SAHT Construction Requirements

For Class 1A Buildings

Version: 2020
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1 GENERAL REQUIREMENTS

1.1 Introduction
Order of precedence: These requirements are additional to the NATSPEC Simple Domestic specification requirements and if differences in interpretation between the two should arise then these requirements take precedence.

1.2 Universal housing design - Background
The SAHT Universal Housing Design Criteria was developed as a requirement to provide standard rental housing that is also suitable for persons with varying degrees of disability including wheelchair users. The principal features are:

- Stepless entry into the house, from the street and from all other external doors.
- Enhanced design of doorways and wider circulation at doorways.
- Power points, fixtures, doors and circulation at universal heights with:
  - Door hardware generally 900mm to 1100mm above floor level.
  - Wall power outlets 450mm to 600mm above floor level.
- Wider (1500mm) circulation between kitchen benches.
- Bathroom designed to accessibility criteria including:
  - Stepless shower.
  - Toilet.
  - Reinforced wall construction so that grab rails can be fitted later as an adaptation.
- Carport (min 3600mm width) with widening at side and extended paving.
- 1000mm wide external paving.

The SAHT house designs contain these features and the design criteria is available from the web at: https://www.housing.sa.gov.au/news-and-publications/housing-design-guidelines.

1.3 SAHT tenants, adjoining owners and occupiers
Notification of interruption to existing services: Notify SAHT tenants and adjoining occupiers of the interruption well in advance of the occurrence and minimise the disruption.

Development Notices and Fencing Notices: Issue notices required in accordance with the Development Act 1993 and Fences Act 1975. Note that the Principal will not issue or accept any fencing notice and no half cost fencing recovery notices will be permitted to be issued to adjoining owners.

Fencing, retaining and boundary wall construction:

- Notification of work on a boundary: Issue reasonable notification to adjoining owners or occupiers of any fencing or other work on the boundary. Install temporary fencing as necessary to maintain the adjoining owners or occupier’s privacy and security.
- Make sure construction issues and timing for demolition of existing fences are discussed and resolved with adjoining owners and occupiers prior to any work being carried out.
- During construction, keep the area tidy and protect adjoining owner or occupier property and if necessary make good prior to the completion of works.
Site supervisor: Make the site supervisor known to all SAHT tenants and adjoining owners or occupiers so that complaints or disputes can be effectively managed.

Making good: Should any site work result in a dispute or require rectification work to adjoining properties, resolve the dispute and carry out the rectification work required as soon as practicable but in any case prior to practical completion.

1.4 Possession of site

Possession of Site Notice (DPS): Prior to commencement on site of any work, obtain a DPS from the Principal.

Inspection: Prior to DPS, inspect the site with a representative of the Contractor and the Principal to address the following:

- Reinforce on site Work, Health and Safety (WHS) requirements.
- Ascertain the position of any existing trees and whether any tree on or adjacent the site is deemed a ‘significant tree’.
- Reinforce the requirements when working on council or adjoining properties.
- Inspect all boundary fences to identify items for replacement or alteration.
- Reinforce the issuing of fencing notices to adjoining owners.
- Issue the Contractor’s representative with a copy of the identification survey or pegging plan (refer to Detailed Drawings), showing all boundary marks, and a copy of the sewer and water service location plans.
- Locate all boundary marks including survey pegs and metal pins.
- Identify Permanent Survey Marks and Temporary Bench Marks.
- Check for sewer and water connections.
- Check for any gas and electrical connections.
- Check for any easements, overhead wires or other obstructions on or near the site.
- Reinforce the requirements relating to stormwater detention and rainwater tanks.
- Mark on the site plan and photograph any dilapidation of the council infrastructure outside the front boundary and the side boundary if a corner allotment.
- Arrange for removal of any rubbish from site and cut grass if necessary.
## 1.5 Mandatory notification stages for inspections

Notice: Notify the Principal when the following construction stages are reached:

<table>
<thead>
<tr>
<th>Item</th>
<th>Details of what is to be Inspected</th>
<th>Items to be in Place</th>
<th>Action</th>
<th>Timing to Notify the Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footings - 1st</td>
<td>Inspection of trenches</td>
<td>Underfloor fill and trenching</td>
<td>Site inspection by Engineer</td>
<td>48 hours notice</td>
</tr>
<tr>
<td>Footings - 2nd</td>
<td>Inspection of reinforcing</td>
<td>Reinforcing and under floor services</td>
<td>Site inspection by Engineer</td>
<td>48 hours notice</td>
</tr>
<tr>
<td>Wall and Roof Frames</td>
<td>Inspection of framing generally, tie downs, bracing etc.</td>
<td></td>
<td>On completion of frames prior to roofing</td>
<td></td>
</tr>
<tr>
<td>First Floor Framing</td>
<td>Inspection of framing, tie downs, bracing etc.</td>
<td></td>
<td>At completion of floor framing and trusses</td>
<td></td>
</tr>
<tr>
<td>Party Walls</td>
<td>Party wall construction</td>
<td>Lower level party wall brickwork</td>
<td>Notify surveyor for survey of party wall</td>
<td>Commencement of party wall brickwork</td>
</tr>
<tr>
<td>1st Fix plumbing and electrical</td>
<td>Inspection of first fix plumbing and electrical</td>
<td></td>
<td>48 hours prior to internal linings</td>
<td></td>
</tr>
<tr>
<td>Shower floor</td>
<td>Inspection of 1:60 floor fall to drain</td>
<td>Floor screed</td>
<td>Construction Coordinator</td>
<td>48 hours notice and prior to tiling</td>
</tr>
<tr>
<td>Wet Areas – waterproofing</td>
<td>Inspection of wet area waterproofing</td>
<td>Bathroom and laundry</td>
<td>Provision of waterproofing certificate</td>
<td>Prior to tiling</td>
</tr>
<tr>
<td>Perimeter paving</td>
<td>Inspection of damp proof membranes to slab edges</td>
<td>Slab edge damp protection and construction methods</td>
<td>Prior to perimeter paving</td>
<td></td>
</tr>
<tr>
<td>Stormwater Disposal</td>
<td>Stormwater system</td>
<td>Pipework</td>
<td>Site inspection by Engineer</td>
<td>48 hours notice</td>
</tr>
<tr>
<td>Fire Mains (if required)</td>
<td>Fire mains</td>
<td>Pipework</td>
<td>Site inspection by Engineer</td>
<td>48 hours notice</td>
</tr>
<tr>
<td>Practical Completion (Hand Over)</td>
<td>Combined inspection of the work</td>
<td>All the work in the contract</td>
<td>Site Inspection by Principal’s representative and Contractor</td>
<td>Booking appointment for Practical Completion</td>
</tr>
</tbody>
</table>
1.6 Practical completion requirements
Submissions: At practical completion and as a requirement for practical completion for each dwelling the Contractor will provide the following to the Principal:

- House keys (3 sets); carport or garage door keys (2 sets); and a letter box key and side gate key (if lockable).
- Operation and maintenance manual, make, model and finishes for all appliances and equipment installed by the Contractor.
- Warranties and guarantees for appliances, sanitary ware, tapware, machinery, pumps, hot water units, stoves, door furniture and hardware, fixtures, fittings and finishes including windows, doors, screens, roofing, fascia, gutters, tiles, vinyl, steel frames (if applicable), termite treatment, floor coverings, wall linings and coverings, electrical items and fittings including light fittings, air conditioner and heating units (if applicable); with warranty period to commence at Practical Completion.
- Certificates of compliance.
- Certification of all site supply, storage, erection, fixing and completion activities of the wall framing and trusses.
- Contractor’s statement of compliance as required under the development approval.
- As-constructed survey by a licenced surveyor including the following:
  - Set-out of the dwelling on the allotment with respect to the land title boundaries (eg building set-backs etc.) fencing, retaining walls and other boundary occupations relative to the boundaries, refer to Detailed Drawings.
  - Verification of the finished floor level (FFL) of the house approximately 1m inside the front door and one level at the centre of the carport or garage slab. All FFLs are to be AHD (Australian Height Datum).

1.6.1 Additional requirement for group housing sites
As-constructed services drawings showing the in-ground location and depth of all services (water, sewer, stormwater, telecommunication, and electrical reticulation), refer to Detailed Drawings.

2 DWELLING CONSTRUCTION REQUIREMENTS

2.1 Party walls and common walls
Penetrations: Avoid services penetrating party walls and common walls. If required, seal penetrations to maintain required fire-resistance level and sound transmission rating.

2.2 Termite Management
Provide a physical termite barrier: FMC Homeguard, Kordon, Smartfilm, Trithor or Termimesh to manufacturers details. Raft slab penetrations and perimeter paving to be protected.

Not acceptable:
- chemical spray;
- exposed footing as perimeter treatment; and
- under slab irrigation systems.
2.3 Keying and locks

Keying:
- Group housing sites: Key dwellings to differ, including carports and garage roller doors.
- For each dwelling:
  - External main doors, including sliding aluminium doors and hinged doors to carports or garages: Key alike.
  - Screen doors: Key alike with a different combination to the external main doors.

Locks: To AS 4145 (Locksets and Hardware for Doors and Windows – Set):
- Lockset: Lever handle.
- Lock barrels: Compatible with 5 or 6 pin Lockwood or Gainsborough construction key system.
- Egress: Allow egress without removable key.
- Double barrel locks: Do not use on main doors or screen doors that open from inside by a snib action.

Construction key barrel: Install to the front entrance and security screen door and to suit the Principal’s C1, C2 (Lockwood products) or C3 (Gainsborough) system.
- For security and aluminium screen doors use Whitco.

2.4 Plumbing

Contractor responsibilities: Pay all connection, inspection fees and obtain all approvals required, and submit certificates of compliance to the Principal at handover.

2.4.1 Hot water temperature control

Hot water reticulation system:
- Hot water supply: Tee off at least 1m from the hot water unit with the tempering valve on the supply line to the ablution taps and the other line delivering direct from the hot water unit to all other taps.
- Bathroom and ensuite taps: Install temperature control device to supply tempered water at 50°C for Class 1a dwellings. Do not install tempering valve on the hot water unit but close to the hot water outlet and not more than 6 metres from the furthest hot water outlet.
- Kitchen and laundry taps: Supply hot water direct from the hot water unit.
- Access: Locate temperature control device to enable access for maintenance or replacement.

For installation locations of temperature control devices refer to Detailed Drawings.

2.5 Electrical

Principal’s electricity supplier: SIMEC Zen Energy.

Contractor responsibilities:
- Lodge a REX application with SAPN for a suitably sized connection from the SAPN service point nominated on the site plan.
- Pay all fees associated with the connection and fitting of meters.
- Pay for the energy used during construction.
- Before handover, provide each dwelling with a digital electricity meter.
For each dwelling: Provide the following:

- Minimum 15 modules in the load centre.
- National Broadband Network (NBN) infrastructure.
- Ready for future installation of photovoltaic arrays, grid connected inverter, battery and battery gateway.

Group housing sites: Provide the following:

- Switchboard: An individual meter for each dwelling and a landlord meter for the public lighting and electricity supply of common areas.
- Labelling: Permanently label each meter with the street address of the dwelling it serves.
- Landlord meter: Before practical completion, arrange installation in the name of the South Australian Housing Trust using the Principal’s electricity supplier.

Air conditioning: Allow for future installation of split system air conditioning units as follows:

- Provide 20 A circuits located so that the future compressor will not be installed adjacent to ground level bedroom windows.
- Make sure there is sufficient space for air flow and adequate clearances for the maintenance of the future equipment.
- Provide a weather resistant isolator in a suitable location for the outside part of the air conditioner. In the roof space provide a conduit from that location to enable wiring to the living area for the in-room part of the air conditioner.
- In two storey housing, allow for the future installation of a split system air conditioner on both levels.
- To protect air conditioners and delay their restart once mains power is restored: install an ON-delay timer relay or under voltage release relay in its own pole at the load centre, in accordance with the SAPN Service and Installation Rules. No other items are to be connected.

2.6 Telecommunications

Principal’s responsibilities: Registering the development with NBN Co. and payment of the developer contribution charge for each dwelling.

Contractor’s responsibilities:

- Make sure the dwellings are fibre ready and built to the relevant guidelines. Refer to Detailed Drawings for NBN Key information for builders and cablers.
- For group housing, construct the pit and pipe within the site in accordance with the design plan.
- Arrange and pay for mandrel bend tests where required.
- Make sure the lead-in conduit riser and cable entry point are located to comply with minimum clearances from other services entering the dwelling.
- Supply and install a box to house the Network Terminal Device (NTD), Power Supply Unit (PSU) and install a double power point in the box.
- Provide an additional conduit from the top of the NTD enclosure to approximately 300mm above the ceiling capped both in the box and in the ceiling space, to allow for any future cabling from the box.
Contractors are not to install:

- Premises connection device/Maddison box: Provided by NBN Co. when end user installation is completed.
- Cable from the cable entry location to the boundary connection point (NBN/Telstra are not able to accept third party cables), Contractor is to provide draw string only.

### 3 SITE CONSTRUCTION REQUIREMENTS

#### 3.1 Imported site fill

Requirement: Free from contamination and certified if required at the Contractor’s expense.

Recycled fill: Supply from an approved supplier:

- Location: Under concrete slabs, paths and driveways and conforming to 0222 Earthwork in NATSPEC Simple Domestic specification.

#### 3.2 Paving

##### 3.2.1 Concrete Paving

*SAHT Universal Housing Design Criteria* stepless entry: Construct pathways from the street, carport or carpark without steps and finish flush with the floor level at the threshold of doors.

- Steep sites: If necessary, provide steps as well as a flush threshold.
- Group sites: Provide kerb ramps as needed and a kerb or wheel stop to prevent wheels from damaging buildings or landscaping.

Future irrigation systems: Under driveways and internal roads on group sites:

- Provide 75mm diameter PVC sleeve (capped).
- Locate sleeve 1500mm from the front of the dwelling.
- Identification: Mark location for clear identification on site.

Tooled joints in paths and driveways: Construct formed tooled joints at intervals not exceeding 1200mm by cutting through the screeded surface to a minimum depth of 30mm.

Paving levels: As shown on the design drawing. If not documented, conform to the following:

- Finish paving at least 15mm below the damp proof membrane and slope away from the building, except at doorways and porches of stepless entries.
- Steps: If steps cannot be avoided, do not construct with a height less than 110mm or more than 180mm.

##### 3.2.2 Perimeter paving

Perimeter paving and paving to clothes line and access paths:

- 1000mm wide.
- 75mm thick concrete paving reinforced with minimum RF62 mesh.
• Extent of perimeter paving: Stepless paving for the full perimeter of the house including porches and carports. Widen paving around hot water services, steps, etc. to maintain 1000mm clear width.

• Folding, paralines and extendalines: Provide a path to the clothes line and pave the area under the line.

• Infill right angled corners with triangular paving between 300 to 450mm in length along the path.

3.2.3 Driveway paving
Driveway paving: If not documented, conform to the following:
• Minimum width: 3000mm increasing to 3600mm at the kerb.
• 100 mm thick concrete reinforced with minimum RF62 mesh.
• Tooled joints: Minimum one along the length of the driveway to facilitate future renewal of storm water or sewer pipes.
• Stepless at the junction between carport or garage and at the road cross over.

3.2.4 Dowelled construction joints (DCJ)
Dowelled construction joints: Locate as follows:
• At each corner.
• Intersection of two paths or path to driveway or driveway to crossover, and junctions to steps, landings and ramps.
• Maximum 10m along path or drive.

Refer to Detailed Drawings for Path detail and Dowelled construction joint detail.

3.2.5 Separation of paving
Separate paving abutting footings and structures or services passing through the paving (e.g. stormwater pipes) with 10mm polyurethane foam filler or backer strip finished level with the surface of the paving. This joint is not to be sealed.

3.2.6 Reinstatement of Council footpaths
Where it is necessary to cut Council paths, satisfy the requirements of the Local Government Authority. Where footpaths are damaged or cut, remove and replace slab between tooled joints.

3.3 Retaining walls
Inspection and certification: Arrange for a professional engineer to inspect retaining walls and provide Principal with inspection certificates.

Encroachment: Do not encroach on adjoining property.

Non-conforming structures: Retaining walls not constructed in accordance with the approved design will not be accepted. Rectification work deemed necessary for any retaining wall is at the Contractor’s expense.

3.3.1 Retaining walls combined with fence posts
The first 3 designs referred to in the following table incorporate boundary fence posts into the structure of the retaining wall.
Height | Detail Drawing
--- | ---
up to 250mm | RW1 with 1N12 top and bottom and W6 ties at 1200 centres
up to 600mm | RW3 as detailed on CD11
up to 800mm | RW3A as detailed on CD11 2A
up to 2000mm | CSRW-D1-1-A and CSRW-D2-1 (note fence posts do not form part of the retaining wall structure)

### 3.3.2 Landscaping retaining walls and internal protective fencing

Retaining walls not associated with a boundary: Construct for durability and neat appearance according to the manufacturer’s and engineer’s details.

Fall prevention: Provide 900mm high powder coated tubular steel fencing to retaining walls that exceed 700mm in height.

### 3.4 Site fencing

Comply with Development Approvals and Council guidelines applicable for the area.

Tolerances: Make sure that all fences are true to line, vertical, and placed in their correct position. Maximum divergence of the centre of the fence from the land title boundary is 50mm.

Bottom of fence sheeting: Do not use for retaining purposes and finish clear of the top soil.

Where no front fencing to street: Define the limits of the allotment with 120mm wide x 100mm deep concrete edging strips to front and side boundaries that clearly differentiate ownership.

### 3.5 Retention and detention tanks and stand

On-site above ground stormwater retention system plumbed into the WC cistern: Install as documented.

WC cistern: Connect the toilet nearest to the rainwater tank. If there is more than one toilet, connect remainder to mains water supply.

Retention tank: Direct rainfall from a minimum 50m² roof area, or as per Council requirements, to the retention tank and without additional downpipes.

- Connect overflow to the detention tank.
- Make sure the base is elevated not less than 1100mm above the finished floor level of the building(s) served by the tank.

Tank stand: Galvanized steel designed to the tank manufacturer’s requirements.

- Legs external to the frame to fit a detention tank of the same size under the retention tank.
- Fix to the concrete slab.

Concrete slab: 100mm thick concrete slab reinforced with RF 62 mesh. Make sure it is separate to the perimeter path.

Detention tank: Drain to the stormwater drain, as documented.

- Locate under the retention tank and within the stand, if possible.
- Fix to concrete slab on suitable packers that allow ventilation under the tank.
3.6 **External water service**
Water meters: Provide a meter for each dwelling and tag with a durable tag showing the street address.

For group housing on a common site:
- Principal is responsible for arranging and payment of a suitably sized mains water connection fitted with a manifold system of SA Water meters, unless documented otherwise.
- Tag each dwelling’s manifold meter with a durable tag showing its street address.
- Provide an isolation valve externally mounted on a wall at each dwelling. If a pressure reducing valve is required, co-locate with the isolating valve.
- Provide a separate meter for water lines servicing the common garden areas.

3.7 **Fire service**
Requirement: Provide fire hydrant installations including water supply, piping, valves, hydrant valves, booster valve and suction points for designated group sites.

Fire hydrant system: Supply, install, commission and test the complete fire hydrant system to AS 2419.1 (Fire Hydrant Installations – System Design, Installation and Commissioning).

Authorised products: Provide equipment listed in the *ActivFire Register of Fire Protection Equipment*.

3.7.1 **Fire mains**
Carry out the works in accordance with the requirements of AS/NZS 2032 (Installation of PVC Pipe Systems) and AS/NZS 3500.1 (Plumbing and Drainage – Water Services), the Water Industry Act and Regulations 2012, SA Water, the SAMFS and the Engineer’s design drawings.

Unless documented otherwise, supply and install 100 mm IPLEX Blue brute pipe or equal approved PVC-U pipe (Class PN 16 or greater) complying with AS/NZS 4765 (Modified PVC (PVC-M) Pipes for Pressure Applications) or 100mm DICL pipes.

Check valve: Install a single spring-loaded check valve in the pipework system inside and adjacent to the property boundary in an accessible position.
- Closed position when loaded.
- No branches to other services prior to the check valve.
- Install in a chamber of adequate size to facilitate the changing or servicing of the valve. The chamber and cover are to be designed for the proposed traffic conditions.

Pipes: Lay in accordance with the manufacturer’s recommendations and AS/NZS 2566.1 and AS/NZS 2566.2 (Buried Flexible Pipelines – Structural Design/Installation) complete with concrete thrust blocks, joints, tees, bends and reducers as required.
- Irrespective of any manufacturer’s requirements, lay fire mains minimum 750mm below finished ground level.
Bedding to pipework: An approved free-running coarse compacted sand. Excavate ground adjacent to pipe sockets to allow the full length of the pipe barrel to bear evenly on the compacted bed. Do not commence backfilling until the work is inspected and passed.

Testing pipes: Test with water under mains pressure as soon as the thrust blocks have reached full strength and there is sufficient fill.

Backfill and compact the trenches to the underside of the finished pavement using suitable and approved filling. Fill is to be placed in 100mm layers, watered and compacted by three passes of a vibrating roller, trench wacker or plate.

3.7.2 Fire hydrant and standpipe

Provide for double headed pillar hydrant(s) in a location(s) that complies with the requirements detailed in AS 2419.1 (Fire Hydrant Installations – System Design, Installation and Commissioning). The hydrant standpipe shall be 100mm NB galvanised “Heavy” steel pipe to AS 1074 (Steel Tubes and Tubulars for Ordinary Service), wrapped against corrosion below ground level using “Denso” tape.

Outlets: SAMFS type 64mm bronze globe valves with male hose fitting and cap. Valve outlets are to face in the horizontal plane at a height of between 1000mm and 1200mm above finished ground level.

Paint the standpipe white, valves and caps Fire Brigade red with 2 coats of enamel paint over etching primer.

The Contractor shall be responsible for making arrangements and testing of the complete fire service by the SAMFS and SA Water.

3.8 Stormwater system

Authority requirements: All work on Council property is to be carried out to the local government requirements.

Requirement: Provide stormwater system in accordance with the approved design with pipe construction to AS/NZS 1254 (PVC-U pipes and fittings for storm water and surface water applications) and AS/NZS 1260 (PVC-U pipes and fittings for drain, waste and vent application).

Pipework: Fully solvent glued PVC pipework and fittings. If not documented, provide minimum 90mm PVC-U stormwater grade pipework and 100mm PVC-U sewer class pipework under common driveways.

Wet system downpipes: Extend sealed pipe as a riser to the gutter pop to form the downpipe. 80mm PVC-U sewer class pipe unless detailed otherwise. Install foam insert or similar between the wall brackets and the riser to allow the riser to slide in case of ground movement, and provide a movement joint between the gutter pop and the riser.

Installation: Unless detailed otherwise:

- Connect all downpipes and rainwater tank overflows to the street kerb and gutter.
- Minimum grade for stormwater is 0.5%.
- Provide sufficient sumps and grated inlets to drain all yard and common spaces to ensure stormwater does not pond. For vehicular trafficked areas, use steel or cast iron grates on a pre-cast or in-situ concrete base.

Completion: At practical completion, provide the Principal with an Engineer’s certificate that the installed system complies with the approved design.
3.9 Site lighting

Requirement: Provide site lighting in accordance with the approved design to address night time security for tenants and aid visibility during vehicular movement.

Luminaire selection: Make sure globes and luminaires are:
- Replaceable Type 6 LED.
- Shielded using visors that reduce glare for drivers and keep the upward waste light ratio to 20% or less.

Luminaire location:
- Security lighting and dwelling sensor lights: Mount on the front wall of the dwelling and on bollards if lighting is to aid visibility during vehicular movement.
- Consider environmental factors that influence vertical luminance i.e. fences, landscaping, reflective surfaces etc.
- Avoid obtrusive spill light into private neighbour or tenant spaces.

Bollards: Galvanized steel or aluminium powder coated set in a ground surface level concrete pad.

Cage: Install a cage suitable for the bollard and set in a ground surface level concrete pad. Cage to be galvanized steel or aluminium powder coated. 240V electrical conduit connection to the bollard to the manufacturer’s recommendations.

Mounting gear (luminaire and gear tray): Easy access for maintenance, sealed and rated between IP54 and IP65, and secured with tamper proof bolts or screws.

Controllers: Generally, external lighting is to be controlled by a photo electric cell.

3.10 Site signage and letter boxes

Letter box and installation: Conform to the requirements of Australia Post.

Numbering: Provide dwelling and letter box with a number in a contrasting colour to the substrate and not less than 75mm in height. Locate on the dwelling near the front entrance door between 1300mm and 1800mm from finished ground level.

3.11 Garden areas

Weeds: Manage weeds on-site and council verges during the contract by physical removal and spraying.

Garden areas in rear yards: Place topsoil to a depth of 100mm to 150mm. Grade and lightly compact the topsoil to give an even finish across the site and finish level with the paving. Do not cover the base of fencing.

Front yard: Free of debris, building waste, stones, weeds and rubbish and scarified (i.e. all soil loosened or rotary hoed to break up the compaction caused during construction). Finish 100mm to 150mm below finished level for topsoil and landscaping by the Principal.
Annexure

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Retaining wall details CD 11 (2)
Retaining wall details 600 – 800mm CD11 (2A) A
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<th>DIST</th>
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Area Name: BROADVIEW

CITY OF PORT ADELAIDE ENFIELD

DP 119270

11 KING WILLIAM STREET, KENT TOWN
P.O. BOX 1000 KENT TOWN 5071
Tel (08) 8130 1666   Fax (08) 8362 0099  A.B.N. 93 007 753 988

Alexander & Symonds Pty.Ltd.

PEGGING PLAN

Marks placed on 13/07/2018

DAMIAN JOHN HOLLAND
LICENSED SURVEYOR

Alexander & Symonds Pty.Ltd.
11 KING WILLIAM STREET, KENT TOWN
P.O. BOX 1000 KENT TOWN 5071
Tel (08) 8130 1666   Fax (08) 8362 0099  A.B.N. 93 007 753 988

REFERENCE A18971TL00A1
SANT D/LN 3811

DMH 10/07/2018  DJH PA 1230627
Temperature Control Devices Installation Diagrams

Tempering Valve Installation Diagram - Class 1a dwellings

Thermostatic Mixing Valve Installation Diagram - Class 1b dwellings
Key information for builders and cablers

Supply internal and external conduit paths:
- Use rigid white P23 telecommunications conduits (23mm Internal Diameter) in the trench (connecting to the service drop conduit) and within the house. Glue all joints using solvent cement.
- Ensure the conduits run as straight as possible.
- Install drawstrings in both conduits.
- Fix all conduits securely using conduit saddles or similar.
- Provide a power point (GPO) within 1500mm of the Network Termination Device (NTD) location.
- Each bend radius of the street conduit must be no less than 300mm.
- Each bend radius of the internal conduit must be no less than 100mm.
- Use no more than 3 x 90° (max) bends between draw points.

NBN Co minimum Premises Connection Device (PCD) separations:
Minimum 250mm from services including:
- Electricity, gas* or water meter enclosures
- Water taps or downpipes
Minimum 1.5m side clearance from gas cylinders*
*Check with your local Authorities for their separations.

NTD Enclosure Ventilation Alert:
If the NTD is to be enclosed, then ventilation is required for safety reasons. Refer to NBN Co Residential Preparation and Installation Guide: SDUs and MDUs for specifications.

NBN Co to supply:
- The P23 service drop conduit from pit to 1 meter inside the property.
- The service drop cable to the PCD location.
- The PCD.
- The internal fibre optic cable from the PCD to the NTD.
- The NTD.
- NTD Enclosure with Standard Power Supply (Battery Backup Unit if required during pre-installation).
- All the fibre optic cables.

Preparing new developments for the NBN

It’s important that builders and cablers talk to new homeowners about the telecommunications services they may want to access in their homes and provide guidance on where NBN equipment, phone and data outlets should be located.

Both fixed line internet and telephone services will be delivered over the NBN. The NBN Co equipment should be located in a safe location, where it is convenient to connect telephone as well as computers and internet TV.

It’s important to remember that if customers want to utilise applications like IPTV via Smart TVs in their living room and telework via HD video conferencing in their office they should consider fixed cabling in the home to connect these devices.

Requesting equipment pre-installation

To enable a smooth and efficient connection to the National Broadband Network, builders/developers may request a pre-installation of the in-home equipment supporting NBN access on behalf of all owners/occupiers of the premises.

Pre-installation of the NBN in-home equipment should be arranged to take place at least 20 days ahead of the estimated home completion date.

To request a Pre-Installation of the NBN Equipment, visit: www.nbnco.com.au/preinstallrequest

The following information will be required when submitting a request:

- Confirmation that you have authority of all owners and occupiers to make this request
- Confirmation that you have the agreement of all owners and occupiers to waive their right to be given notice by NBN Co of the pre-installation under Schedule 3 of the Telecommunications Act 1997
- Premises address or addresses
- Developer estate name and stage number
- Confirmation that power is available
- Date by which the premises will be at secure ‘lock up’ stage
- Estimated completion or handover date
- An onsite contact and confirmation that you have their permission to submit their contact details
- Confirmation that an Internal and Lead-in Conduit has been installed in accordance with NBN Co guidelines
- Confirmation whether Power Supply with Battery Backup will or will not be required
- Preferred installation date

For more information:

Phone 1800 OUR NBN (1800 687 626)
Email us at: newdevelopments@nbnco.com.au
PATH DETAIL

10 mm Polyethylene foam filler.

Reinforced concrete paving as specified.

F62 fabric

DOWELLED CONSTRUCTION JOINT DETAIL

10 mm Polyethylene foam filler. Polyurethane Sealant

F62 fabric

Brunswick Sales MFAP3/3 flexible anchor at 500 mm centres. Minimum of two per joint.

NOTE For 100 mm thick driveways with F62 fabric use Brunswick Sales MFAP3/3 anchors at 300 mm centres
RETAINING WALL DETAILS – PART 1

TYPICAL DETAILS ONLY
BUILDERS ENGINEER IS RESPONSIBLE FOR ALL RETAINING WALL DESIGN
ALL RETAINING WALLS TO BE CONTAINED ON THE TRUST’S ALLOTMENT
**TYPICAL CORNER DETAIL**

WELD NEW FENCE POSTS TO RETAINING WALL POSTS WHERE APPLICABLE. FENCING 1.8 M MAX HEIGHT.

**ORIGINAL GROUND SLOPE**

2000 LONG CONCRETE SLEEPERS. REFER TO SLEEPER MANUFACTURER FOR DETAILS.

HOT DIP GALVANIZED STEEL POST. REFER TABLE OPPOSITE FOR DETAILS.

FORM 80MM GAP BETWEEN ALL SLEEPERS BY PLACING A PIECE OF F.R.C SHEET BETWEEN THEM AT ENDS AND MID SPAN.

**CUT**

DOME TOP OF PIER 20MM

CAP 1M WIDTH WITH 100MM CLAY OR PAVERS AT 1 IN 10 SLOPE AWAY AT BASE OF WALL.

FOOTING DEPTH "D"

BORING PIERS AT 2030 MM CENTRES. NOMINAL USE N20 CONCRETE. TYPICAL. REFER TABLE OPPOSITE FOR DETAILS.

**NOTES:**

- CONSULT NEIGHBOUR BEFORE COMMENCING CONSTRUCTION.

- THE FOOTING DESIGN ASSUMES A CLAYEY SOIL PROFILE. NOTIFY ENGINEER IF ROCK, SAND, FILL OR SOFT SILT IS ENCOUNTERED DURING EXCAVATION AS PIER DETAILS MAY NEED TO BE CHANGED.

- REMOVE EXISTING RETAINING WALLS WHERE APPLICABLE. MAKE SURE EXISTING STRUCTURES NEARBY ARE NOT DISTURBED AND ARE ADEQUATELY SUPPORTED DURING WALL CONSTRUCTION.

- FILL 100MM LEVELING PAD BUT ALLOW CONCRETE TO STIFFEN BEFORE PLACING STEEL POSTS.

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE CONCRETE SLEEPERS ARE SUITABLE FOR THE APPLICATION.

- DURING THE BACKFILLING OPERATION AND IF MACHINERY IS DRIVEN WITHIN 1000MM OF THE WALL, PROVIDE TEMPORARY PROPS TO WALL AND SLEEPERS TO PREVENT DAMAGE.

- WHERE POSSIBLE DO NOT ALLOW WATER TO POND NEAR THE BASE OF THE WALL.

- THESE ILLUSTRATIONS ARE INDICATIVE AND GENERAL IN NATURE AND SHALL NOT BE CONSIDERED AS MEASURE ON SITE AND REFER TO SITE SPECIFIC ILLUSTRATIONS AND REPORT FOR ACCURACY.

**SUMMARY**

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**TYPICAL SECTION THROUGH RETAINING WALL**

- REFER ALSO TO DESIGN CALCULATION SHEET CSRW-D1-1

**AMENDMENT**

A 24/11/2014 R.L.  fence location shifted, encroachment allowed, clouded

**CONCRETE SLEEPER RETAINING WALL DESIGN - CLAY SOIL PROFILE, RETAINING CUT (TYPE 1)**

**ADDRESS**

date. 18/03/08  chkd DAP

sign DAP  CWR-D1-1-A
RETAINING WALL (RW3)

50 x 50 RHS
Galvanised Posts
at 2000 Centres.
Refer Specification

Wall cast around Fence Posts
3/Y12 Horizontally.

6Ø Ties at 400 Centres Vertically.

Placement of Y12 Bars see Plan Detail

Piers at 2000 Centres.

RETAINING WALL DETAILS

SOUTH AUSTRALIAN HOUSING TRUST

SCALE NTS
RETAINING WALL (RW3)

RETAINING WALL DETAILS
600 - 800 High

WALL 600-800 HIGH

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<tr>
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all dimensions in mm

Wall extended at least 50mm below lowest ground level

SECTION TYPE 2 WALL

SECTION TYPE 1 WALL PLAN

RECEIVED DATE: 20/05/06

SOUTH AUSTRALIAN HOUSING TRUST

SCALE NTS

DRN DAP