Government of **Western Australia**
Department of **Communities**
Housing

Housing

Landscaping Technical Brief

Lot Number:

Street Number:

Street Name:

Suburb:

Tender Number:

PREFACE

The Landscaping Technical Brief has been developed by the Western Australia Department of Communities, Housing for landscaping works on residential housing projects delivered by the Department of Communities, Housing.

The Landscaping Technical Brief is to be read in conjunction with the Landscaping Design Brief and the landscaping Specification. The requirements of the Specification are generic and may not cover the requirements for every project situation. Where items are not specified in the Specification, the requirements outlined in the Landscaping Technical Brief are to take precedence.

The contractor is responsible for obtaining all regulatory approvals, permits and licenses from the regulatory authority as required for the completion of all works required for the project. Liaise with the relevant authorities to determine approval conditions and requirements, address these to obtain approval as required.

LANDSCAPING SCOPE OF WORKS AND OBJECTIVES

The Landscaping Technical Brief has been developed by the Department of Communities, Housing to provide Landscaping Contractors with a Guide to the Scope of Works and Standards of Landscaping works required by the Department of Communities, Housing in addition to the components documented on landscaping plans and drawings.

The objective of all landscaping works undertaken for the Department of Communities, Housing is to:

- Ensure landscape design optimises functionality, use ability, privacy and amenity and provides for practical establishment and maintenance.
- To ensure enhancement of existing landscape amenity and general streetscape.
- To improve the visual appeal of the development, screen service areas, and provide shade and a comfortable outdoor living environment for residents.
- The landscape design and plant species selected should be native to the local area where possible to compliment the natural landscape, low maintenance and drought tolerant.

Further guidance to achieve these objectives is set out in the Landscaping Design Brief.

REV. DATE	COMMENTS
7.2.2017	Section 1.0 Mowing Edges. Clause 1.2.9 Added: Concrete edging and concrete kerbing.
7.2.2017	Section 3.0 – Landscape Fences and Barriers. Section deleted.
7.2.2017	Section 5.0 – Grass Planting (Instant Turf and Runners) Reference to runners deleted.
7.2.2017	Section 5.0 Grass Planting (Instant Turf and Runners) – Clauses 5.2.4 and 5.2.5 Deleted.
7.2.2017	Section 6.0 Irrigation – Clauses 5.2.3 Amendment: Irrigation Plans to be submitted as part of a tender in PDF format.
7.2.2017	Section 6.0 Irrigation – Clause 6.2.17 Sprinkler concrete surrounds. Added: Provide plastic surrounds to all sprinklers in the Northwest and Goldfields Regions.
7.2.2017	Section 9.0 Care of Landscape Works – Clause 9.2.4 Amendment: As Constructed Landscape drawings to be submitted in PDF format.
13.2.2020	Preface – Ammendment: Document title changed from Landscaping Brief. Landscaping Scope of Works and Objectives – Ammendment: Landscaping Design Brief is now referred to.
13.02.2020	Section 3.0 Plant Selection & Planting – Clause 3.2.9 Amendment: All trees planted on site are to be a minimum size of 45 litre bag and a minimum height of 1.5m at time of planting.
27.03.2020	Section 5.0 Irrigation – Clause 5.2.2 Water Supply – Scheme Water Amendment: Ensure water supply provided comprises of a common meter (subject to the Project Manager's approval), to service all landscaping to common areas within the site. If a common water meter is not provided contact the Superintendent.

1.0 Landscaping Site Works

1.1 Landscaping Objective

- Landscaping is to be used in order to improve the visual appeal of development, screen service areas, and provide shade and a comfortable outdoor living environment for residents.
- Where possible, existing trees should be retained and incorporated into the design of landscaping.
- The landscape design and plant species selected should be low maintenance and drought tolerant.
- Landscaping plays an important part in softening the visual impact of the site.
- Landscaping is provided to screen from roads, public area and nearby residences.
- A landscape plan is approved by the relevant Local Authority.
- **The Landscaping Contractor is to liaise with the Superintendent prior to the removal of any existing natural vegetation from the site.**

Item	1.2 Acceptable Standards	Yes	No	N/A
Earthworks	1.2.1 Where earthworks are shown on drawings, the contractor is required to inspect each site to ascertain how much soil, is to be removed or imported. Excess soil is to be spread evenly over the site or removed.	◯	◯	◯
	1.2.2 The use of Pesticide and Herbicides shall be determined at site inspection and consideration of site conditions and/or as directed by Superintendent. All Pesticide and Herbicides are to be used in compliance with the Health (Pesticides) Regulations 2011 including appropriate signage and spraying requirements under the Health (Pesticides) Regulations.	◯	◯	◯
	1.2.3 As specified or as directed by the Superintendent, slopes shall be sprayed with an approved herbicide in accordance with manufacturer's specifications to kill weed infestation. Sprayed areas shall remain undisturbed for a period of two weeks specified or cleared by the Superintendent.	◯	◯	◯
	1.2.4 All Binders and Wetting agents used, are to be approved by the Superintendent prior to use and to be applied in accordance with the manufacturer's specification.	◯	◯	◯
	1.2.5 Embankments are to be graded to an even slope with a maximum gradient of 1:4.	◯	◯	◯
	1.2.6 All fill and top soil imported to site is to be free of: • clay material; • refuse or materials toxic to humans, animals or plants; and • Stumps, roots or stones larger than 50mm in size.	◯	◯	◯
	1.2.7 Top soil is to comprise of: • an organic content of at least 3% by mass; • pH neither less than 5.5 nor than 7.5; and • a soluble salt extent not exceeding 0.06% of mass.	◯	◯	◯

	• Be uniformly applied to provide an average compacted thickness of 50mm with a minimum compacted thickness of 30mm at any location. Refer to Landscaping specification for references to Australian Standards and top soil particle size table.			
	1.2.8 All rubbish is to be removed from the site to an authorised and controlled dumping or tip location.	◯	◯	◯
Mowing Edges	1.2.9 Mowing edges are to be provided to the extent and colour as specified on the land scape plan and: • Edging: Concrete and concrete kerb standard to AS1369 with Grade N20. Refer to Landscape Specification for construction details. • Mowing edges to be constructed as shown on plan. • Dimensions of the mowing edge to be minimum width of 150mm and depth of 90mm. • Uniformity in width and continuity of shape and smooth surface finish of concrete surface. • Expansion joints to be included at every 6 meter length.	◯	◯	◯
Finished Levels	1.2.10 Supply all fill necessary to establish required levels.	◯	◯	◯
	1.2.11 Finish levels are to be: • 3cm below paths, kerbs, slabs; • At least one brick course below the damp course on buildings; and • Level with height of bitumised or concrete driveways. • Free of undulations, irregularities & wheel ruts.	◯	◯	◯

2.0 Landscape - Walling and Edging

2.1 Performance Requirements

- Conforming to the detail and location shown on plan.
- Firmly fixed in position and present no potential safety hazards.
- Contractor is to give notice where required for any necessary inspections to be carried out prior to or during installation.
- Geotextiles and subsurface drainage in place before backfilling.

Item	2.2 Acceptable Standard	Yes	No	N/A
Walling & Edging	2.2.1 All Walling and Edging products and types are to be constructed and or installed in compliance of the relevant Australian Standards. Refer to Landscaping Specification for referenced standards.	◯	◯	◯
	2.2.2 Timber Products: Provide only timbers with preservative treatment appropriate to the hazard class. Refer to Landscape Specification regarding relevant Australian Standards.	◯	◯	◯
	2.2.3 Dry Stone Walls: Natural Stone of uniform quality sound and free from defects liable to affect its strength, appearance	◯	◯	◯

	and durability. Refer to Landscaping Specification regarding construction requirements.			
	2.2.4 Stone Pitching: Stones to be clean, hard and durable laterite. Size: No dimension less than 150mm or more than 300mm. Mortar mix proportion (cement: lime (hydrated or putty) with and mix of 1:0.1:3. Bedding layer: Gravel, 30mm thick Laying: Lay stones as follows: • Lay stone in close fitting pattern rammed into position, spacing in between stones to be 10mm maximum; • Fill spaces between the stones with mortar to form an even, sealed surface; • Keep exposed rock surface free from mortar.	○	○	○
	2.2.5 Retaining Walls Generally: Where dry stone walls act as retaining walls construct the stonework to be free drainage through the wall. Refer to Landscape Specification for construction requirements.	○	○	○

3.0 Plant Selection & Planting

3.1 Planting Objectives

- All planting and plant species to comply with Landscaping plan.
- All plants as specified are to be supplied by an accredited nursery or other source approved by the Superintendent.
- All plants are to be removed from containers with reduced risk of damage or disturbance to roots.
- No root bound plants will be acceptable.
- No variation of plan species or size unless approved by the Superintendent.
- All plants delivered to and planted on site will display the label confirming the plants botanical name.

Item	3.2 Acceptable Standard	Yes	No	N/A
Planting	3.2.1 Plants are to be placed in a hole dug to the minimum depth of 100mm deeper than the size of the container with top growth vertical and the top of the root ball 100mm to 200mm below soil level.	○	○	○
	3.2.2 An organic soil improver mix is to be added to each new planting.	○	○	○
	3.2.3 An 80cm diameter depression is to be placed around the plant ensuring all roots are covered and protected with soil.	○	○	○
	3.2.4 All plants are to be name tagged.	○	○	○
	3.2.5 All new planting areas are to be fertilized with organic fertilizer as a surface dressing and fertilised with pelleted fowl manure.	○	○	○

	3.2.6 All shrubs and ground covers are to be a minimum of 175 or 200mm pot size unless otherwise specified on the landscape plan.	◯	◯	◯
	3.2.7 The placement of trees on site are to have regard for overhead power lines and other service lines that may be located in the area.	◯	◯	◯
	3.2.8 All trees and Shrubs planted within a grassed area, are required to have plastic stem protectors fitted.	◯	◯	◯
	3.2.9 All trees planted on site are to be a minimum size of 45 litre bag and a minimum height of 1.5m at time of planting.	◯	◯	◯
	3.2.10 All new trees to be supported with 2x2 meter timber stake and secured with durable non-abrasive plastic tie loosely tied to the stake so as to not damage the tree. Stakes are to be firmly placed in the soil ensuring no damage to the plant roots. The timber stake should be positioned on the prevailing wind side of the plant.	◯	◯	◯
	3.2.11 All new shrubs requiring support are to be supported with timber stake and secured with durable non-abrasive plastic tie loosely tied to the stake so as to not damage the shrub. Stakes are to be firmly placed in the soil ensuring no damage to the plant roots. The timber stake should be positioned on the prevailing wind side of the plant.	◯	◯	◯
	3.2.12 All areas which are depicted on the landscape plan as shrub planting areas are to be levelled to: • 100mm below grassed areas. • At least one brick course below the damp course on buildings. • Level with the height of bitumised or concrete driveways. • 50mm below mowing edges. • All weeds, rubbish, rubble and other foreign materials are to be removed and the area raked clean and level.	◯	◯	◯
	3.2.13 Each plant is to be thoroughly watered at the time of planting and subsequent days up to completion of contract.	◯	◯	◯

4.0 Grass Planting (Instant turf)

4.1 Turf Requirements

- The areas depicted on the landscape plan as being grassed shall be planted with Couch grass or Winter Green (Cynoden dactylon).
- The type of turf specified to be used shall consist of a 25mm depth of dense, well rooted, vigorous grass growth in a 25mm depth of topsoil.
- Turf shall be free of weeds, soil pests and diseases and will only be accepted if accompanied by an approved weed, disease and pest free Certification.
- Turf shall be supplied as rolls in 1.5 metre minimum lengths of uniform width, not less than 300mm, and shall be in sound, unbroken condition.

Item	4.2 Acceptable Standard	Yes	No	N/A

Turf Planting	4.2.1 Prior to planting, the area is to be cleared of rubbish, rubble, stones, roots etc.	○	○	○
	4.2.2 The area to be planted with turf is to be moist to a depth of 100mm before planting. Turf is to be planted within 24 hours of being dug and shall be kept continuously moist up to the completion of the landscaping contract.	○	○	○
	4.2.3 Instant turf to be laid in stretcher bond pattern and be uniform in thickness and colour. Instant turf is to be compacted after laying ensuring a consistent and level finish.	○	○	○
	4.3.4 The area shall be lightly rolled to produce an even and level surface free from rubbish, wheel ruts etc.	○	○	○
	4.3.5 All grassed areas and lawns are to be fertilised with a slow release fertiliser and applied in accordance with manufacturer's recommendations.	○	○	○
	4.3.6 The grassed area and all lawns are required to be watered at the time of planting and subsequent days up to completion of contract.	○	○	○
	4.3.7 Turf Reinforcement System where specified is to be installed to the extent shown on plan, and to the manufacturer's recommendations and installation instructions.	○	○	○
	4.3.8 Synthetic Turf where specified is to be installed to the extent shown on plan, and to the manufacturer's recommendations and installation instructions.	○	○	○

5.0 Irrigation

5.1 Irrigation requirements

- Provide automatically controlled, fixed irrigation systems, as documented.
- Provide automatic controllers that are easily programed and include for:
  - Valve boxes
  - Manual cycle and individual controle valve operation
  - Manual on/off operation of irrigation without loss of program
  - 4 on/off cycles per day
  - Day omit
  - 24 hour battery program backup
  - 240V input and 240V output capable of operating 2 control valves simultaneously.
  - Lockable cabinet to external location minimum IP 54 to AS60529.
  - Micro-irrigation systems
  - Drip systems and subsurface drip irrigation systems
- Meet statutory requirements for backflow prevention.
- The construction of the irrigation system shall include the provision by the Contractor of all necessary labour, plant, tools, transport and materials for the correct installation and operation of the system.
- It shall be the Contractor's responsibility to obtain from the pertinent bodies the location of all existing services on the site i.e. Telstra, Water Authority, Western Power, Horizon Power, and to make good at the Contractor's expense any services damaged during construction and also obtain any necessary permits from the various bodies as may be required.

Item	5.2 Acceptable Standard	Yes	No	N/A
Irrigation Systems	5.2.1 Irrigation systems and watering is to comply with WA Water Corporation requirements and local water restrictions. Consideration must be given to the Water Corporation's allowed watering window when using scheme water when calculating the water requirements for planting and trees.	○	○	○
	5.2.2 Water Supply – Scheme Water • The Contractor shall arrange for the design to run off the existing supply to the site. • For grouped sites of 5 dwellings or less, consideration should be given to reticulation of common areas from adjacent dwellings (subject to Project Manager's approval); • For group and multiple dwelling sites of 6 or more dwellings reticulation is to be connected to common property power and water supply (subject to Project Manager's approval). Water for common property landscaping should generally be supplied from the master meter for the development; and • Water supply to be provided from a separate cut in within 2 metres of the master water meter, with a 25mm tested gate valve fitted with an approved backflow prevention device as required. A flow and pressure test is required from the metered supply to ensure that it provides adequate flow and pressure. • If performance and efficiency of the system is affected by inadequate flow and pressure it must be rectified by the Contractor at their cost.	○	○	○
	5.2.3 Irrigation design is required to provide for: • Design aspects must include for safety, reliability of operation, uniformity of watering, maintenance wind effect, water quality etc., when selecting types of equipment used in the irrigation design. • Minimum of 40mm precipitation per week throughout all sections of the irrigation system. • Sprinklers should be spaced no less than the distance recommended by the manufacturer according to the available pressure and volume of water available. • Verge watering: overspray onto roads is not permitted. In verge areas sprinklers are to be installed along the curb facing back into the property. • Sprinklers are not to overspray onto buildings. • Sprinklers installed in garden beds areas abutting driveways and paths shall be pop-up type with a minimum rise of 150mm so as to minimise vandalism and prevent trip hazards. Over spray onto driveways and paths is not permitted. • Trees are to be watered with bubblers or high flow drippers. • The automatic controller HUNTER XC or equivalent approved by the Superintendent, is to be located in a safe secure position. Where common services exist the power connection is to service common	○	○	○

	landscaped areas on site only. Individual power connection is to be provided to each of the individual dwellings to reticulate landscaped areas to each dwelling. The amount of stations in the Controller must be equal to or greater than the number of stations in the reticulation systems. **The use of two or more Controllers is not permitted without the approval of the Superintendent.** • Irrigation plan is required to be included as part of the Contractors tender and to be submitted in PDF format.			
	5.2.4 It is the landscaping contractor's responsibility to obtain an exemption from the Water Corporation (phone 13 10 39) and program the automatic reticulation controller as per the Water Corporation exemption and seasonal guidelines.	○	○	○
	5.2.5 Water supply: From a separate cut in within 2 metres of the master mains water meter, with a 25mm tested gate valve fitted with an approved backflow prevention device.	○	○	○
	5.2.6 All trenching for mainlines and any PVC pipe in garden beds to be of sufficient depth to allow for minimum 300mm of cover in front areas and 200mm in rear area. Trenching to be as straight and level as possible and free of rock and any sharp objects before piping is installed. The contractor will backfill, compact and level all trenches. Excessive subsidence of trenches after the completion of the works shall be the contractor's responsibility of the Contractor. All surplus soil from trenches shall be removed from the site by the Contractor.	○	○	○
	5.2.7 Where any pipes or electrical conduits need to be installed across roadways, driveways or paths where sleeves have not been installed, they must be plunkered or installed by means of horizontal under road boring. Under no circumstances will cutting of sealed surfaces be allowed without express permission from the Superintendent. Plunkering shall be dry, not water jetting. Where any subsidence of crossovers or other structures occur, repairs are to be undertaken by the Contractor at their cost.	○	○	○
	5.2.8 Provide reticulation sleeves to extent of all landscape areas: • 100mm PVC-U sleeve 300mm below driveways, provide sleeve at the junction of driveway and carport floor. • Provide a 90^0 elbow to each end, 300mm out from the ground. • Fit sleeves in one straight length under the driveway to allow draw wires to be easily drawn through the sleeve.	○	○	○
	5.2.9 Locate the retic controller cabinet next to the dwellings meter box. The controller is in installed in a lockable aluminium box (Reticulation cabinet), by a licensed electrician. Ensure solenoid wires can be routed from here to	○	○	○

	the mains water supply water meter without being hindered by concrete, paving or walls. Connection to the mains water meter is to be undertaken by a licensed Plumber. Install a 10 amp 250 volt socket outlet in the cabinet. Supply conduit and draw wire to the reticulation cabinet. Position socket outlet at the bottom right hand corner of cabinet and connect to common services power circuit. Socket outlet label: SUPPLIED BY COMMON SERVICES POWER CIRCUIT.			
	5.2.10 Solenoid, Control Valves and Conduit: • Solenoid to be Richdel 24 volt AC or equivalent approved by Superintendent. • Size to 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. • Locate solenoid valves in a single location and in a single poly box. Field wires protected with electrical conduit or strapped beneath PVC piping. • Country regions – flow control valves installed to each station. • Use a durable poly box that will protect the valves and wire junctions from foot and vehicle traffic. Also avoid, allowing sand to cover the valves and wire junctions. • Use multi-core wire that is protected with an out PVC sheath. Wires should be further protected with electrical conduit, or where possible, they can be strapped beneath PVC piping. • Provide to each valve box: ○ Automatic control valve ○ Isolating valve ○ Filter 100um ○ Pressure reducing valve with 170 kPa outlet pressure. To be constructed of UV resistant high impact plastic with high impact snap lock plastic cover.	○	○	○
	5.2.11 Low voltage solenoid wiring: • Solenoid wiring shall be minimum 1mm multi strand cable, common wire to be black. • All wiring to be laid in trenches under pipe and attached to pipe with insulation tape at regular intervals of not more than 3m. • Where wiring is to be installed in an area where this is no pipe it must be installed in conduit. • The wiring shall be in continuous unbroken lengths from the Controller to the solenoid valves with 1.5m of spare cable coiled at the valve.	○	○	○
	5.2.12 Micro-irrigation systems: • Tubing to comprise of polyethylene micro irrigation pipe. • Connections: Connect micro-tubelaterals with proprietary push in or screw in fittings. • Drippers: Connect directly into piping or provide appropriately sized micro-tubes.	○	○	○

	• Piping: Lay polyethylene micro irrigation pipe on finished ground surface under planting bed mulch and anchor at 1.5m maximum intervals with U shaped stakes.			
	5.2.13 Drip systems: Integrated drip line systems: Tubing with integral drippers inserted into the tube during manufacture. Discrete drip emitter systems: • Tubing: Polyethylene miro-irrigation pipe • Drippers; turbulent flow types, easily dismantled for cleaning. Connect directly into piping or provide appropriately sized micro-tubes. Piping: lay polyethylene micro-irrigation pipe on finished ground surface under planting bed mulch and anchor at 1.5m maximum intervals with u shape stakes. Air release valves: Provide at the highest point in each section to drain the system when flow stops.	○	○	○
	5.2.14 Subsurface Drip Irrigation Systems: Tubing: • Collector and distributer mains: LDPE or PVC pipe. • Dripline LDPE pipe. • Piping: Install at least 150mm below ground. • Automatic line flushing valve: Provide at the furthest point from the valve on the collector main.	○	○	○
	5.2.15 Underground piping and PVC fittings: • Mainline pipework shall be minimum **Class 12 PVC** unless otherwise specified. • All lateral pipework shall be minimum **Class 9 PVC** pipe made to Australian Standard AS4177. PVC Pipe is to be installed according to the manufacturers' recommendations in accordance with AS2032 "Installation of PVC pipe systems". • PVC fittings are to be Class 18 and to be made to Australian AS1477. Changes in direction of PVC pipe using fittings and excessive bending of pipe will **not** be permitted. • Low density polyethylene pipe is to be a minimum of 19mm when used with drippers.	○	○	○
	5.2.16 Sprinklers: • Sprinklers in large, small grassed areas and roll on turf areas should comprise of Richdel or Hunter Series gear driven and domestic pop up type sprinklers respectively or equivalent approved by Superintendent. • In garden beds Pop up type sprinklers similar to Hunter P502.15A and P502.15AF or equivalent approved by Superintendent are to be installed where suitable. All sprinklers other than pop-up types shall be on rigid PVC or flexible semi rigid risers. • All sprinklers along buildings are to be positioned no closer than 60mm.	○	○	○

	• Pop-up sprinklers in garden beds shall have a minimum rise of 150mm. Rigid rises shall have a minimum clearance of 150mm. • **The use of Micro sprays or black poly piping is not permitted without prior approval from the Superintendent.** • Small narrow gardens along driveways, paths etc. Pop-up Hunter strip sprays 5 CST-B or Rainbird 5CST-B or equivalent approved by Superintendent. • Gardens abutting lawn areas, paths etc. **use pop up sprinklers not ridged risers** to avoid trip hazards. • Drippers are to comprise of the pressure compensating variety type, selected to apply adequate water to the shrubs/trees. • The drippers must have capacity to be installed directly online either buried or surface laid, with the option of flexi riser tube to be fitted to the online dripper and placed at the base of the shrubs/trees.			
	5.2.17 Concrete Surrounds: • All sprinklers installed along curbs abutting roads, driveways and parking areas shall have concrete surrounds, minimum size 300 in diameter and 90mm thick. • All sprinklers in lawn/grassed areas to have concrete surrounds, minimum size 200mm in diameter and 80mm thick. **Northwest and Goldfields Region:** • Provide plastic surrounds to all sprinklers.	○	○	○
	5.2.18 Warranty: the contractor shall guarantee the irrigation system against faulty materials and workmanship for a period of twelve (12) months from the date of contract completion.	○	○	○
	5.2.19 Connection to Services: • Connection of services to the main water supply is to be carried out by a licensed Plumber. • Connection of services (retic controller) to the main electrical supply is to be carried out by a licensed Electrician.	○	○	○

6.0 Mulching

6.1 Mulching requirements

- All mulches used for landscape planting shall consist of organic material complying with the requirements of AS4454. Mulch shall be composted or pasteurized. The use of other materials as ground cover shall be as indicated on landscape plan and or approved by Superintendent. Depths: Spread organic mulch to a depth of 75mm, and gravel mulch to a depth of 50mm. Mulch particles sizes should be not greater than 20mm.

Item	6.2 Acceptable Standard	Yes	No	N/A
Mulch	6.2.1 Place mulch to the required depth, clear of plant stems, and rake to an even surface flush with the surrounding finished levels. Spread and roll mulch so that after settling,	○	○	○

	or after rolling. It is smooth and evenly graded between design surface levels sloped towards the base of plant stems in plantation beds, and not closer to the stem than 50mm when using gravel mulches.			
	6.2.2 In mass planting areas, place after the preparation of the planting bed but before planting and other work. In smaller areas (e.g. planter boxes) place after the preparation of the planting bed, planting and other work.	○	○	○
	6.2.3 Extent: Provide mulch to 750mm diameter, to surrounds of plants, planted in driplines and grass areas.	○	○	○

7.0 Verges and Street Trees

7.1 Verge and Street Tree requirements

Definitions:

- The verge: The verge is the area bounded by the back of the kerb (or edge of the road if no kerb exists) and the property boundary.
- Verge treatment: Any soft or hard landscaping installed within the area of the verge including street trees.
- Approved Street Tree: Approved street tree or tree of approved species, for that street planted in a verge in accordance with a street tree installation requirements of the Local Authority.
- The following items are acceptable materials and should be installed in accordance with Local Authority requirements. Acceptable materials should create a dust free, moisture retentive and erosion resistant surface.
- The verge treatment is not to impede pedestrian access.
- Prior to landscaping the verge the Contractor is responsible for locating the position of any existing services in the verge. The location of services can be obtained by contacting DIAL BEFORE YOU DIG on 1100.

Item	7.2 Acceptable Standard	Yes	No	N/A
Verge Treatment & Street Trees	7.2.1 The general level and grade of the verge is not to be altered.	○	○	○
	7.2.2. For verges without a footpath all verge treatments are to be set back 1.5m from the road frontage.			
	7.2.3 Planting of Grass: The turf is to be a species approved by the Local Authority as an approved verge treatment. • The water source is to be sourced from a point beyond the water meter and inside the property through a backflow protected irrigation connection. • Provide reticulation with pipes installed at a minimum depth of 300mm with pop up sprinkler system with conduit placed under footpaths. • Sprinkler system is able to be maintained in a safe condition.	○	○	○
	7.2.4 Stone/rock mulch treatments: • River-washed rounded stone D_{50} < 40mm • Crushed Rock D_{50} < 40mm • Crusher dust D_{50} < 10mm	○	○	○

	7.2.5 Stone aggregates, loose pea gravel or crushed brick are generally not permitted by Local Authorities as verge treatments. Should these materials be specified the Contractor is required to obtain approval by the Local Authority.	○	○	○
	7.2.6 Where gravel treatments are authorised by the Local Authority to be used as verge treatment, it is to be installed to a depth of 100mm thick water bind and compacted so as to not allow any loose material to be spread onto the road, footpath or neighbouring properties.	○	○	○
	7.2.7 Generally, plants selected for inclusion in a landscape planting on a verge must not exceed 0.75m in height. Plants selected must not pose a hazard to the public (i.e. poisonous, irritant), or obstruct pedestrian access.	○	○	○

8.0 Care of Landscape Works

8.1 Care of Landscaper Works and Contractors Responsibilities

- The contractor shall be responsible for the care and maintenance of all landscaping works for the consolidated period of the contract to complete the works.

Item	8.2 Acceptable Standard	Yes	No	N/A
Landscape Works	8.2.1 During and at the completion of the contract of works any dead plants or nominated plants by the Superintendent as unhealthy shall be replaced by the contractor. Replacement plants shall be of similar size and quality and of identical species and variety to the plants being replaced. All costs of replacement shall be borne by the Contractor.	○	○	○
	8.2.2 Weed and grass growth in mulched areas shall be controlled with herbicide, in accordance with manufacturer's instructions during the landscape construction period. Contact of the herbicide with the new plants shall be avoided and any damage or damaged plant material replaced by the Contractor at no cost to the Superintendent.	○	○	○
	8.2.3 At the completion of all landscape works the Contractor is to leave the site clean and tidy and clear all rubbish, rubble, stones, roots etc.	○	○	○
	8.2.4 At the completion of all landscaping works the Contractor is to test and flush sprinkler heads until the entire irrigation and sprinkler system is clean. Automatic controllers should be easily programmed in accordance with WA Water Corporation requirements and local water restrictions and programmed to the required Water Corporation seasonal guideline recommendations for water conservation. The Operations Manual is to be provided to the resident at the completion of the landscaping works. At the completion of the landscaping works the Contractor shall provide drawings of all "as constructed" details showing the position of all mainline piping and control valves. The as	○	○	○

	constructed drawings are to be submitted in PDF format. This cost must be factored into the total contract price.			

10.0 Compliance

10.1 Landscape Design compliance	◯	◯	◯
10.2 Local Authority Compliance	◯	◯	◯

10.3 List areas of non-compliance or where performance provisions have been applied:

11.0 Submission Requirements

Requirement	Details	Yes	No	N/A
Landscape Plan 1:200 Scale	North point and scale bar	◯	◯	◯
	Footprint of Building/(s) and ground levels	◯	◯	◯
	Extent of Landscaped areas	◯	◯	◯
	Legend identifying plant, trees and shrub species	◯	◯	◯
	Verge treatments if applicable	◯	◯	◯
	Irrigation system and extent and location of service connections	◯	◯	◯