. Gas General

119.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to gas maintenance:
 - (i) **AS 1056.1 – 1991** Storage Water Heaters;
 - (ii) **AS 1357.1 – 2009** Valves primarily for used in hot water systems;
 - (iii) **AS 3498 – 2009** Authorisation requirements for plumbing products – Water heaters and hot water storage tanks;
 - (iv) **AS 4032.1 – 2005** Water supply – Valves for the control of heated water supply temperatures – Thermostatic mixing valves – Materials design and performance requirements;
 - (v) **AS 4426 – 1997** Thermal insulation of pipework, ductwork, and equipment – selection installation and finish;
 - (vi) **AS/NZS 3000 – 2007** Electrical Installations;
 - (vii) **AS/NZS 3500.4 – 2003** Heated Water Services;
 - (viii) **AS/NZS 5601.1 – 2010** Gas Installations; and
 - (ix) **DR AS/NZS 5601.1 – 2010** Gas Installations – General Installations.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

119.2 Fees and Permits

- (a) The Contractor is responsible for the payment of fees related to the work that they perform the cost of which is deemed to be included in the price of the Task.



119.3 Certificate of Compliance

- (a) The Contractor, as per regulations, when completing Gas Work must provide:
 - (i) a certificate of compliance to the relevant regulatory body/supplier; and
 - (ii) a copy of the certificate of compliance to the Principal.

120. Gas Quality

120.1 Materials and Workmanship

- (a) Where the Contractor is required to Replace or Supply and Install Appliances, the Contractor must affix a sticker to the Appliance clearly showing the date of Installation and the signature of the Installer. The Contractor is also required to engrave “**HA**” onto the side or rear of the Appliance. Contractor must use an engraving tool and letters must be **10 mm** high.
- (b) When a property is being refurbished, all existing vents must be checked and cleaned. Non-compliant installations must be reported to the Principal immediately and the Principal advised of the required works to rectify.

121. Gas Service

121.1 General

- (a) Without limiting the Principal’s rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Minor Service Works Order Tasks comply with the terms and conditions of the Contract; and
 - (ii) will reperform the Minor Service Works Order Tasks when directed by the Principal when a Defect occurs during the Defects Liability Period (3 months) from the date upon which the Minor Service Works Order Tasks was performed.
- (b) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to Minor Service Works Order Tasks during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Minor Service Works Order Tasks at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal’s direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).
- (c) Major Service Works Order Tasks include all labour and Materials and parts to return the Appliance to its full intended functions.
- (d) All replacement parts for the same Appliance must be guaranteed for a period of 12 months from the date of Installation.
- (e) The Contractor must advise the Principal on the Completed Works Order of any parts replaced not included in the Task.



- (f) Where the Contractor is required to locate and repair a leak in a gas supply line the Task is deemed to include the replacement of up to 1 metre of 15mm or 20mm piping. Replacement of any pipe work is to be "like for like" I.E. copper piping for copper piping. All material and fittings required for joining of the pipework is included in the task.
- (g) Where locating and repairing gas leaks in a concealed location, the Task is deemed to include making good to the surface up to 1m square. This includes the replacement of all lawn, paving, concrete or bitumen to ground surfaces and for works in a cavity or brick wall, the surface is to be left suitable for finishing trades. Excluded from this Task is the restoration of face brick work, wall sheeting, plastering, tiling and/or painting.
- (h) All new piping must be concealed where practicable and installed neatly where exposed to an external wall. No new piping must be visible to an internal wall.

121.2 Minor Service

- (a) Where the Contractor is required to perform a Minor Service to an upright stove, in bench hot plate or wall oven, the Contractor must:
 - (i) Clean and Adjust the:
 - A. rail cocks;
 - B. stove burners and ignitions (i.e. top burners, griller burner, oven burner and ignition); and
 - C. thermocouple and thermostat.
- (b) Where the Contractor is required to perform a Minor Service on a hot water unit, the Contractor must:
 - (i) clean and Adjust the pilot assembly;
 - (ii) clean and Adjust the thermocouple; and
 - (iii) Adjust the temperature and burner pressure where necessary.
- (c) Where the Contractor is required to perform a Minor Service on a room heater, the Contractor must:
 - (i) clean and Adjust the room heater;
 - (ii) test carbon monoxide (CO) levels;
 - (iii) test the gas inlet and burner pressures; and
 - (iv) clean the pilot light.

121.3 Major Service

- (a) Where the Contractor is required to perform a Major Service this includes a full service including replacement parts to the nominated Appliance or part of the Appliance.



- (b) Major Service Works Order Tasks include all components and parts of the nominated Appliance or part of the Appliance that require replacement.
- (c) Minor service task is deemed included in a Major Service.

122. Stoves, Cooktops and Ovens

- (a) Where the Contractor is required to Supply and Install an upright stove, elevated stove, in bench cooktop or wall oven, the Principal's Nominated Brands are:
 - (i) Westinghouse – for further information about Westinghouse products please visit: www.westinghouse.com.au; and
 - (ii) Chef – for further information about Chef products please visit: www.chefappliances.com.au.
- (b) Gas upright stoves must be a free standing one piece Appliance and must incorporate the following characteristics:
 - (i) a cooking hob with four burners;
 - (ii) a fixed up stand with a built in and non-removable splashback;
 - (iii) a grill beneath the hob;
 - (iv) a removable vitreous enamel grill shelf with at least two height positions;
 - (v) an oven with at least three height positions;
 - (vi) a removable oven shelf;
 - (vii) a removable oven door with a window;
 - (viii) finished in white enamel or stainless steel to all surfaces – areas of brown or black are permitted; and
 - (ix) where power outlet is available the appliance must have a **240 V** burner ignition system.
- (c) Elevated stoves must have an alongside grill and cooktop and must be secured to the wall by 2 L shaped powder coated brackets 75mm x 75mm and 40mm width securely fixed to the wall with plugs and screws and pop riveted (white) to the stove so as to prevent the elevated stove from moving on the benchtop. Section of bracket that is secured to the wall is to be fixed facing downwards.
- (d) Gas in bench cooktops must incorporate the following characteristics:
 - (i) four burners;
 - (ii) finished with white enamel or stainless steel to all solid surfaces – areas of brown or black are permitted;
 - (iii) control dials must be to the front or side of the cooktop; and



- (iv) where power outlet is available the appliance must have a **240 V** burner ignition system; and
 - (v) similar size to suit existing benchtop cut out.
- (e) Gas wall ovens must incorporate the following characteristics:
 - (i) grill element to the top of the oven;
 - (ii) a removable vitreous enamel grill shelf with at least two height positions;
 - (iii) an oven with at least three height positions;
 - (iv) a removable oven shelf; and
 - (v) a removable oven door with a window.

123. Hot Water Units

- (a) Where the Contractor is required to Supply and Install a hot water unit, only units that suit dwellings with low flow (water efficient) fixtures and fittings may be installed, and the Principal's Nominated Brands are:
 - (i) Rheem – for further information about Rheem products please visit: **www.rheem.com.au**;
 - (ii) Rinnai – for further information about Rinnai products please visit: **www.rinnai.com.au**;
 - (iii) Bosch – for further information about Bosch products please visit: **www.bosch-climate.com.au**; and
 - (iv) Dux – for further information about Dux products please visit: **www.dux.com.au**.
 - (v) Thermann – for further information on Thermann Hot Water Units visit: **www.thermann.com.au**
- (b) Storage water heaters must be of mains pressure manufacture incorporating the following characteristics:
 - (i) installed with a tempering valve set at **50 °C**.
 - (ii) installed with two new relief valves.
 - (iii) installed with a new isolation and non-return valve.
- (c) Continuous gas water heaters must incorporate the following features:
 - (i) wall mounted;
 - (ii) suitable for operation on either natural gas or LPG or TLP; and



- (iii) an outlet flow:
 - A. **12 l** per minute for public housing; or
 - B. **16 l** to **20 l** per minute for GROH.
- (iv) installed with a new isolation valve to cold water and gas inlet piping.
- (d) Gas regulator at meter must be upgraded to elevated gas pressure (where available) before progressing an increase to the gas supply line to the hot water unit.
- (e) Continuous flow water units must be pre-set to **50 °C**.
- (f) The Contractor must ensure that Personnel liaise with the electrician tradesperson where weatherproof power points are required.
- (g) Instantaneous hot water units are to incorporate the following features:
 - (i) Wall Mounted;
 - (ii) Be installed with a tempering valve and set with a maximum temperature of 50 °C;
 - (ii) Automatic ignition; and
 - (iii) installed with a new isolation valve to cold water and gas inlet piping.
- (h) Instantaneous hot water units are only to be installed at the Principal's discretion.

124. Room Heaters

- (a) The Contractor must select and Install room heaters in accordance with **AS/NZS 5601.1 – 2010** Gas Installations.
- (b) Where the Contractor is required to Supply and Install a room heater, the Principal's Nominated Brand is Rinnai and must be convection type only – for further information about Rinnai products please visit: www.rinnai.com.au.
- (c) Where the Contractor is required to Supply and Install or Replace a bayonet outlet or plugging in a room heater, all existing vents must be checked and cleaned.

125. Conversion

- (a) Sites to be converted from LPG gas to natural gas include providing all new gas service lines to the Site and conversions of the Appliances attached to the existing supply line. Only work that is deemed necessary by the Principal may be carried out.
- (b) The Contractor must purge the gas piping prior to the commencement of any conversion work.



- (c) All conversion work and converted Appliances must be checked and Tested. The Contractor must provide and affix ratings labels for instantaneous hot water heaters and also a label to identify that the Appliance operates on natural gas.
- (d) The Contractor must pay all fees and liaise with Energy supplier regarding pipe sizing and working pressures for each property. The Principal's preference is for a **2.75 kPa** pressure.
- (e) Existing LPG sets must be disconnected and Removed from site with bottles. LPG bottles must be returned to a local supplier.

GLAZING

126. Glazing General

126.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to glazing maintenance:
 - (i) **AS 1170.4 – 2007** Structural design actions – Earthquake actions in Australia;
 - (ii) **AS 1288 – 2006** Glass in Buildings – Selection and Installation;
 - (iii) **AS 2047 – 1999** Windows in Buildings – Selection and Installation;
 - (iv) **AS/NZS 1170.2 – 2011** Structural design actions – Wind actions; and
 - (v) **AS/NZS 2208 – 1996** Safety glazing Materials in buildings.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.
- (c) All glazing work must be carried out in strict compliance with the safety regulations and requirements of the SAA Glass Installation Code in conjunction with **HB 125** The Glass and Glazing Handbook.

126.2 Measurements

- (a) Measurements are to be issued to the next highest **0.5 m²** increment, for example:
 - (i) **Up to 0.50 m²** claimed as **0.50 m²**
 - (ii) **0.51 m² – 1.00 m²** claimed as **1.00 m²**
 - (iii) **1.01 m² – 1.5 m²** claimed as **1.5 m²**
 - (iv) **1.51 m² – 2.0 m²** claimed as **2.0 m²**
 - (v) **2.01 m² – 2.5 m²** claimed as **2.5 m²**
 - (vi) **2.51 m² – 3.0 m²** claimed as **3.00 m²** and so on.



- (b) Where more than one small panel to a door or sidelight is to be replaced, the meterage claimed must be calculated as the total area of glass replaced and not as a minimum of **0.5 m²** per panel.

127. Glazing Quality

127.1 Materials and Workmanship

- (a) The Contractor must avoid the practice of sending carpenters to board up broken glazing, unless otherwise instructed by the Principal, before sending a glazier to rectify the issue.
- (b) The glazing Schedule of Rates specifies the sizes of glass sheet that the Contractor must supply. For detail on glass measurement and payment refer to clause 126.2 Measurements.
- (c) All glass used must be free from defects including but not limited to:
 - (i) blisters;
 - (ii) checks;
 - (iii) chips;
 - (iv) fogging;
 - (v) inclusions;
 - (vi) scratches;
 - (vii) stones; and
 - (viii) tears.
- (d) The Contractor, when carrying out work relating to glass sliding doors, Fixed glass panels, sidelights or other type of glass panels that could be mistaken as unimpeded path, must affix a motif sticker to the glass. **AS 1288 – 2006** Glass in Buildings – Selection and Installation, stipulates that the motif sticker must be of sufficient magnitude and opaqueness to be readily apparent and permanently adhered to the glass after Installation. The cost of this is deemed to be included in the price of the Task.
- (e) Newly Installed glass must be cleaned on both sides.
- (f) All broken glass must be Removed from the floor and from the window frame on both sides of the window.

128. Timber Framed Windows, Doors and Sidelites

- (a) Where the Contractor is required to reglaze a timber window frame, the Contractor must Remove all putty and thoroughly clean the woodwork. Rebates must be oiled or primed. The Contractor must ensure that the glass is properly sprigged and then re-puttied.



- (b) Where the Contractor is required to reglaze a timber door frame, the Contractor must ensure that the glass is properly sprigged and then re-puttied. Before Installing the glass, the Contractor must Remove all putty and thoroughly clean the woodwork. Rebates must be oiled or primed.
- (c) Timber framed doors and sidelights must only be fitted with **6.38 mm** clear laminated safety glass or **6.38 mm** obscure laminated safety glass
- (d) Existing beads must be used wherever possible. The cost of replacing damaged or missing beads is deemed to be included in the price of the Task.

129. Aluminium Framed Windows, Doors and Sidelites

- (a) Black silicone is an acceptable product in replacing rubber inserts. Where black silicone is used, the Contractor must clean all excess silicone from glass and frames and leave neat.
- (b) Existing rubber inserts must be reused wherever possible. Replacing damaged or missing inserts is part of the Task.

130. Aluminium Door and Window Replacement

130.1 General

- (a) Aluminium doors (glass and screen doors), frames and tracks must be powder coat finished, free from die marks, scratches and other blemishes to the colour. Colour to Match existing frame must occur unless otherwise specified on the Works Order.
- (b) Frames must be Securely Fixed to stud or brick or concrete work.
- (c) Where locks are not keyed alike, replacement locks must be keyed alike to the main entrance door. If replacing the main entrance door lock, the lock must be keyed alike the majority of any existing door locks on the Site i.e. all door locks are to be keyed to the same.

130.2 Aluminium Door Track

- (a) Fitting of new tracks, Hanging and Adjusting of doors must be undertaken so that they open, close and lock correctly.
- (b) New tracks are to be correctly aligned and Securely Fixed.

130.3 Aluminium and Glass Sliding Door

- (a) Where the Contractor is required to replace a glass sliding door and frame, the new sliding glass doors must slide on the internal face of adjoining Fixed glazing panel.
- (b) Door lock/handle must be positioned **1000 mm** above the floor.
- (c) The lock is to be placed so that it does not interfere with the screen door. This takes precedence over (b).



- (d) Where the Contractor is required to replace a glass sliding door or replace a glass sliding door lock only, the glass sliding door lock must be key operated internally and externally with an internal snib. The Principal's Nominated Brand is Lockwood – for further information about Lockwood products please visit: www.lockweb.com.au When replacing a door lock only and a Lockwood lock cannot be fitted, the Contractor must use the brand and type appropriate for the door. The cost of the appropriate lock is deemed included in the price of the Task.
- (e) Glass door and Fixed panel must have a motif sticker.

130.4 Aluminium Sliding Screen Door

- (a) The Contractor must Install a double cylinder safety door fitted with an internal snib. The Principal's Nominated Product is Whitco Leichhardt – for further information about Whitco products please visit: www.whitco.com.au
- (b) The Contractor must ensure that doors:
 - (i) have at least two Adjustable roller wheels supporting the door;
 - (ii) are Installed so that screen doors are removable only in the fully open position;
 - (iii) have a double cylinder keyed lock with internal snib;
 - (iv) have a plastic or metal safety lock shield;
 - (v) have stainless steel mesh;
 - (vi) have a vertical brush strip;
 - (vii) that include extruded aluminium have a high durability powder coating;
 - (viii) that include extruded aluminium are from aluminium alloy 6063-T6;
 - (ix) have a manufacturer's marking adhered to frame with transparent acrylic adhesive or untearable polyester film label.
- (c) The Contractor must Supply and Install aluminium channels enclosing:
 - (i) the lock edge of the sliding door where required; and
 - (ii) the aluminium track where required.
- (d) Aluminium angles must be Fixed in two positions:
 - (i) one Fixed to the sliding door mullion; and
 - (ii) one to the sliding barrier screen door;which interlock when the sliding barrier door is in a closed position.
- (e) Interlocking angles must extend for a minimum of 80 per cent of the door height.



- (f) The Contractor must ensure that channel, tracks and angles are Securely Fixed using Fixing that cannot be Removed when the barrier screen door is closed.
- (g) A weather Seal is to be fitted to the closing mullion, where interlock sections are not required.
- (h) Stainless steel mesh must be fully insulated from all aluminium using a PVC or nylon barrier to ensure no contact between any of the mesh and the aluminium products.
- (i) Screens must have the following characteristics:
 - (i) mesh must have a high durability powder coating; the Principal's nominated coating colour is black;
 - (ii) mesh must be a plain weave, 10 count mesh i.e. strands on the weft and 10 strands on the warp per **25.4 mm** of mesh;
 - (iii) mesh must be woven to **ISO 9044 – 1999**;
 - (iv) mesh must have apertures on average **1.5 mm x 1.5 mm**;
 - (v) the open area of mesh must not be more than 42 per cent; and
 - (vi) mesh must be manufactured from 304 or 316 grade stainless steel, have a diameter of **0.9 mm** or **1.0 mm** and a tensile strength of **800 + 40 MPa**.

130.5 Aluminium Windows

- (a) Where the Contractor is required to Replace a sliding sash, the minimum size allowance is **1.0 m²** per sash.
- (b) Replacing a sliding sash includes the frame, lock, glass, runners and the flyscreen and the cost of this is deemed to be included in the price of the Task.
- (c) Short glazed windows must be fitted with flyscreen and the cost of this is deemed to be included in the price of the Task.
- (d) New aluminium sash windows must exhibit the following qualities:
 - (i) lockable chain winders are to be used on hinged sashes;
 - (ii) keyed safety lock is to be fitted to sliding sashes with two locking positions (fully closed and slightly open (approximately **100 mm**));
 - (iii) manufacturer's marking adhered to frame with transparent acrylic adhesive or untearable polyester film label.
- (e) Where a window's designed wind pressure exceeds 600 Pa, the Contractor must provide the Principal with a certificate prepared by the aluminium window manufacturer and signed by an engineer.
- (f) The Contractor must only fit security screens to the external side of a sliding window sash to allow for escape in case of emergency.



- (g) Security screen must be Securely Fixed using pop rivets or screws with tamper resistant heads.
- (h) Where fly screens are greater than **0.82 m²** or **1 m** in width or height, the screen must be fitted with a powder coated extruded aluminium spreader bar to support the longer edges.
- (i) All security screens must be fitted with stainless steel mesh instead of a **7 mm** aluminium grille. Where the mesh is anchored to the frame, the minimum thickness of the frame must be **3 mm**.
- (j) The Principal's Nominated Products for safety locks are:
 - (i) Whitco W2200416; and
 - (ii) Lockwood 785.
- (k) The Principal's Nominated Product for window winder is Whitco W380116.
- (l) For further information about Whitco products please visit: www.whitco.com.au
- (m) For further information about Lockwood products please visit: www.lockwood.com.au

131. Polycarbonate

- (a) Where the Contractor is required to Replace glazing in areas where extensive glazing replacement occurs, the Contractor is permitted to use a clear polycarbonate. The only brand that the Contractor is permitted to use for external windows and doors is Bayer Makrolon and the product must be UV and impact resistant. Other brands may be used for shower screens and doors. For further information about Bayer Makrolon polycarbonates please visit: www.makrolon.com.
- (b) This material is not to be used in areas prone to cyclones. For further information about cyclone areas see clause 6 Cyclonic Areas.
- (c) Existing rubber inserts must be reused wherever possible. Damaged or missing inserts are to be replaced and charged using the correct Task.
- (d) Black silicone is an acceptable product in replacing rubber inserts. Where black silicone is used, the Contractor must clean all excess silicone from glass and frames and leave neat.

132. Board up of Windows and Doors

- (a) Where the Contractor has been instructed to board up a window or door, the Contractor must use 12mm structural, form or marine plywood.
- (b) The boards must be fixed to the external structure of the property, not the window or door frame, with galvanised fixings and nylon anchors where necessary, except where the circumstances in paragraph (c) apply.



- (c) If external cladding of the property is ACM (Asbestos Containing Material), then the Contractor is permitted to fix boards to the external side of the frame.
- (d) The board must cover 100% of the opening and overhang the open by a minimum of 50 mm on all sides.
- (e) All care must be taken to reduce excessive damage to the property when fixing boards.

133. Louvre Blades

- (a) Where the Contractor is required to Supply and Install louvre blades, the Contractor must Match existing glass where possible in respect to thickness and transparency.
- (b) If beaded, existing beads must be used wherever possible. Damaged or missing beads are to be replaced and the cost of this is deemed to be included in the price of the Task.

134. Shower Screens and Shower Doors

- (a) Where the Contractor is required to reglaze glass shower screens or shower doors, the Contractor must Remove any existing broken glass and Replace using **6 mm** thick opal polycarbonate Makrolon or **6.38 mm** thick obscure laminated safety glass as specified on the Works Order. Both Materials must be framed with suitable aluminium or stainless steel channel for fastening to the wall, floor or bath riser.
- (b) All fastenings must be stainless steel screws, or nickel-plated brass screws.
- (c) The Contractor must Seal the joints between the shower screen frame and the wall, tiles or bath with water and mould resistant silicone.
- (d) Wired glass is not to be used as it does not comply with Australian Standards.

135. Mirrors

- (a) Where the Contractor is required to Supply and Install a mirror, the mirror must be Secured with heavy duty clips and screws the cost of which is deemed to be included in the price of the Task.
- (b) Mirrors must have the following qualities:
 - (i) **4mm** or **6 mm** thick;
 - (ii) double rolled coat of mirror backing paint;
 - (iii) fibre washers Fixed between the mirror backs and mountings;



- (iv) first quality float glass with heavy and hard silver reflective surface;
- (v) Fixed with four chromium plated heavy brass clips; and
- (vi) heavy galvanic copper coating to the back of the mirror.

PAINTING

136. Painting General

136.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to painting:
 - (i) **AS 4361.2 – 1998** Guide to lead paint management – Residential and commercial buildings;
 - (ii) **AS/NZS 2311 – 2009** Guide to the painting of buildings; and
 - (iii) **AS/NZS ISO 31000 – 2009** Risk management.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.

137. Painting Quality

137.1 Materials and Workmanship

- (a) All paints and preparatory Materials must be approved by the Australian Paint Approved Scheme (APAS) unless otherwise specified.
- (b) All paints must be delivered to the Site in unbroken containers bearing the trademark of the manufacturer and may be subject to inspection.
- (c) For further information about APAS please visit:
www.apas.gov.au/PDFs/D152.pdf
- (d) Paints used as part of a system (e.g. Sealer, primer, undercoat and topcoat) must be of the same brand.
- (e) Materials must not be thinned, mixed or added to in any way other than in accordance with the manufacturer's instructions.
- (f) The Contractor must be aware that all paint Tasks include allowances for tinting, matching colour to existing colour as close as possible when required or requested and that all varnish Tasks include staining where required.
- (g) All Tasks include allowances for using low VOC paints and odour eliminator to reduce the VOC of all paints. The Principal's Nominated Product is Odour Zapp Paint Odour Eliminator – available from: www.floodaustralia.net.
- (h) Storing



- (i) Containers and other Materials must not be stored on finished surfaces.
 - (ii) Containers and other Materials must be stored on surfaces yet to be finished if these are adequately protected with an impervious drop sheet or a tarpaulin.
 - (iii) Where the Site is occupied, the location of storage must be agreed with the Tenant and Removed from the Site at the end of each day.
- (i) The Contractor must not paint or varnish defective Materials. The Contractor must report defective Material to the Principal immediately.
- (j) Undercoats
 - (i) All painting Tasks, excluding varnishing, include undercoating prior to applying top coats.
 - (ii) The Contractor is required to apply an undercoat and the price of each Task is deemed to include the undercoating.
 - (iii) The Contractor must apply one coat of tinted oil based three-in-one (primer, Sealer and undercoat) covering 100 per cent of the surface that requires an undercoat.
 - (iv) The only exceptions to paragraph (i), (ii) and (iii) above where the Principal will pay for an additional coat of undercoats are:
 - A. severe smoke staining following a fire;
 - B. severe nicotine staining;
 - C. graffiti damage; or
 - D. very vivid and dark colours.
- (k) Where the Contractor is required to apply a varnish, the Contractor must first apply any staining where necessary to provide a consistent colour to the timber followed by two coats of semi-gloss varnish.
- (l) For Wall, Cornice and Ceiling Paint, the Contractor must spot-coat any unsealed, porous or raw surfaces with an appropriate undercoat followed by two coats of 100 per cent low sheen acrylic based paint for dry areas and two coats of 100 per cent semi-gloss acrylic based paint for Wet Areas.
- (m) For Windows and Doors Paints, the Contractor must spot-coat any unsealed, porous or raw surfaces with an appropriate undercoat followed by two coats of 100 per cent full-gloss enamel based paint or varnish.
- (n) For Timber Fixtures Paints, the Contractor must spot-coat any unsealed, porous or raw surfaces (with an appropriate undercoat if finishing coat is painted) followed by two coats of full-gloss enamel or semi-gloss varnish.



- (o) Where required to paint ferrous metals, the Contractor must apply one coat of rust proof primer and one coat of appropriate undercoat, followed by two coats of tinted enamel based paint.
- (p) Where required to paint non-ferrous metals, the Contractor must apply one coat of rust proof primer and one coat of appropriate undercoat followed by two coats of full-gloss acrylic based paint.
- (q) Colorbond must only be painted where severe deterioration or rusting of the existing surface finish is evident. 100 per cent of the Colorbond surface must be degreased and wiped clean. The Contractor must spot coat with rust proof primer followed by two coats of full-gloss acrylic.
- (r) Where required to paint concrete paving, the Contractor must apply two coats of semi-gloss enamel non-slip paving paint.
- (s) For external walls, eave linings, fibro sheets and weatherboards, the Contractor must spot-coat any unsealed, porous or raw surfaces (with an appropriate undercoat if finishing coat is painted) followed by a minimum of 2 coats of 100 per cent semi-gloss acrylic or low sheen acrylic.
- (t) For external windows, doors, metalwork and woodwork, the Contractor must spot-coat any unsealed, porous or raw surfaces (with an appropriate undercoat if finishing coat is painted) must be a minimum of 2 coats of 100 per cent full-gloss enamel or semi-gloss varnish.
- (u) For un-plasticised PVC Paints, before applying two coats of semi-gloss acrylic based paint, the Contractor must first degrease 100 per cent of the PVC surface using an industrial strength degreaser, rubbed with a wet and dry cloth.
- (v) Tempered hardboard must be painted with one coat of appropriate undercoat followed by two coats of tinted enamel based paint.
- (w) Timber fencing must be spot coated with and appropriate undercoat, followed by two coats of 100 per cent exterior low sheen acrylic paint.
- (x) Timber Decking and Steps must be oiled with a natural decking oil. See clause 144.11 Oil – Steps or Decking.
- (y) The Principal may request the Contractor supply three **250 ml** samples from a fully sealed tin of paint or varnish. The Principal may also request the Contractor to provide samples of finished work for Testing.
- (z) If samples fail to meet the Test requirements or to compare satisfactorily with the manufacturer's records, the Contractor must pay the Testing fee.
- (aa) Where the Painting Works are found to be non-compliant, the Contractor must satisfy the requirements of the Works Order using the correct Materials at no extra cost to the Principal.
- (bb) Where the Tenant's possessions cannot be moved from the Room to be painted, the Contractor must adequately protect these possessions from spills, splashes or smears of paint by using impervious drop sheets or tarpaulins.



- (cc) Electrical fitting plates, doors, cupboards and window furniture (locks, handles, flanges, push plates) must be Removed prior to preparation and refitted following painting. Alternatively, the Contractor may mask off unmoveable items and then clean them following completion of painting Tasks.
- (dd) Any surface affected by spillages, such as splashes or smears are to be cleaned off or replaced at the Contractor's expense.
- (ee) Surfaces not to be painted unless otherwise directed by the Principal include:
 - (i) face masonry and brickwork;
 - (ii) stainless steel items;
 - (iii) glazed ceramic tiles;
 - (iv) electrical fittings and Fixtures (switches, outlets, batten holders)
 - (v) previously finished surfaces (e.g. chrome plated, baked enamel or finished plastic items); and
 - (vi) Laminex and melamine.

138. Surface Preparation

138.1 General

- (a) Full surface preparation is included in all painting or varnishing Tasks and includes:
 - (i) removal of all hooks, nails and wall plugs;
 - (ii) filling all holes, gouges, cracks and chips;
 - (iii) forming external corner edges;
 - (iv) skim set coat;
 - (v) feathering edges of existing paint and plaster to Repair flaking paint;
 - (vi) Flushing and sealing; and
 - (vii) applying one coat of three-in-one primer-Sealer-undercoat to 100 per cent of the surface.
- (b) All surfaces to be painted must be washed down using an appropriate cleaning agent to obtain an acceptably clean surface suitable for painting, ensuring any dust, fluff or other uneven surface material is Removed.
- (c) Where the existing plaster based surface has paint peeling in sheets due to previous non- or incorrect preparation or undercoating, all preparation is included in the painting Task prior to painting.



- (d) The Contractor must Remove all loose, flaked, scaling or powdered paint and completely sand down all depressions, nibs, roller or brush marks and paint edges to give a uniform surface ready for painting.
- (e) When sanding, take care to avoid scratching glass, Fixtures and fittings. All dust resulting from sanding must be contained to the work area. Dust must be collected on drop sheets. Where an electric sander is used it must be fitted with a dust collector.
- (f) Metal work must be completely degreased, Scrubbed with a wire brush, and then wet and dry sanded before being wiped clean.
- (g) Existing paint and varnish splashes on Fixtures such as door handles and catches must be Removed.
- (h) Each coat of paint or varnish must be fully dry before applying subsequent coats.
- (i) The cost of any sanding and cleaning between coats is deemed to be included in the price of the Task.

138.2 Asbestos

- (a) ACM must never be sanded or scrapped back. Where paint has deteriorated to a stage that requires scrapping or sanding, the Principal will arrange removal and replacement of the material by issuing Tasks on a separate Works Order.

138.3 Lead (Pb) Paint

- (a) Where existing paint is suspected to contain lead (Pb), any surface preparation must be abandoned and the Contractor must conduct a lead paint Test.
- (b) Where lead paint is present the Contractor must contact the Principal.
- (c) The Principal will cancel the Works Order and issue a Works Order for the replacement of the whole lead painted item (e.g. if the paint on a window frame contains lead paint, the whole window must be replaced).
- (d) See further clause 4.4 of the General Specification.

138.4 Mould

- (a) The Contractor must treat all mould in accordance with clause 2.7 Mould.

138.5 Sanding

- (a) All cracked, flaked, crocodiled, perished or blistered paintwork is to be sanded down except where there is evidence of lead primer or ACM. See clauses 144.2 and 144.3.

138.6 Putty, Sealants and Filler

- (a) Preference must be given to putties, sealants and filler that are flexible where manufactured to be used with the adjoining Materials.



- (b) Fill holes, gaps, joints and cracks with suitable putty, sealant or filler then Flush and sand.
- (c) Putty, sealants and fillers must be proprietary products tinted or stained to Match paint or stain.
- (d) Gypsum based filler and putty cannot be used for external work.

138.7 Gaps, Joints and Cracks

- (a) All gaps, joints and cracks to surfaces must be filled and Flushed prior to painting to prevent the movement of vermin.

139. Internal Surfaces

139.1 General

- (a) Where the Contractor is to paint using the internal surfaces Tasks, these Tasks relates to painting of walls, ceilings and cornice as specified.

139.2 Paint Surface

- (a) Where the Contractor is required to paint a component of the Room (e.g. wall or ceiling or skirting), the Task is to be charged by the unit of measurement of that specified component, viz:
 - (i) walls are to be claimed by **m²**;
 - (ii) ceilings and cornice are to be claimed by **m²**; and
 - (iii) cornices are to be claimed by **m**.
- (b) Walls are to be claimed as a whole, length by height. There will be no deductions for openings such as windows and doors.
- (c) The Contractor must use an appropriate paint and or varnish. See clause 137.1 Materials and Workmanship.

139.3 Paint Wall

- (a) Where the Contractor is required to paint wall, the Contractor must paint only the nominated wall or walls.

140. Paint Room Complete (omit ceiling)

- (a) Where the Task nominates to omit ceiling the Contractor is not required to paint the ceiling and cornice in the nominated Room.
- (b) Where the Contractor is required to Paint Room Complete (Omit Ceiling) the Contractor must paint or varnish:
 - (i) all previously painted surfaces; and
 - (ii) any new raw Materials within the Room;



that were previously painted or varnished or where similar Materials at the Site are painted or varnished, including but not limited to:

- (iii) all wall surfaces;
- (iv) all woodwork, doors and door frames;
- (v) timber windows; and
- (vi) internal and external of cupboards, cabinets, shelves and wardrobes (excluding Laminex and melamine),

to the maximum area stipulated by the Task, using an appropriate paint and or varnish. See further clause 137.1 Materials and Workmanship.

141. Paint Room Complete (include ceiling)

- (a) Where the Task nominates to include ceiling the Contractor is required to paint the ceiling and cornice in the nominated Room.
- (b) Where the Contractor is required to Paint Room Complete (Include Ceiling) the Contractor must paint or varnish:
 - (i) all previously painted surfaces; and
 - (ii) any new raw Materials within the Room;

that were previously painted or varnished or where similar Materials at the Site are painted or varnished, including but not limited to:

- (iii) all walls and ceiling surfaces;
- (iv) all woodwork, doors and door frames;
- (v) timber windows; and
- (vi) internal and external of cupboards, cabinets, shelves and wardrobes (excluding Laminex and melamine),

to the maximum area stipulated by the Task, using an appropriate paint and or varnish. See further clause 137.1 Materials and Workmanship.

142. Internal Features

- (a) The painting or varnishing of cabinets, cupboards and robes includes the painting of all accessible surfaces both on the inside and the outside of the item.
- (b) Laminex and melamine components are not to be painted.
- (c) When required to paint timber Fixtures such as kitchen cupboards, benches, islands, pantries, linen stores, robes, broom cupboards and vanity cupboards, the Contractor must use a minimum of two coats of 100 per cent full-gloss enamel or semi-gloss varnish.



- (d) Where an internal surface of a cupboard, robes or pantries is hard wall or plaster, the Contractor must use a minimum two coats of 100 per cent low sheen acrylic paint.
- (e) When required to paint metal cabinets or troughs, the Contractor must use a minimum of two coats of 100 per cent full-gloss enamel paint.
- (f) When the Contractor is required to paint an internal or external door the paint must be brush finished, not rolled.
- (g) Where the Contractor is required to paint or varnish timber Fixtures, including but not limited to:
 - (i) architraves;
 - (ii) baseboards and kickboards;
 - (iii) skirtings and quads;
 - (iv) coving;
 - (v) dado boards and rails; and
 - (vi) picture rails,the Contractor must undercoat then use a minimum of two coats of 100 per cent full-gloss enamel paint.
- (h) The Contractor must use an appropriate paint and or varnish. See further clause 137.1 Materials and Workmanship.

143. Doors and Windows

- (a) The Contractor must be aware that the painting of doors includes the top edge and both side edges, but does not include the bottom edge.
- (b) The painting of door frames includes all doors stops, mouldings, architraves and jambs to one side of the door frame. The edges that the door sits against must be painted as part of the specified Room.
- (c) Painting of timber windows includes all glazing bars, frames, trims, mullions, sills, mantles and architraves or mouldings of the window.

144. External Features and Surfaces

144.1 General

- (a) Only exterior grade products and Materials may be used on external surfaces.
- (b) Upon completion of external painting Tasks, the Contractor must neatly paint or stencil on the left hand side of the inside of the electricity meter box:
 - (i) the registered painter's name and contact number;
 - (ii) the paint manufacturer's name; and



- (iii) the date that the painting Task was completed.

144.2 Scoping External Painting

- (a) Before issuing a Works Order for external painting, the Principal will arrange:
 - (i) damaged or rusted material replacement;
 - (ii) easing and Adjusting of sashes, awning panels shutter (see clause 144.20 Awning Detail) and external doors;
 - (iii) clamping and pinning of sashes;
 - (iv) oiling of hinges and louvre frames;
 - (v) securing, Repairing or replacing barge boards, battens and mouldings;
 - (vi) Repairing or replacing broken external wall sheeting;
 - (vii) straightening and securing loose downpipes, straps, vents, water and gas service pipes and their fixing; and
 - (viii) Repair or Replace guttering.
- (b) Defective items must not be painted and the Contractor must report any defective items to the Principal immediately.
- (c) The Works Order for external painting must be checked by the Contractor prior to commencement to ensure all Tasks, quantities and sizes are correct, and if not correct, should be treated as a Works Order Error.

144.3 External Colour Schemes

- (a) Where not specified on the Works Order, the Contractor must liaise with the Principal about a suitable colour scheme.
- (b) Consecutive single detached houses are to be painted to the same colour scheme.

144.4 Garage Door

- (a) Where the Contractor is required to paint a tilt or roller garage door, the Contractor must paint the external face of the door and all frames, reveals and flashings.

144.5 Gutters, downpipes, valleys and flashings

- (a) Where the Contractor is required to paint gutters, downpipes, valleys and flashings, the Task will be paid per lineal metre of each and the Principal will specify on the Works Order the product to be painted.
- (b) The Contractor must use two coats of full-gloss enamel.



- (c) Colorbond products must not be painted unless the surface is badly deteriorated.

144.6 Fascia

- (a) Where the Contractor is required to paint fascia, the Task will be paid per lineal metre.
- (b) The Contractor must use two coats of full-gloss enamel.
- (c) Colorbond products must not be painted unless the surface is badly deteriorated.

144.7 Balustrade or handrail

- (a) Where the Contractor is required to paint balustrade or handrail, the Task will be paid per metre.
- (b) The Contractor must use two coats of full-gloss enamel.
- (c) Colorbond or powder coated products must not be painted unless the surface is badly deteriorated.

144.8 Bargeboard, scribe fillet, post, or rail

- (a) Where the Contractor is required to paint bargeboard, scribe fillet, post, or rail, the Task will be paid per metre.
- (b) The Contractor must use two coats of full-gloss enamel.
- (c) The Task includes painting of any flashings and mouldings attached or Adjacent to the bargeboard, scribe fillet, post, or rail.
- (d) The Contractor must use two coats of full-gloss enamel.

144.9 Water, gas, waste and vent pipes

- (a) Where the Contractor is required to paint water, gas, waste and vent pipes, the Task will be paid per Site.
- (b) The Contractor must use two coats of full-gloss enamel.

144.10 Non-slip Paint

- (a) Where required to apply non-slip paint to concrete or timber surfaces, the Contractor must apply two coats of Wattyl Permo-Pave non-slip or similar product and applied with a roller – for further information about Wattyl products please visit: www.wattyl.com.au.
- (b) Bare concrete, including compressed sheeting, must be acid-etched prior to painting.



144.11 Oil - Steps or Decking

- (a) Timber on steps or decking must be oiled with a natural decking oil. The Principal's Nominated Product is Cabots – for further information about Cabots products please visit: www.cabots.com.au

144.12 Graffiti

- (a) Where the Contractor is required to Remove graffiti from an external unpainted surface, the Contractor must use chemical removal suitable for the type of surface and then pressure wash to Remove paint and any chemical residue.

144.13 Clay or Cement Tile Roof

- (a) The Contractor must treat and Remove lichen and moss prior to painting.
- (b) This Task includes painting of all items above the gutters, including but not limited to:
 - (i) roof tiles;
 - (ii) flashings;
 - (iii) valleys;
 - (iv) roof vents and flumes;
 - (v) roof pipes;
 - (vi) other penetrations through roof;
 - (vii) gables;
 - (viii) bargeboards; and
 - (ix) scribe fillets.
- (c) Colorbond or powder coated products must not be painted unless the Principal specifies this on a Works order and the surface is badly deteriorated.
- (d) The Contractor must use two coats of UV protected low sheen acrylic roof paint.

144.14 Colorbond or Zinc Roof

- (a) Colorbond or zinc coated roof products must not be painted unless the surface is badly deteriorated.
- (b) The Contractor must use two coats of UV protected low sheen acrylic roof paint.
- (c) This Task includes painting of all items above the gutters, including but not limited to:
 - (i) roof sheeting;
 - (ii) flashings;



- (iii) valleys;
- (iv) roof vents and flumes;
- (v) roof pipes;
- (vi) other penetrations through roof;
- (vii) gables;
- (viii) bargeboards; and
- (ix) scribe fillets.

144.15 Eaves, gables, HardieFlex, fibro sheet, or weatherboard

- (a) The Contractor must use two coats of UV protected low sheen acrylic paint.

144.16 Lattice

- (a) The Contractor must use two coats of UV protected low sheen acrylic paint.
- (b) The Contractor must paint both sides of the lattice.

144.17 Brick wall or render

- (a) The Contractor must use two coats of UV protected low sheen acrylic roof paint.
- (b) Previously unpainted surfaces must not be painted.

144.18 Gates

- (a) The Contractor must use two coats of UV protected low sheen acrylic paint.
- (b) Colorbond or powder coated products must not be painted unless the surface is badly deteriorated.
- (c) The Contractor must paint both sides of the gates.

144.19 Fences

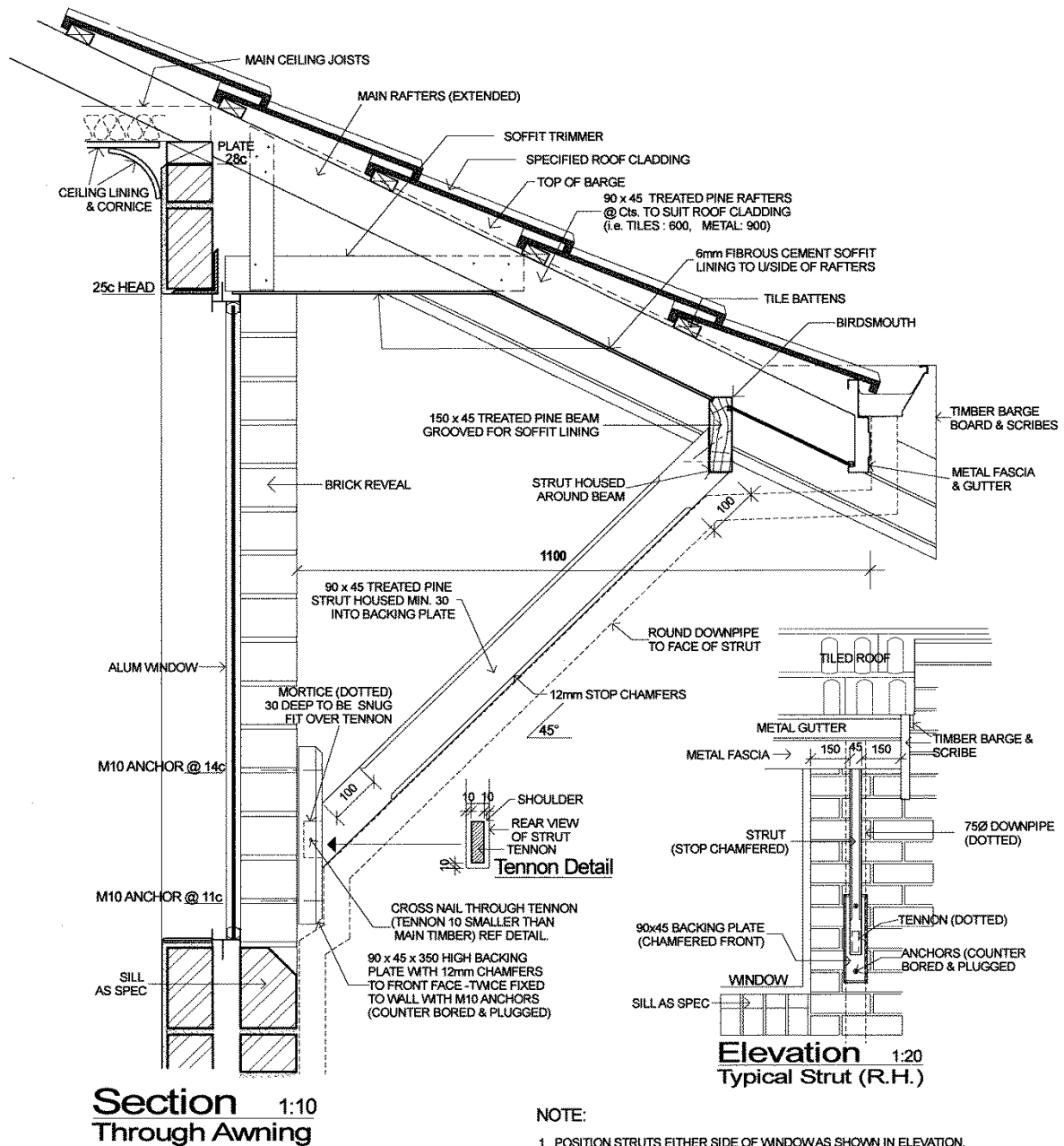
- (a) The Contractor must use two coats of UV protected low sheen acrylic paint.
- (b) The Contractor must not paint HardieFence capping, unless currently painted.

144.20 Awning Detail

See over page:




(a) Detail K64 Window Awning Extended Rafters



NOTE:

1. POSITION STRUTS EITHER SIDE OF WINDOW AS SHOWN IN ELEVATION. MAXIMUM DISTANCE BETWEEN STRUTS SHALL NOT EXCEED 2500.
2. HOUSE STRUTS INTO BACK PLATES AS SHOWN & CROSS NAIL THROUGH SIDE OF PLATE WHEN LOCATED IN FINAL POSITION.
3. FIX BACK PLATES TO WALL WITH 2 No M10 MASONRY ANCHORS IN BED JOINTS. COUNTER BORE HOLES & PROVIDE FLUSH FITTING PLUGS TO FACE OF PLATES ON COMPLETION.
4. PROVIDE 75Ø METAL DOWNPIPE WHERE INDICATED ON PLANS TO ALIGN CENTRALLY WITH STRUT AND FIXED TO FACE.
5. BACK PLATES & STRUTS TO HAVE 12mm CHAMFERS TO ALL EDGES.

ISSUE DATE October 2013 SCALE N.T.S	 DEPARTMENT OF HOUSING	DETAIL WINDOW AWNING - EXTENDED RAFTERS SHOWN 26 1/2 ° PITCH	DETAIL No. K64
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145. Pest Control General

145.1 Standards

- (a) In addition to the regulations stipulated in clause 1.2 Legislation and Codes of Practice, Contractors should be especially aware of the following standards with respect to pest control maintenance including but not limited to:
 - (i) **AS 1678.10.001 – 1998** Emergency procedure guide – transport – pesticides;
 - (ii) **AS 3660.1 – 2000** Termite management – new building work;
 - (iii) **AS 3660.2 – 2000** Termite management – in and around existing buildings and structures – guidelines;
 - (iv) **AS 3660.3 – 2000** Termite management – assessment criteria for termite management systems;
 - (v) **AS 4349.3 – 2010** Inspection of buildings – timber pest inspections; and
 - (vi) **AS/NZS ISO 22608 – 2007** Protective clothing – protection against liquid chemicals – measurement of repellency, retention and penetration of liquid pesticide formulations through protective clothing Materials.
- (b) Where amendments exist, the Contractor must be aware to the latest amendment.
- (c) All pest control work is to be carried out in accordance with the requirements of the Department of Health. For further information, please visit [**www.public.health.wa.gov.au**](http://www.public.health.wa.gov.au)

145.2 Definitions and Interpretations

GENERAL PEST means any pest except all types of termites (commonly referred to as white ants).

145.3 Pesticide Licenses

- (a) Only Personnel that have achieved at least Certificate III in Pest Management are permitted to apply pesticides.
- (b) For more information about pesticides licenses please visit:
[**www.public.health.wa.gov.au/3/1137/2/pesticide_licenses.pm**](http://www.public.health.wa.gov.au/3/1137/2/pesticide_licenses.pm)

145.4 Compliance and Inspection

- (a) The Principal reserves the right to request random checking of all chemicals, Materials and soil sampling as used and performed by the Contractor. This will be at the cost of the Principal.



- (b) The Principal reserves the right to pass the cost of these inspections, sampling and Testing onto the Contractor where it is proven that the work undertaken is not compliant.

PEST CONTROL

146. Pest Control Quality

146.1 Materials and Workmanship

- (a) Many of the SoR Tasks incorporate a second follow up visit and treatment. These Specifications detail which pests the second visits and treatments apply to.
- (b) Where the Contractor determines that Structural damage has occurred due to the action of a pest upon the property, the Contractor must report such damage to the Principal, which may determine that a full building inspection be carried out.
- (c) The Contractor must notify the Principal of Tasks needed to:
 - (i) remedy pest access;
 - (ii) proof the property from further infestations; and
 - (iii) return the property to an acceptable standard of cleanliness.
- (d) If a Tenant has concerns regarding the use of chemicals or treatment methods:
 - (i) no work is to commence;
 - (ii) the Contractor must provide guidance to the Tenant including any suitable alternatives; and
 - (iii) where Tenant still has concerns, the event is to be treated as a Hold Point: see clause 4.8 of the General Specification.
- (e) The Contractor must supply the Tenant or the Principal with Material Safety Data Sheets and explain the information upon request.
- (f) The Contractor must post details of the treatment, chemicals, date and Personnel details in the meter box.

146.2 Warranty

- (a) Without limiting the Principal's rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Pest Control Works comply with the terms and conditions of the Contract; and
 - (ii) will reperform the Pest Control Works when directed by the Principal when a reinfestation occurs during the Defects Liability Period (12 months in the case of termites) or (three months in all other cases) from the date upon which the initial treatment was performed.



- (b) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to Pest Control Works during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Pest Control Works at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal's direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).

147. Bed Bugs

- (a) Where the Contractor is required to treat bed bugs, the Contractor must ensure that the treatment is appropriate for the scale and location of the infestation.
 - (b) Treatment of bed bugs is limited to:
 - (i) Vacant properties;
 - (ii) treating internal carpeted areas;
 - (c) Task for the treatment of bed bugs includes a return inspection after 14 days to assess the state of the infestation and complete a second treatment where necessary. This second visit is included in the Task.
 - (d) Where there is furniture within the room being treated, the contractor must remove and subsequently reposition the furniture as part of the Task.
-

148. Cockroaches

- (a) Where the Contractor is required to treat cockroaches, the Contractor must ensure that the treatment is appropriate for the scale and location of the infestation.
- (b) Treatment of cockroaches includes but is not limited to:
 - (i) applying gel baits in cupboards and Wet Areas;
 - (ii) dusting motors and under dishwashers, ovens, fridges and freezers;
 - (iii) treating obvious cracks, voids and crevices;
 - (iv) applying a residual insecticide to the internal and external perimeter of the property; and
 - (v) providing the Tenant with information on prevention and control of infestation.
- (c) Where the effectiveness of treatment is being adversely affected by:
 - (i) poor Tenant hygiene at the property; and/or
 - (ii) the lack of Tenant cooperation with controlling the infestation,



the Contractor must advise the Principal.

- (d) The Contractor must return after 20 days and within 28 days to complete treatment including the treatment of freshly emerged nymphs. The second visit is included in the Task.
- (e) Hot spot service must specifically target German cockroach (*Blattella germanica*) infestations in the kitchen and Wet Areas and allows more time to be spent effectively treating target areas. Hot spot service allows for a return treatment.
- (f) Where the Contractor believes that an infestation is severe, the Contractor must immediately inform the Principal to recommend and agree upon an appropriate treatment plan.
- (g) The Contractor must inform the Principal about the need for further treatments following the completion of the first treatment and additional Works Orders may be raised.

149. Fleas

- (a) The treatment of fleas includes but is not limited to:
 - (i) treating internal skirtings and carpeted areas with residual insecticide and insect growth regulator; and
 - (ii) applying a residual spray to all external areas including garden beds, lawns and sand areas.
- (b) Where the Contractor is required to treat a flea infestation, the Contractor must contact the Tenant (within an appropriate timeframe) prior to date of treatment to instruct the Tenant on preliminary actions that will need to be undertaken before treatment such as:
 - (i) vacuuming and brushing down carpets, curtains and soft furnishings;
 - (ii) flea treatment of pets;
 - (iii) hot washing or disposal of infested pet bedding; and
 - (iv) mowing of lawns and removal of weeds.
- (c) Where the Tenant has not carried out preliminary actions prior to the time arranged for the Contractor to carry out the flea treatment, the Contractor must inform the Principal.
- (d) Tasks for the treatment of fleas include a return inspection after 14 days to assess the state of the infestation and complete a second treatment where necessary. This second visit is included in the Task.
- (e) The Contractor must inform the Principal of the need for further treatment following each visit.



150. Ticks

- (a) Where the Contractor is required to treat tick infestations to the outside of a property, the Contractor must contact the Tenant at least one week prior to date of treatment to instruct the Tenant on preliminary actions that will need to be undertaken before treatment such as:
 - (i) lawn mowing; and
 - (ii) removing grass and weeds from garden beds, along fences and around buildings.
- (b) The treatment of ticks includes but is not limited to:
 - (i) treating internal skirtings and carpeted areas with residual insecticides and insect growth regulators;
 - (ii) applying a residual spray to all external areas including garden beds, lawns and sand areas; and
 - (iii) providing the Tenant with information on prevention and control of infestations.
- (c) Residual insecticide treatment must be applied to all shrubs and foliage up to a height of **1 m**.
- (d) The Contractor must recommend any physical controls that may help include removal of excess foliage and in making sure native animals are proofed out of yards.
- (e) The Contractor must return after 14 days to complete treatment and assess the state of the infestations and complete second treatments where necessary. This second visit is included in the Task.
- (f) Where the Tenant has not carried out preliminary actions, the Contractor must inform the Principal of this.

151. Termites

- (a) Where the Contractor is required to inspect a Site and report to the Principal on the findings, the Contractor must include:
 - (i) treatment advice;
 - (ii) recommended Tasks; and
 - (iii) a Site map with plan of treatment of the recommended treatment area.
- (b) Where no treatment is necessary, the Contractor must include a clearance certificate.
- (c) The treatment of termites includes but is not limited to:
 - (i) installation of a residual chemical treated zone to prevent ingress of termites into a Site;



- (ii) localised treatment to stop termite activity in a specific location;
 - (iii) baiting products to eliminate termite colonies and reduce the risk of reinfestation; and
 - (iv) providing the Tenant with information on prevention and control of infestation.
 - (d) Treatment relating to termites must be limited to the area of the existing building inclusive of **600 mm** of ground immediately surrounding the Site. Fences, trees and outbuildings beyond this area must not be treated or inspected unless specifically stated on the Works Order.
 - (e) In all cases where there are termite infestations to a Site, the Contractor must report to the Principal any breakdown of termite barriers and recommend Repair work to minimise the risk of future infestation.
 - (f) The Contractor must return 14 days after initial treatment to ensure that treatment has resulted in the eradication of the infestation. This second visit is included in the Task.
 - (g) The Principal does not permit the use of arsenic trioxide.
 - (h) The Contractor must use the most appropriate method of eliminating termite activity to minimise the potential for further damage.
-

152. Ants

152.1 Singapore Ants

- (a) Singapore Ant (*Monomorium destructor*) treatment may be affected by tropical thunderstorms within 48 hours of treatment. A Works Order for Singapore Ant treatment may be reissued by the Principal following a tropical thunderstorm.
- (b) The treatment of Singapore Ants includes but is not limited to:
 - (i) treating primarily with a bait matrix that has the ability to reduce/eliminate colony or residual spray with a transfer effect;
 - (ii) treating roof voids and other accessible cavities;
 - (iii) treating the external perimeter of the property, paths and paving;
 - (iv) spot targeting of obvious nests and trails;
 - (v) placement of ant baits in safe locations inside the dwelling; and
 - (vi) providing the Tenant with information on prevention and control.

152.2 Other Ants

- (a) Treatment of other ants includes but is not limited to:
 - (i) dusting of roof voids and other accessible cavities;



- (ii) treating the external perimeter of the property, paths and paving;
- (iii) spot targeting of obvious nests and trails;
- (iv) placement of ant baits in safe locations inside; and
- (v) providing the Tenant with information on prevention and control.

153. Bees or Wasps

- (a) The treatment of bees and wasps includes the spraying and dusting of hives and nests and the removal of them.
- (b) Where a hive or nest is at height, the Contractor must employ appropriate working at heights methods including where necessary the use of:
 - (i) cherry pickers;
 - (ii) elevated work platforms,
 - (iii) ladders;
 - (iv) safety harnesses; and
 - (v) scaffolding.

154. Mice or Rats

- (a) If baiting is required tamper resistant stations or grain based baits must be used, whichever is most relevant for the situation. Baits must be placed out of reach of children and pets and where baits cannot be mistaken for food or rubbish.
- (b) The treatment of mice and rats includes but is not limited to:
 - (i) placement of bait in roof voids; and
 - (ii) placement of bait in notable areas of activity such as sheds, storerooms, pantries and external areas.
- (c) The use of snap traps and tracking baits should only be used in major infestations and the event must be treated as a Hold Point: see clause 4.8 of the General Specification.
- (d) The Contractor is not required to return and Remove baits. The Contractor must provide instructions to the Tenant on removal and disposal.

155. Possums and Pigeons

155.1 Possums

- (a) Common Brushtail Possums and Western Ringtail Possums are indigenous to Western Australia and as such are protected under the provisions of the *Wildlife Conservation Act 1950* (WA).



- (b) Possums must be Removed from buildings in accordance with Department of Parks and Wildlife (DPaW) guidance.
- (c) The DPaW stipulates that trapping of possums must only be conducted by a licenced trapper, under the conditions of a Regulation 15 Licence obtained from the Nature Protection Branch of the DPaW. Trapping a possum without a licence is illegal and subject to penalties.
- (d) All visits are included in the Task.

155.2 Pigeons

- (a) Where the Contractor is required to set traps for pigeons, the Contractor must set the trap and then return twice in one week to check for pest, Remove pests and Remove trap, for example:
 - (i) set trap on Monday;
 - (ii) revisit trap on Wednesday; and
 - (iii) revisit and Remove trap on Friday.
- (b) The above timetable avoids returning over the weekend and ensures that caught pests can be Removed without unnecessary distress. The timings should be adhered to if the actual days are not practical.
- (c) The cost of all visits are deemed to be included in the price of the Task.

156. Spiders

- (a) The treatment of spiders includes but is not limited to:
 - (i) spot treating any active webs on the inside of the property;
 - (ii) dusting the roof void;
 - (iii) treating the internal and external perimeters and eaves;
 - (iv) treating around doors, windows and other openings;
 - (v) spraying fence lines, sheds, pergolas and other outbuildings; and
 - (vi) providing the Tenant with information on prevention and control of infestation.
- (b) The treatment of spiders will cover both the interior and exterior of the Site.

157. Snakes

- (a) The Principal does not consider snakes to be household pests and for this reason snake removal is not covered in the Schedule of Rates.
- (b) However, the Principal has a duty of care to protect Tenants from harm and as such may require the services of licenced snake removal specialist from time to time to execute Quoted Work.



158. Carcass Removal

- (a) Where required the Contractor must Remove dead animal carcasses and deodorise the affected area.
- (b) Where the Contractor is unable to locate the source of the smell they must report on the returned Works Order the reason.

PLUMBING AND DRAINAGE

159. Plumbing and Drainage General

159.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to plumbing and drainage maintenance:
 - (i) **AS 1056.1 – 1991** Storage Water Heaters;
 - (ii) **AS 1172.1 – 2005** Water Closets (WC) – Pans;
 - (iii) **AS 1357.1 – 2009** Valves primarily for use in heated water systems – Protection valves;
 - (iv) **AS 1357.2 – 2005** Valves primarily for use in heated water systems – Control valves;
 - (v) **AS 3498 – 2009** Authorisation requirements for plumbing products – Water heaters and hot water storage tanks;
 - (vi) **AS 3500.1 – 2003** Plumbing and drainage – Water services;
 - (vii) **AS 3500.2 – 2003** Plumbing and drainage – Sanitary plumbing and drainage;
 - (viii) **AS 3500.3 – 2003** Plumbing and drainage – Stormwater drainage;
 - (ix) **AS 3500.4 – 2003** Plumbing and drainage – Heated water services;
 - (x) **AS 3500.5 – 2003** Housing Installations;
 - (xi) **AS 4426 – 1997** Thermal insulation of pipework, ductwork, and equipment – Selection Installation and finish;
 - (xii) **AS 5200.000 – 2006** Technical Specification for plumbing and drainage products – Procedures for certification of plumbing and drainage products;
 - (xiii) **AS/NZS 2712 – 2007** Solar and heat pump water heaters – Design and construction;
 - (xiv) **AS/NZS 2918 – 2001** Domestic solid fuel burning Appliances;
 - (xv) **AS/NZS 3662 – 2005** Performance of showers for bathing;



- (xvi) **AS/NZS 3718 – 2005** Water supply – Tap ware;
 - (xvii) **AS/NZS 6400:2005** Water efficient products – rating and labelling;
 - (xviii) **ATS 5200.020 – 2004** Technical specifications for plumbing and drainage products – Flushing valves for water closets and urinals – for use with mains supply;
 - (xix) **ATS 5200.021 – 2004** Technical specification for plumbing and drainage products – Flushing valves for water closets and urinals – for use with break tank supply;
 - (xx) **ATS 5200.037.1 – 2006** Technical specifications for plumbing and drainage products – Flow controllers – For controlling flows in cold or heated water systems;
 - (xxi) **ATS 5200.037.2 – 2008** Plumbing and drainage products – Flow controllers for use with heated or cold water systems; and
 - (xxii) *Water Services Regulations 2013 (WA)* – including the WaterMark Certification Scheme.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.
- (c) All plumbing work is to be carried out in accordance with the requirements of the Water Corporation of Western Australia. For further information please visit www.watercorporation.com.au.

159.2 Fees and Permits

- (a) All payments for fees and permits required by the Plumbers Licencing Board (PLB) must be paid by the Contractor.
- (b) For further information please visit: www.plumbers.wa.gov.au

159.3 Compliance and Inspection

- (a) Plumbing and Drainage Work is subject to the PLB's audit program and other compliance activities.
- (b) The Principal undertakes an in-house audit program for all Plumbing and Drainage Work.

159.4 Notice of Intention

- (a) The Contractor must lodge a notice of intention with the PLB at least 24 hours prior to the commencement of all major plumbing work, except Emergency work.
- (b) Contractors must not carry out, permit or arrange for major Plumbing and Drainage Work to be carried out unless a notice of intention for the work has been lodged with the PLB.



159.5 Certificate of Compliance

- (a) The Contractor must within 5 working days of completing all major Plumbing and Drainage Work:
 - (i) provide the PLB a certificate of compliance for the work;
 - (ii) provide a copy of the certificate of compliance to the Principal; and
 - (iii) give a copy of the certificate of compliance to the relevant Local Government authority if the work is drainage plumbing and the drainage plumbing is not, and is not intended to be, connected to a sewer.

159.6 Multi-entry Certificate

- (a) The Contractor must be certified to carry out all minor Plumbing and Drainage Work on a multi-entry certificate, lodged with the PLB within 5 working days of the end of each calendar month.

160. Plumbing and Drainage Quality

160.1 Materials and Workmanship

- (a) Materials and products used in Australia for plumbing and drainage Installations must have been authorised in accordance with the Plumbing Code of Australia (PCA). The PCA requires material and product types be certified under the Watermark Scheme. A schedule of Materials and products requiring Authorisation and relevant specifications is included in **AS 5200.000 – 2006** Technical specifications for plumbing and drainage products – Procedures for certification of plumbing and drainage products.
- (b) Where the Contractor is required to Replace or Supply and Install Appliances, the Contractor must affix a sticker to the Appliance clearly showing the date of Installation and the signature of the Installer. The Contractor is also required to engrave “**HA**” onto the side of the Appliance. Contractor must use an engraving tool and letters must be **10 mm** high.

161. Sanitary

161.1 Pedestal Pans

- (a) Where the Contractor is required to Replace a pedestal pan, the Task is deemed to include all works and materials required.

161.2 Cisterns

- (a) Where the Contractor is required to Replace a dual Flush cistern and/or dual Flush uniset cistern, this Task is deemed to include all works and materials required.
- (b) All cisterns must be minimum WELS rated 4 star.



161.3 Wash Troughs

- (a) Where the Contractor is to Replace a wash trough, the Task is deemed to include all works and materials required.

161.4 Baths

- (a) Where the Contractor is required to Replace a bath, the Task is deemed to include all works and materials required.

161.5 Basins

- (a) Where the Contractor is required to Replace either a wall hung china basin or a china vanity basin, the Task is deemed to include all works and materials required.
- (b) The cost of any cutting to fit and Fix the basin is deemed to be included in the price for the Task.

161.6 Sinks

- (a) Where the Contractor is required to Replace either a stainless steel single bowl inset kitchen sink or a stainless steel bowl and a half inset kitchen sink, the Task is deemed to include all works and materials required.
- (b) The cost of any cutting to fit and Fix the sink is deemed to be included in the price for the Task.

161.7 Puddle Flanges

- (a) Where a shower floor is to be retiled, a puddle flange must be fitted below screed, to existing floor sheeting or concrete slab.
- (b) Puddle flange to include grate and cap to prevent debris falling into waste during the process.

162. Drainage

162.1 Leach Drain

- (i) Where the Contractor is required to Supply and Install or Replace a plastic leach drain:
- (ii) When replacing a deep type leach drain, excess soil and old leach drain are to be Removed from Site. A pump out point will be required on the surface for every **6 m** of drain or part thereof.
- (iii) When replacing an above ground type leach drain, the Installation must adhere to Local Government requirements. Excess soil and old leach drain to be Removed from Site.
- (iv) Where an old leach drain is structurally sound but not functioning due to a build-up of fats and grease, the Contractor does not have to Remove the old leach drain but must Install a diverter and concrete



diverter box. The Contractor must Install the new leach drain to Local Government requirements and a distance away from the existing leach drain so that the soils affected by the build-up of fats and grease do not interfere with the performance of the new leach drain.

- (v) Leach drain lids should be replaced to a depth of **600 mm**; **and**.
- (vi) Where leach drains are connected to a septic system and require servicing see clause 162.3 Septic Waste Systems – Collection and Disposal.

162.2 Blockages

- (a) Trenching for replacement sewer lines must be undertaken by manual labour digging to a depth of **600 mm** in all ground conditions.
- (b) Where Plumbing and Drainage Work requires the clearance of a blockage, the following information must be reported to the Principal on the returned Works Order:
 - (i) the cause of the blockage; and
 - (ii) the time and date that the blockage was Removed.
- (c) All obstructions must be Removed from the system and not washed downstream. Pump out of septic systems is to be organised by the Contractor where required.
- (d) The Contractor must report the cause of all blockages to pedestal pans, waste pipes and sewer lines to the Principal.
- (e) Where earthworks are required to resolve drainage issues, the system must be Tested prior to backfilling. Where the drainage system involves a pedestal pan, this must be plunged as part of the Test. The Contractor must ensure that backfill is free from sharp Materials and must be compacted and finished Flush with adjoining soil surfaces.
- (f) Camera inspections are to be used only when issued on Works Orders. Where this is not stipulated, the Contractor must obtain Authorisation from the Principal. Where camera inspections are required but not specified on the Works Order, the event may be treated as if it were Additional Works for the purposes of clause 4.7 of the General Specification. Where camera inspections are required, recordings of inspections are to be submitted to the Principal.
- (g) See clause 169 Hydro-jetting Equipment for requirements in respect of Hydro-jetting of waste lines and camera inspections.
- (h) Where the Contractor is required to clear a blockage, the cost of mechanical drain cleaning equipment and clean-up is deemed to be included in the price of the Task.
- (i) The Site must be left in a sanitary condition with all drain openings sealed and all excavations backfilled and compacted level with the surface of the ground.



- (j) Without limiting the Principal's rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Plumbing and Drainage Works involving resolving blockages comply with the terms and conditions of the Contract; and
 - (ii) will reperform the Plumbing and Drainage Works involving resolving blockages when directed by the Principal when a blockage occurs during the Defects Liability Period of fourteen (14 days from the date upon which the initial works were performed.
- (k) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to and Drainage Works involving resolving blockages during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Plumbing and Drainage Works involving resolving blockages at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal's direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).
- (l) The Contractor must *dial before you dig* in situations where mechanical excavation is to occur.
- (m) Where clearing a blockage, the Contractor is required to replace sanitary drainage pipe work in a concealed location and the Task is deemed to include making good to the surface up to 1m square. This includes the replacement of all lawn, paving, concrete or bitumen to ground surfaces and for works in a cavity or brick wall, the surface is to be left suitable for finishing trades.
- (n) Excluded from this Task is the restoration of face brick work, wall sheeting, plastering, tiling and/or painting.

162.3 Septic Waste Systems – Collection and Disposal

- (a) Where, as a result of a Works Order already issued for other work, the septic system is found to be at fault, the Contractor must report the following immediately to the Principal giving full details and extent of pump-out required:
 - (i) number and location of septic tanks;
 - (ii) number and location of drainage wells;
 - (iii) number and location of all leach drains;
 - (iv) any other information relevant to the situation; and
 - (v) details including the cause of the blockage, time and date, to be entered as remarks on the Works Order before it is submitted as part of a Payment Claim.
- (b) All liquid wastes collected must be Disposed of at a Gazetted sanitary disposal site.
- (c) Septic Waste System work includes:



- (i) the emptying, removal and disposal of the contents of apparatus for the bacteriolytic treatment of sewerage, liquid waste systems and grease traps;
 - (ii) the chemical treatment of and proper disposal of the contents at the sanitary site and the maintenance, disinfection and Repairs of all plant used in such disposal;
 - (iii) the operator providing all labour and plant necessary for the emptying of and removal of the contents by means of pump or suction method to a sealed impervious tanker;
 - (iv) the opening up of the system for the inspection in such a manner as to cause the least possible inconvenience to residents or occupiers, or damage, to the system or adjoining or Adjacent areas;
 - (v) use pumping or suction and transportation methods without spillage or causing a nuisance;
 - (vi) after emptying, all systems being thoroughly washed down, sealed down and back filled;
 - (vii) servicing of soak wells and septic tanks, which includes the opening of lids, the removal of the liquid contents, the cleaning of internal walls and apertures, the breaking up of the soil at the floor of the well to a depth of **150 mm** and a report on condition of well;
 - (viii) servicing of leach drains, which includes the opening of lids at internals of not more than two metres, the cleaning of internal walls and apertures and the breaking up of soil at the floor of the leach drain to a depth of **75 mm**;
 - (ix) servicing of a plastic type leach drain, which includes opening all pump out points and the removal of the liquid contents;
 - (x) the Contractor refitting and Sealing lids, and Installing new inspection eyes to lids; and
 - (xi) the Contractor making good any damage or anything moved or broken to obtain access to the system and leaving the premises in a sanitary, clean and tidy condition.
- (d) The Contractor must retain the tipping documentation showing the Site address, date, amount of waste Disposed of and the cost of disposal.

163. Stormwater

- (a) Where the Contractor is required to Replace a stormwater tank, the Contractor must use a **600 mm x 600 mm** concrete or plastic replacement. The Contractor must Replace and reconnect all piping and fittings where necessary.
- (b) Sumps must always be a minimum distance of **2.4 m** from the building, or where yard area does not allow, to the Local Government requirements.
- (c) When the Contractor is required to Supply and Install a dished spoon drain,



it must include includes 2 x **100 mm** finishing collar and 2 x **100 mm x 250 mm**.
Additional ½ h may be claimed when Installing pits into concrete or paving.

164. Water Supply

- (a) When replacing sink sets, shower roses, shower arms and tap ware, fittings should achieve the WELS ratings as specified below.
- (b) The Principal will only accept Star or Capstan style handles with new or replacement tap ware. Finger Grip style handles are not permitted and will be treated as a Defect.
- (c) Tap ware including showers must be selected from the following brands, must meet Australian Standards and be standard chrome plated unless otherwise directed and like for like in their replacement:
 - (i) Caroma - for further information about Caroma fittings visit: www.caroma.com.au;
 - (ii) Dorf - for further information about Dorf fittings visit: www.dorf.com.au;
 - (iii) Alder - for further information about Alder fittings visit: www.aldertapware.com.au;
 - (iv) Porcher - for further information about Porcher fittings visit: www.porcher-us.com;
 - (v) Raymor - for further information about Raymor fittings visit: www.raymor.com.au; and
 - (vi) Mania National - for further information about Mania National fittings visit: www.plumberlink.com.au.
 - (vii) Galvins Tapware – for further information about Galvins fittings visit: www.galvins.com.au
 - (viii) Enware – [for further information about Enware fittings visit:](#) www.enware.com.au
- (d) All bathroom tap ware must be minimum WELS rated 4 stars.
- (e) All kitchen tap ware must be minimum WELS rated 4 stars.
- (f) Where the Contractor is required to Replace pillar taps, automatic washing machine taps, or washing machine conversion taps, the Contractor must do so only with chrome plated **15 mm** Capstan taps and style tapware for washing machine conversion taps.
- (g) Where the Contractor is required to Replace lever action flange conversion units, pillar taps, hob sets or basin sets, the Contractor must use CARE style ¼ or ½ turn lever style tapware.



- (h) The Contractor may only use AquaLoc Monster Washers at the Principal's discretion. For further information about AquaLoc Monster Washers made by plumbers only visit: www.aqualoc.com.au
- (i) Where the Contractor is required to Replace taps to a bath, the Contractor must Install safety taps.
- (j) Where the Contractor is required to locate and repair a leak in a water service the Task is deemed to include the replacement of up to 1M of 15mm or 22mm piping. Replacement of any pipe work is to be "like for like" so as not to interfere with the Electrical earthing I.E. copper piping for copper piping. All material and fittings required for joining of the pipework is included in the task.
- (k) Where the Contractor is required to Repair a water leak to the property water main or reticulation piping connected to the property water main, the Contractor must read the water meter, estimate the flow rate and report the exact location of the leak on the Works Order. Upon completion of the Works Order, submission of a Water Corporation (or relevant Water Provider) leak allowance form to the Principal, is deemed included in this Task.
- (l) Leak allowance forms may be requested at the discretion of the Principal and must be submitted in a digital format via the Water Provider's website. Manually completed Leak Allowance Forms may only be submitted where the Water Provider doesn't provide a digital option, or at the approval of the Principal.
- (m) All new piping must be concealed where practicable and installed neatly where exposed to an external wall. No new piping must be visible to an internal wall.
- (n) Where the Contractor is required to pressure Test hot and cold water services, the Contractor must:
 - (i) Remove existing tap or outlet;
 - (ii) connect pressure Test can;
 - (iii) Remove washers from a combined tap set and cap outlet;
 - (iv) Remove water service at hot water unit;
 - (v) cap and turn off HWU stop cock;
 - (vi) disconnect water service at meter can cap;
 - (vii) pressure test the water service to live mains pressure. The hydrostatic pressure shall no exceed the maximum set under the manufacturer's warranty for tapware;
 - (viii) reinstate water service;
 - (ix) renew washers if necessary; and
 - (x) provide written report to Principal on the findings.



- (o) Where the Contractor is required to pressure test a concealed set, the Contractor must test through shower, kitchen or trough sets only and provide a written report to the Principal on the findings.
- (p) Where repairing water leaks in a concealed location, the Task is deemed to include making good to the surface up to 1m square. This includes the replacement of all lawn, paving, concrete or bitumen to ground surfaces and for works in a cavity or brick wall, the surface is to be left suitable for finishing trades. Excluded from this Task is the restoration of face brick work, wall sheeting, plastering, tiling and/or painting.

165. Backflow Testing

- (a) a) All testing must be completed in accordance with AS 2845.3—2010 Part 3: Field testing and maintenance of testable devices.
- (b) b) Field testing, which includes inspection, must be carried out only by a certified contractor.
- (c) c) Equipment used for the field testing kit of backflow prevention devices must be annually calibrated and certified by a suitably qualified person.
- (d) d) A copy of the test report must be retained by the tester and copies forwarded to the:
 - (i) Relevant authority having jurisdiction; and
 - (ii) Owner of the device.
- (e) Where the test fails the Contractor must identify the issue and provide a quote to repair within 48 hours.
- (f) The Quotation must include all parts, materials and retest for certification.
- (g) Certification of device must be provided upon completion of repair.

166. Hot Water Units

- (a) Continuous flow hot water units must be pre-set to **50 °C** and no additional costs may be charged for the Installation of a tempering valve.
- (b) Solar hot water units must be closed circuit thermosiphon units, suitable for mains pressure connection and must incorporate:
 - (i) a water heater with minimum capacity of:
 - A. **180 l** for one and two bedroom dwellings; or
 - B. **300 l** for three or more bedroom dwellings.
 - (ii) a double glazed vitreous enamelled cylinder storage tank with a magnesium sacrificial anode or marine grade 316 stainless steel cylinder;



- (iii) a collector construction with a minimum **3 mm** tempered glass sealed from the water ingress;
 - (iv) a single phase, electrical, booster element with thermostatic and manual control; and
 - (v) a tempering valve set at a maximum of 50 °C;
 - (vi) a cyclonic frame and Fixing in all cyclone prone areas which is to be claimed via the specific SOR;
 - (vii) the Principal's Nominated Brand, which is Solahart – for further information about Solahart visit: **www.solahart.com.au**
- (c) The Contractor must liaise with appropriate and skilled tradespeople where required to make an electrical connection in order to complete the requirements of the Works Order.
- (d) Where a hot water unit requires replacement, only units that suit dwellings with low flow (water efficient) fixtures and fittings may be installed, and the Principal's Nominated Brands are:
 - (i) Rheem – for further information about Rheem products visit: **www.rheem.com.au**;
 - (ii) Dux – for further information about Dux products visit: **www.dux.com.au**; and
 - (iii) Wilson – for further information about Wilson products visit: **www.wilsonhotwater.com.au**.
 - (iv) Quantum - for further information on Quantum Heat Pumps visit: **www.quantumenergy.com.au**
 - (v) Bosch – for further information about Bosch products please visit:
www.bosch-climate.com.au
 - (vi) Evo heat – for further information on Evo Heat Pump Hot Water units visit:
www.evoheat.com.au
 - (vii) Thermann – for further information on Thermann Hot Water Units visit:
www.thermann.com.au
- (e) Storage water heaters must be of mains pressure manufacturer incorporating A/C power supply and installed with:
 - (i) a tempering valve set at 50 °C;
 - (ii) two new relief valves; and



- (iii) a new isolation and non-return valve.
- (f) Instantaneous electric water heaters must be factory Tested and incorporate the following features:
 - (i) wall mounted;
 - (ii) installed with a tempering valve set at a maximum of **50 °C**; and
 - (iii) A/C power supply.
- (g) Where a solar hot water unit or heat pump requires replacement the Contractor is required to complete and submit the Small-scale Technology Certificate (STC) to the Principal.

167. Solid Fuel Heater

- (a) Where Solid fuel room heaters are to be Supplied and Installed, the Principal's Nominated Product is Jarrahdale Swagman solid fuel room heaters.
- (b) For further information about Jarrahdale Radiant Wood Heaters visit: www.jhc.com.au.
- (c) Where the Contractor is required to Install a solid fuel heater, the Contractor will ensure that the flue pipe exit and double flue pipe casing are both fitted with flashing and a cowl to prevent ingress of water and Debris.
- (d) A precast hearth constructed of not less than **18 mm** thick compressed fibre cement sheeting must be Installed and be painted with heat resistant matte black paint that will not rub off.
- (e) The front and sides of the solid fuel heater must be protected by a non-detachable mesh screen at an acceptable distance such as to protect persons from being injured. The sides may be protected alternatively by a solid metal heat shield.
- (f) The solid fuel heater must be supplied with a heat shield or shields to be Installed no further than **200 mm** from a heat sensitive wall.

168. Roofing

- (a) Where the Contractor is required to Replace corrugated iron sheeting, the Contractor must not Replace like for like, but instead Replace using zincalume corrugated iron. The Principal's Nominated Brand is Lysaght Custom Orb – for further information on Lysaght products visit: www.lysaght.com.
- (b) Sheets must overlap by at least one and a half corrugations at sides and no less than **300 mm** at ends.
- (c) Sheets must be turned up at ridges and wherever required Fixed at ends of sheets and every forth overlap/underlap at intermediate bearings with **50 mm** tek screws.



- (d) When a Contractor is required to use Fixings, screws and washers as part of a Roofing work, only galvanised screws and neoprene washers may be used.
- (e) Ridge capping must be over lapped **150 mm** and Fixed every **300 mm** on alternative sides and beaten down into corrugation.
- (f) Valleys must be turned up under roofing with beaded edges, to be lapped **150 mm** at joints.

169. Hydro-jetting Equipment

169.1 General

- (a) Where the Contractor is required to use high pressure hydro-jetting equipment to clear blocked sewer or storm water where an electrical drain machine is insufficient to clear the blockage, the Contractor must adhere to the following procedures.

169.2 Hydro-Jetting and Camera Inspection

- (a) The Contractor must clear the blockage to the septic, storm water or sewer line using Hydro jetting high pressure cleaning equipment.
- (b) The Contractor must clear the drain in its entirety of all obstructions and the line must be left clear and in complete working order.
- (c) The Contractor must perform a camera inspection once the blockage has been cleared. Footage must clearly show the internal view of the drain as the camera enters and travels along the sewer or septic line.
- (d) The image must record the distance of the camera head from the point of entry.
- (e) When the position of the compromised or damaged line has been located, the location of the camera head will be marked at ground level using marker paint. The location of the camera head must be determined through the use of a locating device capable of identifying the depth of the camera head.
- (f) The Contractor must submit a camera inspection DVD including clear audio commentary upon completion of the works within two working days. Where the recording on the DVD cannot be adequately interpreted by the Principal, the DVD will be returned to the Contractor with a request that the Contractor supply adequate footage.
- (g) The Contractor may be required to continue to submit recorded footage until the Principal is satisfied with the suitability of the footage in fulfilling the Principal's requirements.
- (h) The Contractor must submit to the Principal an assessment of blocked drain which includes but is not limited to the following:
 - (i) a written and audio report describing the issues with the drain including but not limited to:
 - A. tree roots;



- B. length of broken drain;
 - C. trees requiring removal;
 - D. cause of blockage;
 - E. recommended SoR Tasks;
 - (ii) an “as constructed” drawing documenting the following:
 - A. drain location;
 - B. depth of drain;
 - C. location of compromised drain; and
 - D. position of marker paint;
 - (iii) drawings marked with a datum point from where the measurements are taken;
 - (iv) an indication of estimated costs associated with the rectification of those issues;
 - (v) footage recorded onto a DVD identifying the location of the blockage in the drain; and
 - (vi) confirmation that the Contractor has clearly marked at the surface the depth and location of the compromised drain for future reference.
- (i) Where the report does not meet the requirements of paragraph (i) above it may be treated by the Principal as a Defect.
 - (j) The Site must be left in a sanitary condition with all drain openings sealed and all excavations backfilled and compacted level with the surface of the ground.
 - (k) Without limiting the Principal’s rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Hydro-jetting and Camera Inspection Work comply with the terms and conditions of the Contract; and
 - (ii) will reperform the Hydro-jetting and Camera Inspection Work when directed by the Principal when a blockage occurs during the Defects Liability Period (6 months) from the date upon which the initial works were performed.
 - (l) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to Hydro-jetting and Camera Inspection Work during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Hydro-jetting and Camera Inspection Work at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal's direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).



- (m) Where additional works are identified, to ensure the adequate functioning of the property drainage system, the Contractor is to immediately inform the Principal and request an Additional Works Order under Clause 4.7 of the General Specification.

RETICULATION

170. Reticulation General

170.1 Standards

- (a) The Contractor must apply as a minimum the following standards with respect to reticulation maintenance:
 - (i) **AS/NZS 1477 – 2006** PVC Pipes and Fittings for Pressure Applications;
 - (ii) **AS/NZS 3000 – 2007** Electrical Installations; and
 - (iii) **ATS 5200.030 – 2012** Technical specifications for plumbing and drainage products – Solenoid valves.
- (b) Where amendments to the above standards exist, the Contractor must be aware of the latest amendments.
- (c) The Contractor shall, where possible, improve the water efficiency of the reticulation system being repaired or replaced with the approval of the Principal.

171. Reticulation Quality

171.1 Materials and Workmanship

- (a) The Principal requires the Contractor to become familiar with the Site relevant to the Reticulation Works, including but not limited to:
 - (i) the location and types of reticulation system at each Site; and
 - (ii) knowledge of any particular issues related to that system such as:
 - A. water pressure;
 - B. coverage; and
 - C. water quality.
- (b) Where the Contractor undertakes:
 - (i) an Installation of a new reticulation system;
 - (ii) a start-up of an existing reticulation system;
 - (iii) a replacement of an existing reticulation system; or
 - (iv) Repairs to an existing reticulation system,



the Contractor must Flush the system. See clause 172.3 Flush for further detail.

- (c) All new and Repaired fittings must be Tested to ensure their ability to perform the required function without fault.

171.2 Installation of New Systems

- (a) Where the Contractor is required to Install a new reticulation system, the Contractor must provide for a minimum of **40 mm** precipitation per week throughout all sections of the system.
- (b) At the completion of any newly installed systems, the Contractor must provide to the Principal drawings of all details of changes made in the position of any mainline piping and control valves.

171.3 Connection to Services

- (a) Where necessary the Contractor must make a connection from the existing water main by engaging a licenced plumber.
- (b) For Installation of controllers and where not already Installed, the Contractor must make a connection from existing electricity supply by engaging a licenced plumber.
- (c) Backflow protection must be provided where required and at the Principal's discretion.

171.4 Warranty

- (a) Without limiting the Principal's rights under clause 20.6(b) of the Conditions of Contract or subclause (b) the Contractor:
 - (i) guarantees and warrants all Reticulation Works comply with the terms and conditions of the Contract.
- (b) The Contractor acknowledges that irrespective of whether a Defect occurs with respect to Reticulation Work during the Defects Liability Period or once the Defects Liability Period has expired, the Principal may direct the Contractor to rectify defective Reticulation Works at no cost to the Principal (and if such rectification is not carried out by the Contractor in accordance with the Principal's direction, the cost of the rectification Works will be a debt due from the Contractor to the Principal).

171.5 Health, Safety and Environment

- (a) The Contractor is responsible for all hazards encountered in the execution of the Reticulation Works and must ascertain and where necessary map the location of cables, pipes and other services and inform and instruct Personnel.



172. Test, Reset, Flush, Start-up and Shut-down

172.1 Test

- (a) Where the Contractor is required to Test a system, the Contractor must Test each station to ascertain that all components are operating correctly, identify any Repairs or Adjustments required. The Contractor must make any necessary Adjustments to the reticulation controller timer so that watering days and times comply with the requirements of the Water Corporation of Western Australia. For further information please visit www.watercorporation.com.au.

172.2 Reset

- (a) Where the Contractor is required to reset a system, the Contractor must Adjust the reticulation controller timer so that watering days comply with the requirements of the Water Corporation. For further information please visit www.watercorporation.com.au.
- (b) The Contractor must Test the backup battery and Replace if necessary. The cost of replacing the **9 V** battery is deemed to be included in the price of the Task. See further clause 175.5 **9 V** Battery Replacement.

172.3 Flush

- (a) Where the Contractor is required to Flush a system, the Contractor must Remove the sprinkler or sprinkler nozzle and run the individual station for sufficient time to clear all soil, grit, sand, silt or Debris. The Contractor must clean and refit the sprinkler or the sprinkler nozzle.

172.4 Shut-down

- (a) Where the Contractor is required to shut down a system at the commencement of winter, the system must be shut down at the controller. Task includes removal of the back-up battery.

172.5 Start Up

- (a) Where the Contractor is required to start up a system at the commencement of summer, the system must be programmed for the correct days and times for watering as specified by the Water Corporation and the Task includes Installation of a new back-up battery.

173. Sprinklers and Sprays

173.1 Adjusting and Clearing Sprinklers

- (a) The Contractor must Remove the sprinkler and/or nozzle and clear obstructions. The Contractor must Flush the line where build-up of soil, grit, sand, silt or Debris is evident. The sprinkler or nozzle must be refitted or Adjusted to provide correct coverage, pattern and precipitation.



173.2 Sprinkler Placement

- (a) Sprinklers should be spaced no further apart than the distance recommended by the manufacturer according to the available pressure and volume of water available. The type of nozzle used must be such that it minimises over-spray and undue water usage.

173.3 Verge Watering

- (a) Over-spray onto roads is not permitted. In verge areas sprinklers are to be Installed along the curb facing back onto the property.

173.4 Around Buildings

- (a) Sprinklers are not to over-spray onto buildings. All sprinklers must be situated no closer than **60 mm** to walls when throwing away from a building.

173.5 Garden Beds

- (a) The Contractor must only Install pop-up sprinklers in garden Bed areas abutting driveways and paths in order to minimise vandalism and prevent Tenants from injuring themselves. Pop-up sprinklers in garden beds must have a minimum rise of **150 mm**. Elsewhere ridged risers are permissible with a clearance of **150 mm**.

173.6 Sprinklers

- (a) Where the Contractor is required to Replace or Supply and Install sprinklers, the Principal requires the use of sprinklers specific to certain situations:
 - (i) in large grassed areas – Hunter P Series, gear driven pop-up sprinklers;
 - (ii) in small grassed areas – Toro domestic pop-up sprinklers;
 - (iii) in areas with low water pressure – Nelson MP3000 pop-up sprinklers;
 - (iv) in garden beds all sprinklers other than pop-up types must be on ridged PVC or flexible semi-ridged risers and of premium quality; and
 - (v) in all other garden Bed areas pop-up sprinklers similar to Hunter P502.15a and P502.15af must be Installed where suitable.
- (b) For further information about Hunter products visit: www.hunterindustries.com.
- (c) For further information about Toro products visit: www.toro.com.au.
- (d) For further information about Nelson products visit: www.nelsonirrigation.com.

173.7 Concrete Sprinkler Surrounds

- (a) All sprinklers Installed alongside curbs abutting roads, driveways and parking areas must have concrete surrounds with a minimum diameter of **300 mm** and a



thickness of **90 mm**. All sprinklers in lawn areas must have concrete surrounds with a minimum diameter of **200 mm** and a thickness of **80 mm**.

174. Solenoid Valves

174.1 Solenoid Control Valves

- (a) Where the Contractor is required to Replace or Supply and Install solenoid control valves, the Contractor must use Irritrol valves. For further information about Irritrol valves visit: www.irritrol.com.
- (b) The size must be the same as the line in which they are Installed or smaller, providing that the use of smaller valves does not restrict the water flow to an extent that affects the operation of the sprinklers.
- (c) All solenoids valves are to be Installed in plastic valve boxes and all electrical work must be carried out in accordance with **AS/NZS 3000 – 2007** Electrical Installations.

174.2 Solenoid Coils

- (a) The Contractor is required to Test solenoid coils for correct operation before any replacement of a valve. If the coil is not functioning correctly, the coil must be replaced with a coil suitable for that specific valve. Once complete, the valve must be re-tested to ensure correct operation.

174.3 Low Voltage Solenoid Wiring

- (a) Where there is a break in the wiring between the controller and the solenoid, the Contractor must use a cable and solenoid locator to trace wiring and Test for the continuity of the wires. When located the Contractor is to Repair up to **1.00 m** of wire, joiners and insulation tape.
- (b) Solenoid wiring must be multi-core minimum **1 mm**, common wire (earth) to be black and master valve wire to be white.
- (c) The Contractor must lay all wiring in trenches under the piping and must be attached to the piping with insulation tape at intervals of not more than **3 m**. Where the wiring is to be laid in a trench without piping, the wiring must be routed through a conduit. The wiring must be in continuous unbroken lengths from the controller to the solenoid valves with **1.5 m** of spare cable coiled at the valve.

174.4 Locate Solenoid Valve

- (a) The Contractor must use an electronic wire and solenoid locator to locate solenoid valves. Where the valve cannot be traced, the Contractor must carefully trench or unearth wiring in order to locate the valve.

175. PVC and Poly Pipe

175.1 General

- (a) Black polythene piping is not to be used.



- (b) All PVC fittings must be a minimum Class 18.
- (c) The cost of individual joiners and clips is deemed to be included in the price of the Task.

175.2 Repair leak to PVC Pipe

- (a) Where the Contractor is required to Repair a leak to a PVC pipe or joiner, the Contractor must locate and cut out the broken section. The Contractor must then Supply and Install new pipe and joiners. All joins must be cleaned and primed prior to fixing with PVC solvent cement, following which the line must be Flushed.

175.3 Repair leak to Poly Pipe

- (a) Where the Contractor is required to Repair a leak to a poly pipe, the Contractor must do so using joiners and clips and then must Flush the line.

175.4 Underground Piping

- (a) Where the Contractor is required to lay underground piping, the Contractor must ensure that all piping is a minimum Class 12.
- (b) The Contractor must use bends and elbows rather than cause excessive bending to the pipe.
- (c) The Contractor must ensure that a licenced plumber takes responsibility for the following:
 - (i) the initial “cut-in” and gate valve (see clause 34.2 Gate Valve Detail for further detail);
 - (ii) the ascertaining of whether back flow prevention devices such as double check valves or vacuum breakers are required; and
 - (iii) the commissioning of such a valve if required.

175.5 Trenching

- (a) All trenching for mainlines and any PVC piping in garden beds must be of sufficient depth to allow for **150 mm** of earth cover. Trenching must be as straight and level as possible and free of rock and any sharp objects before piping is Installed.
- (b) Backfill
 - (i) The Contractor must backfill, compact and level all trenches. Excessive subsidence of trenches after completion of Reticulation Works is the responsibility of the Contractor to correct at no extra cost to and to the satisfaction of the Principal.
 - (ii) Any surplus soil resulting from the Contractor’s excavations and not incorporated back into the trench must be Removed from the Site.
- (c) Road Crossings



- (i) If the Contractor is required to Install pipes or electrical conduits across roadways, driveways or paths where sleeve pipes have not already been Installed, the Contractor must plunker or bore horizontally beneath the road. Under no circumstances must sealed surfaces be cut without the express permission of the Principal. Plunkering must be dry, not water jetting.
- (ii) Any subsidence resulting from the work of the Contractor must be rectified by the Contractor at no extra cost to and to the satisfaction of the Principal.

176. Controllers

176.1 Connection and Placement

- (a) The Contractor must only Install the automatic Controller specified and make the necessary connection from the existing electricity supply. The Controller must be Installed in a service cabinet.
- (b) The connection to **240 V** power supply (if no power outlet has been provided for the reticulation controller) is the responsibility of licensed Personnel only. Where direct connection is required, the reticulation controller is to be Installed on a separate protected circuit.
- (c) For new Installations the controller is to be placed in a safe and Secured position as far as is practicable in compliance with clause 176.2 Service Cabinet.
- (d) Power connection in a grouped site is to be from the common service power source, not from an individual dwelling power supply.

176.2 Service Cabinet

- (a) Service cabinet for placement of the controller must be formed from aluminium and of a weather proof construction with:
 - (i) hinged, dust-sealed doors; and
 - (ii) a Lane Security 777 Department of Housing special pin cylinder lockset. The lock must accept only the Principal's electrical E key.
- (b) Installation of service cabinets may only be performed as Quoted Works.

176.3 Automatic Controller

- (a) Where the Contractor is required to Replace or Supply and Install an automatic controller, the Principal's Nominated Products are Hunter and Irritrol.
- (b) The controller must be a solid state dual program controller with battery back-up. The number of stations in the controller must be equal to or greater than the number of stations required to operate the reticulation system. Where the use of two or more smaller controllers is necessary the Contractor may treat the task as if an incorrect task had been issued for the purposes of clause 4.6 of the General Specification.



- (c) For further information about Hunter products visit: www.hunterindustries.com.au
- (d) For further information about Irritrol products visit: www.irritrol.com

176.4 240 V Transformers

- (a) Prior to replacement of controllers, the Contractor must Test the operation of the **240 V** transformer. If the transformer is faulty it is to be replaced with a transformer that is suitable for that particular controller.

176.5 9 V Battery Replacement

- (a) Backup batteries are to be Tested and where found to be faulty or have low level of charge must be replaced with a premium quality long life battery. The Principal's Nominated Brands are Duracell and Energiser.
- (b) For further information about Duracell please visit: www.duracell.com.
- (c) For further information about Energiser please visit: www.energiser.com.

177. Annexures



177.1 Complex Cleaning Inspection Report

Note – The outcomes are detailed in Estate Management specifications for Complex Cleaning

See over page:



COMPLEX - CLEANING PERFORMANCE INSPECTION SHEET

COMPLEX ID		WORKS ORDER NUMBER	
SITE ADDRESS			

CLEANING DETAILS AND PERFORMANCE

INTERNAL AREAS	OUTCOMES ACHIEVED		COMMENTS
	YES	NO	
LOCATION			
Fire equipment areas			
Vinyl flooring			
Carpet flooring			
Entrance Halls			
Foyers			
Walkways			
Lifts			
Stairwells			
Landings			
Communal toilets			
Communal Laundries			
Others -			

EXTERNAL AREAS	OUTCOMES ACHIEVED		COMMENTS
	YES	NO	
LOCATION			
Fire equipment areas			
Parking areas			
Pathways			
Stairways			
Landings			
Walkways			
Drying areas			
Other paved areas			
Bin Storage areas			
Bulk bins			
Outside Toilets			
Laundry rooms			
Other covered areas			
Others -			

COMMENTS	
----------	--

NAME		DATE	
------	--	------	--



177.2 [Not Used]



177.3 Complex Grounds Inspection Report

Note – The outcomes are detailed in Estate Management specifications for Grounds Maintenance

See over page:



COMPLEX - GROUNDS MAINTENANCE PERFORMANCE INSPECTION SHEET

COMPLEX ID		WORKS ORDER NUMBER	
SITE ADDRESS			

WORK CLASS

Work Class		Cycles per annum	
Additional or amended extent of Works			

DETAILS AND PERFORMANCE

GROUNDS AREA	OUTCOMES ACHIEVED			COMMENTS
	YES	NO	N/A	
Verges Mowing				
Weeding				
Rubbish removed				
Pruning				
Driveways Weeding				
Rubbish removed				
Pruning				
Clear strip drains				
Garden beds maintained				
Grass & lawns Mowing				
Edging				
Brush cutting				
Rubbish removed				
Pruning				
Garden beds Weeding				
Rubbish removed				
Pruning				
Paths Weeding				
Rubbish removed				
Pruning				
Clear strip drains				
Paved areas Weeding				
Rubbish removed				
Pruning				
Clear strip drains				
GROUNDS WORKS	OUTCOMES ACHIEVED			COMMENTS
	YES	NO	N/A	
Sprinklers Cleared				
Not mower damaged				
Fertilise Grass & lawns				
Garden beds				
Herbicide spraying				



Tenant alterations				
Pruning & clippings				

GENERAL COMMENTS	
-------------------------	--

NAME		DATE	
------	--	------	--

177.4 Service Report Sheets

See over page:



EVAPORATIVE COOLER UNIT DETAILS	
MAKE AND MODEL	
RATED FLA	TYPE DOWN / SIDE DISCHARGE

MAINTENANCE		
PROCEDURE	DATE & COMMENT	
SEASON START UP		
SET AND CHECK BLEED OFF RATE		
CHECK PULLEYS AND V BELTS		
CHECK MOTOR AND DRIVE		
CHECK DUMP VALVE		
CLEAN AND CHECK PADS		
CHECK PUMP OPERATION AND WATER DISTRIBUTION OVER PADS		
CHECK FLOAT VALVE OPERATION AND LEVEL		
CHECK MOTORISED DAMPER OPERATION		
CHECK CONTROLS AND ELECTRICAL		
CHECK ENTIRE SYSTEM CONDITION		
SEASON SHUT DOWN		
OPEN WATER BLEED LINE AND DRAIN		
REMOVE PLAUG, DRAIN AND CLEAN SUMPS		
REMOVE, HOSE DOWN AND REINSTALL PADS		
LUBRICATE TO RECOMMENDATIONS		
SHUT DOWN ELECTRICAL		
FIT WINTER COVERS		

COMMENTS:	
SIGNATURE:	DATE:



ROOM TYPE AIR CONDITIONING UNIT DETAILS	
MAKE AND MODEL	
CAPACITY	TYPE WALL SPLIT / RAC / CASSETTE
REFRIGERANT	RATED FLA

MAINTENANCE		
PROCEDURE	DATE & COMMENT	
SIX MONTHLY		
CHECK CONDITION OF UNITS AND CLEAN		
CHECK OPERATION OF SYSTEM		
ENSURE ALL DRAINS ARE CLEAR		
CHECK & RECORD ROOM TEMPERATURE AND SETPOINT		
CHECK FOR UNDUE NOISE AND VIBRATION		
CLEAN FILTERS		
LUBRICATE TO RECOMMENDATIONS		
CHECK AND RECORD REFRIGERANT PRESSURES		
CHECK CONDITION OF REFRIGERANT PIPE		
CHECK REFRIGERATION SAFETIES.		
CLEAN CONDENSATE TRAY		
CLEAN EVAPORATOR & CONDENSER COILS		
CHECK AND RECORD OPERATING CURRENTS		
PERFORMANCE TEST UNIT i.e. AIR ON/OFF TEMPS		

COMMENTS:	
SIGNATURE:	DATE:



DUCTED AIR CONDITIONING UNIT DETAILS		
MAKE AND MODEL		
CAPACITY	TYPE	PACKAGED / SPLIT
REFRIGERANT	RATED FLA	
FILTERS		
NUMBER		
TYPE		
SIZE		
EFFICIENCY		
MAINTENANCE		
PROCEDURE	DATE & COMMENT	
SIX MONTHLY		
CHECK CONDITION OF UNITS AND CLEAN		
CHECK CONDITION OF DUCTWORK & CLEAN		
CHECK OPERATION OF SYSTEM		
ENSURE ALL DRAINS ARE CLEAR		
CHECK & RECORD ROOM TEMPERATURE AND SETPOINT		
CHECK FOR UNDUE NOISE AND VIBRATION		
CHECK PULLEYS AND V BELTS		
CHECK MOTOR AND DRIVE		
REPLACE FILTERS		
LUBRICATE TO RECOMMENDATIONS		
CHECK AND RECORD REFRIGERANT PRESSURES		
CHECK CONDITION OF REFRIGERANT PIPE		
CHECK REFRIGERATION SAFETIES.		
CLEAN CONDENSATE TRAY		
CLEAN EVAPORATOR & CONDENSER COILS		
CHECK AND RECORD OPERATING CURRENTS		
PERFORMANCE TEST UNIT i.e. AIR ON/OFF TEMPS		

COMMENTS:	
SIGNATURE:	DATE:



177.5 Inspect and Report Templates

See over page:



ALL INSPECT & REPORT TASKS MUST BE COMPLETED AND RETURNED TO THE DEPARTMENT OF COMMUNITIES WITHIN 48 HOURS

[illegible]

NON SOR WORKS - MATERIAL					
SOR	Material Description	Quantity	Cost	Location	Classification



NON SOR WORKS - LABOUR				
SOR	Labour Description	Units of labour	Location	Classification

NON SOR WORKS - PLANT AND EQUIPMENT	
Plant/Equipment description	Cost

WORKS PROGRAM	
Estimated time to complete works	

NAME	SIGNATURE	DATE

PHOTOS	



Pest Control Inspect and Report Template

ALL INSPECT & REPORT TASKS MUST BE COMPLETED AND RETURNED TO THE DEPARTMENT OF COMMUNITIES WITHIN 48 HOURS.

HA Works Order #		Property Address	
Conducted on		Conducted by	
Trade		Licence/Registration #	

PESTS

What pests are being inspected?

<input type="checkbox"/> Termites	<input type="checkbox"/> Bees	<input type="checkbox"/> Mice
<input type="checkbox"/> Ants (Singapore)	<input type="checkbox"/> Wasps	<input type="checkbox"/> Rats
<input type="checkbox"/> Ants (Other)	<input type="checkbox"/> Cockroaches	<input type="checkbox"/> Ticks
<input type="checkbox"/> Bed Bugs	<input type="checkbox"/> Fleas	<input type="checkbox"/> Other _____

Comments/Technical Advice:

PROPERTY

What type of building is the property?

Type:	<input type="checkbox"/> Single Dwelling	<input type="checkbox"/> Duplex	<input type="checkbox"/> Triplex	<input type="checkbox"/> Complex
Height:	<input type="checkbox"/> Single Storey	<input type="checkbox"/> Double Storey	<input type="checkbox"/> Multi Storey	<input type="checkbox"/> Other _____
Walls:	<input type="checkbox"/> Double Brick	<input type="checkbox"/> Brick Veneer	<input type="checkbox"/> Timber Frame	<input type="checkbox"/> Other _____
Roof Lining Material:	<input type="checkbox"/> Tile	<input type="checkbox"/> Metal	<input type="checkbox"/> Other _____	
Roof Structure Material:	<input type="checkbox"/> Timber Frame	<input type="checkbox"/> Steel Frame	<input type="checkbox"/> Other _____	
Floor:	<input type="checkbox"/> Suspended Timber	<input type="checkbox"/> Concrete	<input type="checkbox"/> Both	<input type="checkbox"/> Other _____
Fences:	<input type="checkbox"/> Metal/Colorbond	<input type="checkbox"/> Fibre Cement	<input type="checkbox"/> Timber	<input type="checkbox"/> Other _____

Comments/Technical Advice:



INSPECTION

What areas were inspected?

- | | | |
|--|--|---|
| <input type="checkbox"/> Building Interior | <input type="checkbox"/> Building Exterior | <input type="checkbox"/> Subfloor |
| <input type="checkbox"/> Roof Space | <input type="checkbox"/> Roof Exterior | <input type="checkbox"/> Outbuildings/Sheds |
| <input type="checkbox"/> Grassed Areas | <input type="checkbox"/> Garden Beds | <input type="checkbox"/> Paving/Concrete |
| <input type="checkbox"/> Fences/Gates | <input type="checkbox"/> Trees | <input type="checkbox"/> Other _____ |

What areas were NOT inspected and why?

Comments/Technical Advice:

FINDINGS

Were any pests found at the property?

- ☐ Yes ☐ No

Details:

Is there any evidence of previous pest treatments?

- ☐ Yes ☐ No

Details:

Is there any evidence of damaged caused by pests?



☐ Yes ☐ No

Details:

SORs REQUIRED AND QUANTITIES

SOR	Description	Quantity	Location	Classification

NON SOR WORKS - MATERIAL

SOR	Material Description	Quantity	Cost	Location	Classification

NON SOR WORKS - LABOUR

SOR	Labour Description	Units of labour	Location	Classification



NON SOR WORKS - PLANT AND EQUIPMENT	
Plant/Equipment description	Cost

OTHER INFORMATION, ADVICE OR RECOMMENDATIONS

WORKS PROGRAM	
Estimated time to complete works	

NAME	SIGNATURE	DATE



MAP



PHOTOS	



Gas Appliance Inspect and Report Template

ALL INSPECT & REPORT TASKS MUST BE COMPLETED AND RETURNED TO THE DEPARTMENT OF COMMUNITIES WITHIN 48 HOURS.

DATE	
HA WORKS ORDER NUMBER:	
PROPERTY ADDRESS:	

HEAD CONTRACTOR		
GASFITTERS NAME		
GASFITTERS LICENSE No		
MAKE, MODEL AND AGE OF APPLIANCE		

TECHNICAL ADVICE: details of issue(s) found.	
--	--

HAVE IMAGES BEEN SUBMITTED TO HA? (Tick appropriate box)	YES	NO
--	-----	----

SCHEDULE OF RATES (SOR) REQUIRED AND QUANTITIES

SOR	QTY	ADDITIONAL COMMENTS

NON SOR WORKS

QTY	MATERIAL AND/OR LABOUR DESCRIPTION



IS PIPING UPGRADE REQUIRED? (Tick appropriate box)

YES	NO
-----	----

If YES box is ticked all pipe calculations must be completed and submitted.
Refer to the supplementary information page of this report.



Gas Appliance Inspect and Report Template – Supplementary Information

ALL INSPECT & REPORT TASKS MUST BE COMPLETED AND RETURNED TO THE DEPARTMENT OF COMMUNITIES WITHIN 48 HOURS.

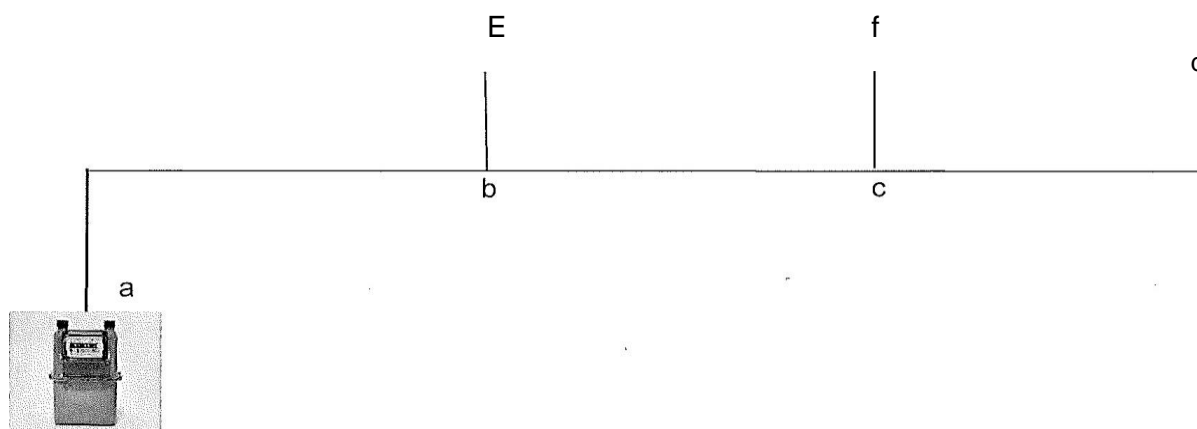
PIPING UPGRADE CALCULATIONS

AVAILABLE PRESSURE: Tick appropriate box

1.25kpa	2.75kpa
---------	---------

APPLIANCE TYPE	MAKE	MJ rating
Storage HWU		
Bayonet		
Cooker		
Instantaneous HWU		
Continuous Flow HWU		

INSTALLATION DETAILS				
Pipe Section	Appliance	Length M	Gas Flow MJ/Hr	Pipe Size mm
ab	ALL			
bc				
cd				
be				
cf				



Note: For further examples and pipe sizing charts refer to AS NZS 5601 GAS STANDARDS



177.6 Fire Services Maintenance

See over page (inventory as at 1/11/2014):



Metro North East					
Address	Suburb	Hose Reels	Hydrants	Extinguishers	Detection Systems
34 Maidos St	Ashfield		10	4	
52 Freeland Square	Eden Hill	2		3	
31 Market St	Guildford				
321 Lord St	Highgate		11	10	
350 Stirling St	Highgate	4			
47-49 Smith St	Highgate	12	44	2	1
353 Crawford Rd	Inglewood				
121-123 Dundas Rd	Inglewood		20	12	2
51 Scanlon Way	Lockridge			4	
19 Brathwaite Rd	Lockridge				
35 Kennedy St	Maylands				
7 Sarah St	Maylands			5	
181 Railway Pde	Maylands				
134 Peninsula Rd	Maylands			10	
49 Joseph St	Maylands				
6 Kenilworth St	Maylands				
261 Guildford Rd	Bayswater				
265 Guildford Rd	Bayswater				
1 Midvale Place	Midvale			12	
31 First Ave	Mt Lawley			6	
30 York St	North Perth				
14 Daphne St	North Perth				
90 Mabel St	North Perth				
377 Hector St	Yokine				
76 Alexander Dr	Yokine				
356 Hector Rd	Yokine				



Metro North West					
Address		Hose Reels	Hydrants	Extinguishers	Detection Systems
6-8 Hewett Way	Balga				
131 Alexander Dr	Dianella				
1 Abbott Way	Dianella				
136 Hancock St	Doubleview				
90 Brown St	East Perth	5		9	1
15 Wittenoom St	East Perth			2	1
107 Goderich St	East Perth	9	16	8	1
70 Goderich St	East Perth	10	14	11	2
342 Harborne St	Glendalough				
27 Rawlins St	Glendalough				
48 Crocker Way	Innaloo				
61 King George St	Innaloo				
207 Lakeside Dr	Joondalup			6	
18 Alvis Place	North Beach			6	
43-47 Charles Riley Rd	North Beach			12	
50-56 Edgefield Way & 3 Alvis Pl	North Beach			12	
2 Irene St	Perth				
138 Summers St	Perth				
32 Cheriton St	Perth	14	20	1	1
601 Wellington St	Perth	20	28		2
192 Claisebrook Rd	Perth				
45 Pearl Pde	Scarborough			4	
25 Joyce St	Scarborough				
1 Hilda & 2 James St	Shenton Park				
203 Nicholson Rd	Shenton Park	16	17	5	2
1 Price St	Subiaco	1	8	1	1
1-3 Court Place	Subiaco				
93 Thomas St	Subiaco	24	76	92	1
122 Cambridge St	West Leederville				
12 Cowle St	West Perth				
122-128 Charles St	West Perth			5	
1217 Hay St	West Perth			31	



Metro South					
Address	Suburb	Hose Reels	Hydrants	Extinguishers	Detection Systems
29 Fifth Ave	Beaconsfield				
34 Doig Pl	Beaconsfield				
90 Lefroy St	Beaconsfield		8	6	
64 Point Walter Rd	Bicton			4	
49 Cranford Ave	Brentwood			5	
30 Harrison Way	Calista			4	
32 Edmund Way	Calista			4	
437 Stirling Hwy	Claremont			14	1
9 Egeus Pl	Coolbellup			7	
2 Dorcas St	Coolbellup		4	6	
2 Elinor Pl	Coolbellup	3	2	6	
68 Cordelia Ave	Coolbellup	14	4	14	
4 Curran St	Coolbellup				
38 Hargreaves Rd	Coolbellup		4	6	
26 Malvolio Rd	Coolbellup	3	2	6	
1 Pier St	East Fremantle			6	
32 Bellevue Tce	Fremantle			4	
8 Malcolm St	Fremantle				
10 Swanbourne St	Fremantle			4	
340 High St	Fremantle	4	21	15	1
169 Holland St	Fremantle			21	
33 Holland St	Fremantle			3	
19 Burt St	Fremantle			3	
48-50 Alexandra Rd	Fremantle			8	
23-41 Beach St	Fremantle	6	21	13	1
18 Knutsford St	Fremantle	23	20		
26-34 Queen Victoria St	Fremantle	2	12	9	
2 Vale St	Fremantle			6	
16 Bromley Rd	Fremantle			9	
15 Kellam Way	Medina			4	
1 Gibbon St	Mosman Park		2		
16 Wellington St	Mosman Park			6	
1 Wellington St	Mosman Park	11	4	12	
11 Harvest St	North Fremantle		10		
15 Harvest Rd	North Fremantle		8		
27 Casserley	Orelia			4	
5 Clark Pl	Orelia			4	
56 Mulligan Way	Orelia			4	
12 Dowling Pl	Orelia			4	



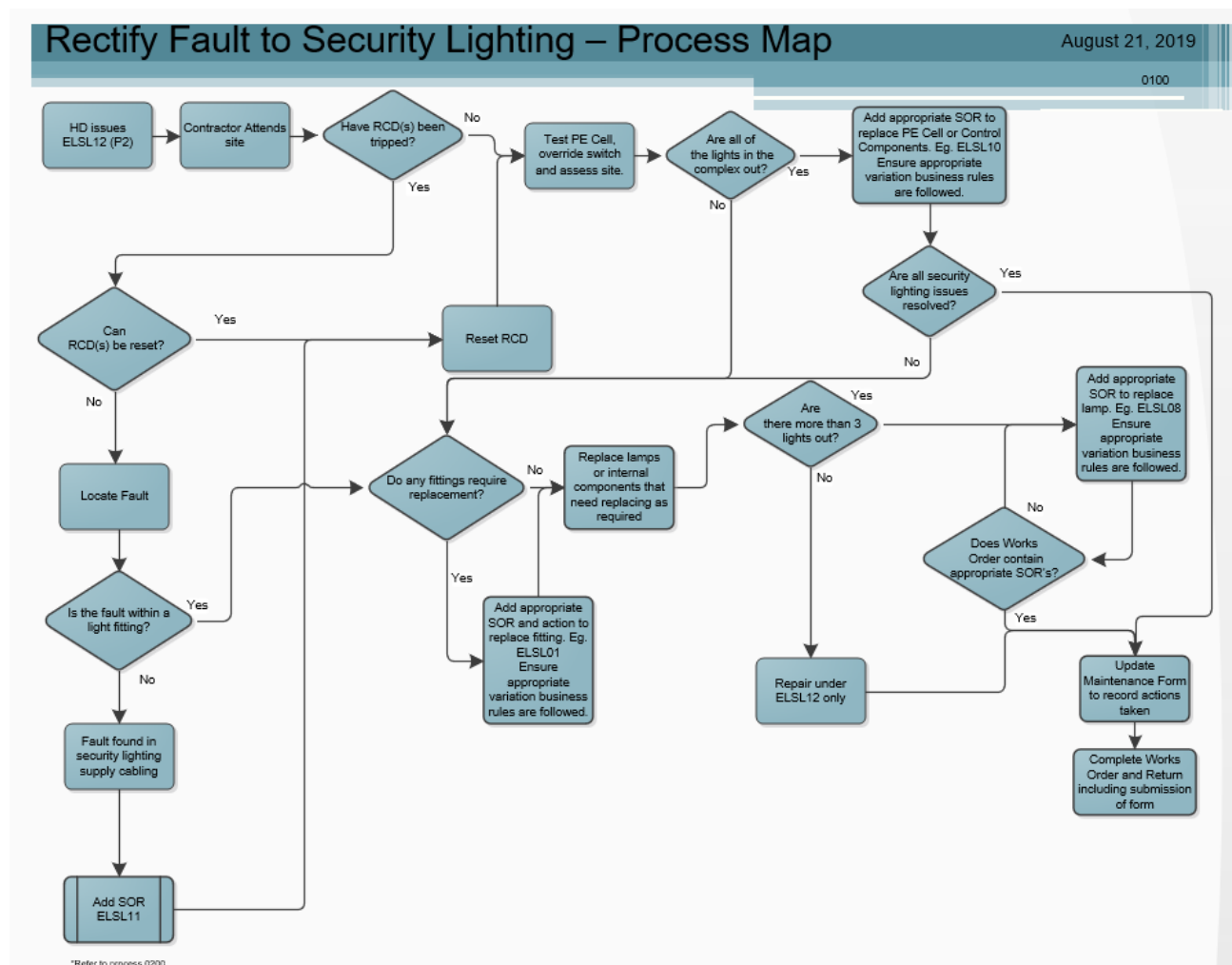
11 Richard Pl	Orelia			4	
361 Canning Hwy	Palmyra		8	6	
76 Safety Bay Rd	Shoalwater			4	
90 Safety Bay Rd	Shoalwater			4	
17 Light St	Shoalwater			4	
277 South Tce	South Fremantle			17	
190 South St	South Fremantle			26	
5 Sweetman St	White Gum Valley			8	
3 Ferres St White	White Gum Valley				



Metro South East					
Address	Suburb	Hose Reels	Hydrants	Extinguishers	Detection Systems
15 Coralie Ct	Armadale			2	
32 Dumond St	Bentley	66	97	70	2
142 Bishopsgate St	Carlisle				
11 Marchamley Pl	Carlisle		15	17	1
87 Ley St	Como				
36 Walanna Dr	Karawara			8	
1 Walanna Dr	Karawara			10	
2910 Albany Hwy	Kelmscott		2	4	
8 Davis Rd	Kelmscott				
71 Collins St	Kensington				
209 Douglas Ave	Kensington			6	
43-45 Norbury Way	Langford			4	
19 Kelsall Cr	Manning			7	
48-52 Nannine Pl	Rivervale		11	9	1
1105 Albany Hwy	Saint James				
4 Heppingstone St	South Perth			4	
7 Ranelagh Cr	South Perth			6	
324 Mill Point Road	South Perth			6	
5 Allen St	South Perth		9	9	1
8 Albert St	South Perth			3	
26 Hurlingham Tce	South Perth		11	11	1
29 Leonard St	Victoria Park			4	
59 Leonard St	Victoria Park			4	
15 McMaster St	Victoria Park				
131 Basinghall St	Victoria Park East			5	
24 Hertford St	Victoria Park			5	
107 Hubert St	Victoria Park East			4	
119 Hubert St	Victoria Park East			4	
127 Hubert St	Victoria Park East			4	
133 Hubert St	Victoria Park East			4	



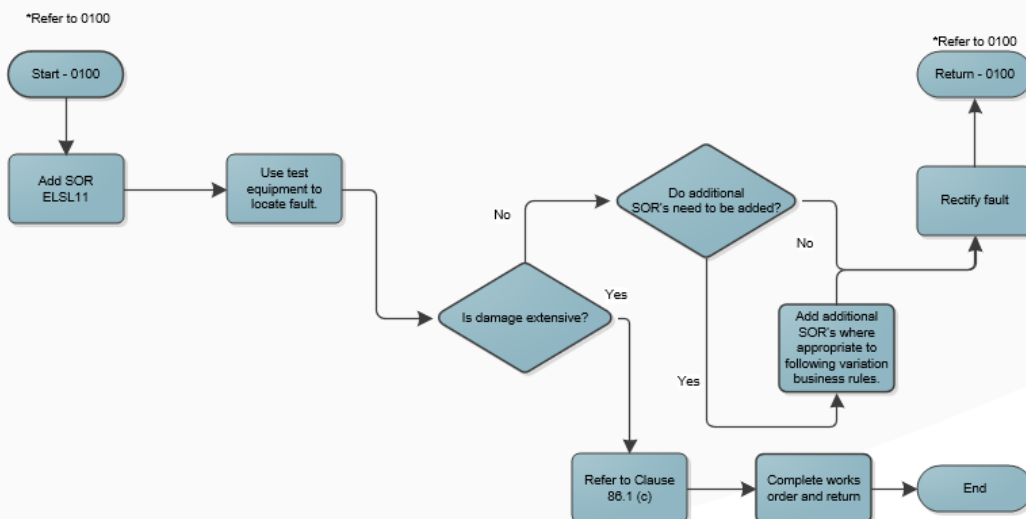
177.7 Rectify Fault to Security Lighting – Process Maps





Rectify Fault to Security Lighting – Process Map

August 21, 2019



177.8 Security Lighting Maintenance Report

COMPLEX ADDRESS _____

WORK ORDER NUMBER & SUFFIX _____

All replacement of light fittings, lamps, cabling and all electrical components must be recorded.

Location of lamps to be replaced

Outside
Unit/s _____

Driveway _____

Common Area (eg. Stairways, free standing carports) _____

Location of replaced light fittings

Outside Unit/s _____

Driveway _____

Common Area (eg. Stairways, free standing carports) _____

Location of replaced cabling



Driveway_____

Location of replaced electrical components

PE Cell _____

Ballast

Contactor/switchgear_____

Additional Comments

Electrical Contractor name _____

177.9 Colour Schemes

See over page:



Department of Communities Internal Colour Schemes Guide 2022 v5.0

PAINT

Fixtures (*Doors and Frames, Skirting, Architraves, Quads, Timber Window Frames, Balustrade, Trough Cabinets etc*)

1. White 100% Full Gloss Enamel

Ceiling and Cornice

2. White 100% Low Sheen Acrylic or Semi Gloss Acrylic

Walls

3. Dulux Hog Bristle Half Strength 100% Low Sheen Acrylic or Semi Gloss Acrylic
4. Dulux Limed White Half Strength 100% Low Sheen Acrylic or Semi Gloss Acrylic

TILES

Ceramic Wall Tiles – All Areas

5. Gloss White 200mm x 200mm or 200mm x 400mm

Ceramic Floor Tiles – Dry Area (R9)

6. European Ceramics Homeland Grey 450mm x 450mm
7. European Ceramics Homeland White 450mm x 450mm
8. European Ceramics Homeland Ash 450mm x 450mm
9. European Ceramics Homeland Charcoal 450mm x 450mm

Ceramic Floor Tiles – Wet Area (R10)

10. European Ceramics Homeland Grey 300mm x 300mm
11. European Ceramics Homeland White 300mm x 300mm
12. European Ceramics Homeland Ash 300mm x 300mm
13. European Ceramics Homeland Charcoal 300mm x 300mm

Vinyl Floor Tiles (300mm x 300mm x 2mm)

- | | |
|-------------------------|--------------------------------|
| 14. Polyflor Pebble | 20. Armstrong Cable Dune |
| 15. Polyflor Cappuccino | 21. Armstrong Boulder Beige |
| 16. Polyflor Merino | 22. Armstrong Scarborough Sand |
| 17. Polyflor Dusky Grey | 23. Armstrong Lakelands Grey |
| 18. Polyflor Moondust | |
| 19. Polyflor Ochre | |

CARPET

24. Tuftmaster Spring Ridge Birch Grey 990
25. Tuftmaster Spring Ridge Tempest 980
26. Godfrey Hirst Beaucastle Galaxy 795
27. Godfrey Hirst Beaucastle Timber 185

LAMINATE

Cabinetry (*Doors and Drawer fronts, Carcass, Shelves etc*)

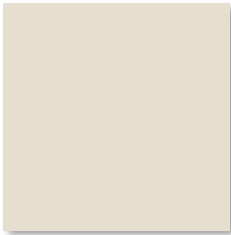
28. Formica Snowdrift (White) 0723 – Velour Finish

Bench Top

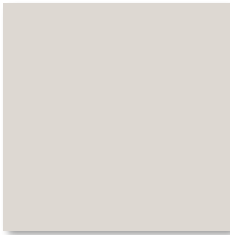
29. Formica Grey Finestone 6367 – Velour Finish
30. Laminex Sand Pebble 559 – Natural Finish
31. Formica Flint Crystal 3518 – Velour Finish
32. Laminex Greystone 772 – Natural Finish



PAINT



Dulux Hog Bristle
Half Strength



Dulux Limed White
Half Strength

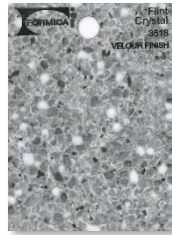
LAMINATE BENCH TOP



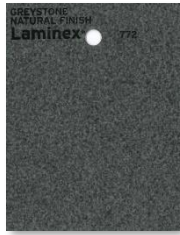
Formica
Grey Finestone



Laminex
Sand Pebble

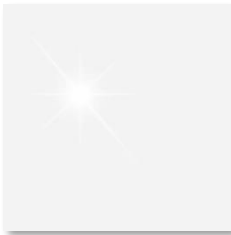


Formica
Flint Crystal

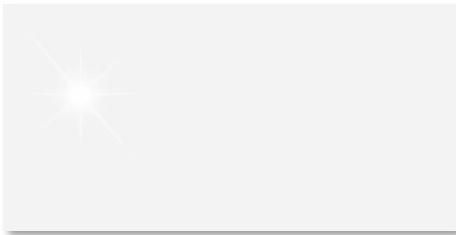


Laminex
Greystone

CERAMIC WALL TILES – ALL AREAS

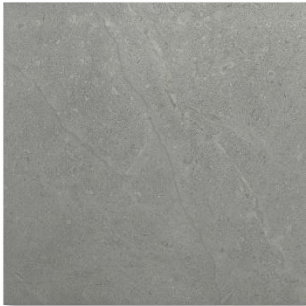


Gloss White
200mm x 200mm



Gloss White
200mm x 400mm

CERAMIC FLOOR TILES – DRY AREA (R9)



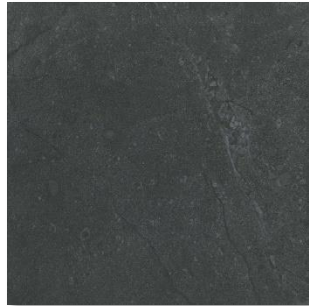
European Ceramics
Homeland Grey
450mm x 450mm



European Ceramics
Homeland White
450mm x 450mm



European Ceramics
Homeland Ash
450mm x 450mm



European Ceramics
Homeland Charcoal
450mm x 450mm

CERAMIC FLOOR TILES – WET AREA (R10)



European Ceramics
Homeland Grey
300mm x 300mm



European Ceramics
Homeland White
300mm x 300mm



European Ceramics
Homeland Ash
300mm x 300mm



European Ceramics
Homeland Charcoal
300mm x 300mm



VINYL FLOOR TILES

Polyflor Vinyl Tiles



Pebble



Cappuccino



Merino



Cable Dune



Boulder Beige



Dusky Grey



Moondust



Ochre



Scarborough Sand



Lakelands Grey

CARPETS



Tuftmaster
Birch Grey 990



Tuftmaster
Tempest 980



Godfrey Hirst
Galaxy 795



Godfrey Hirst
Timber 185



COLOUR SCHEME PACKAGES

*** NOTE: Below packages are suggestions only. Issuing officer can mix or match colours at their discretion. Colours or packages to be identified on the Works Order ***

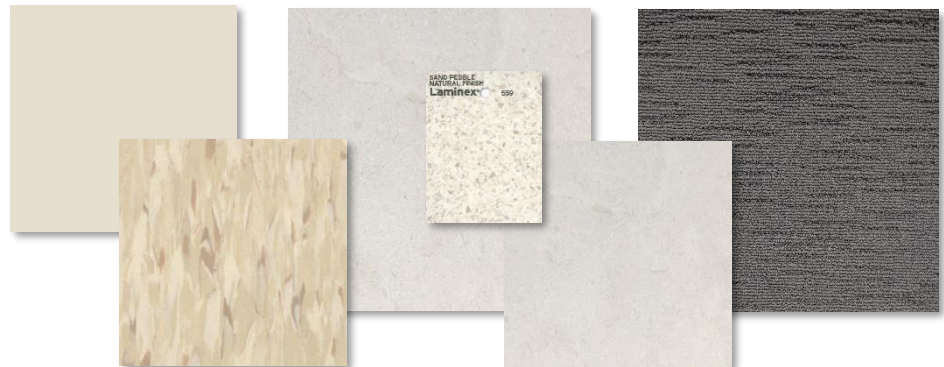
PACKAGE 1

Walls – Limed White Half
Vinyl tiles – Dusky Grey
Dry Area tiles – Homeland Grey
Wet Area tiles – Homeland Grey
Benchtop – Grey Finestone
Carpet – Tempest 980



PACKAGE 2

Walls – Hog Bristle Half
Vinyl tiles – Cable Dune
Dry Area tiles – Homeland White
Wet Area tiles – Homeland White
Benchtop – Sand Pebble
Carpet – Birch Grey 990



PACKAGE 3

Walls – Limed White Half
Vinyl tiles – Lakelands Grey
Dry Area tiles – Homeland Ash
Wet Area tiles – Homeland Ash
Benchtop – Flint Crystal
Carpet – Timber 185



PACKAGE 4

Walls – Limed White Half
Vinyl tiles – Dusky Grey
Dry Area tiles – Homeland Charcoal
Wet Area tiles – Homeland Charcoal
Benchtop – Greystone
Carpet – Galaxy 795

