Attachment 5 - Landscape Plans

01 vision

_materials palette

Engineered paving for reduced reflection, longevity & aesthetic quality.

engineered paving

integrated paving design

Raising garden areas required for plantings. Can also double as informal seat.

raised garden areas

raised garden areas

Functional furniture. Timber battens where possible for a more natural, softer appearance.

integrated seating

pergola

modular bbq

01 vision

_plant species selection

groundcover

low maintenance, low water requirement native groundcover plantings to 0.5m height. grasses & sedges will withstand the harsh rooftop environment.

dianella caerulea

juncus usitatus

lomandra confertifolia

pennisetum alopecuroides

poa poiformis

shrub

low maintenance, low water requirement native groundcover plantings 0.5-1.0m height. grasses & sedges will withstand the harsh rooftop environment.

banksia spinulosa

casuarina glauca

grevillea bronze rambler

metrosideros thomasii

syzygium australe bush christmas

tree

small native trees for structure and framed views. height to 1.25m.

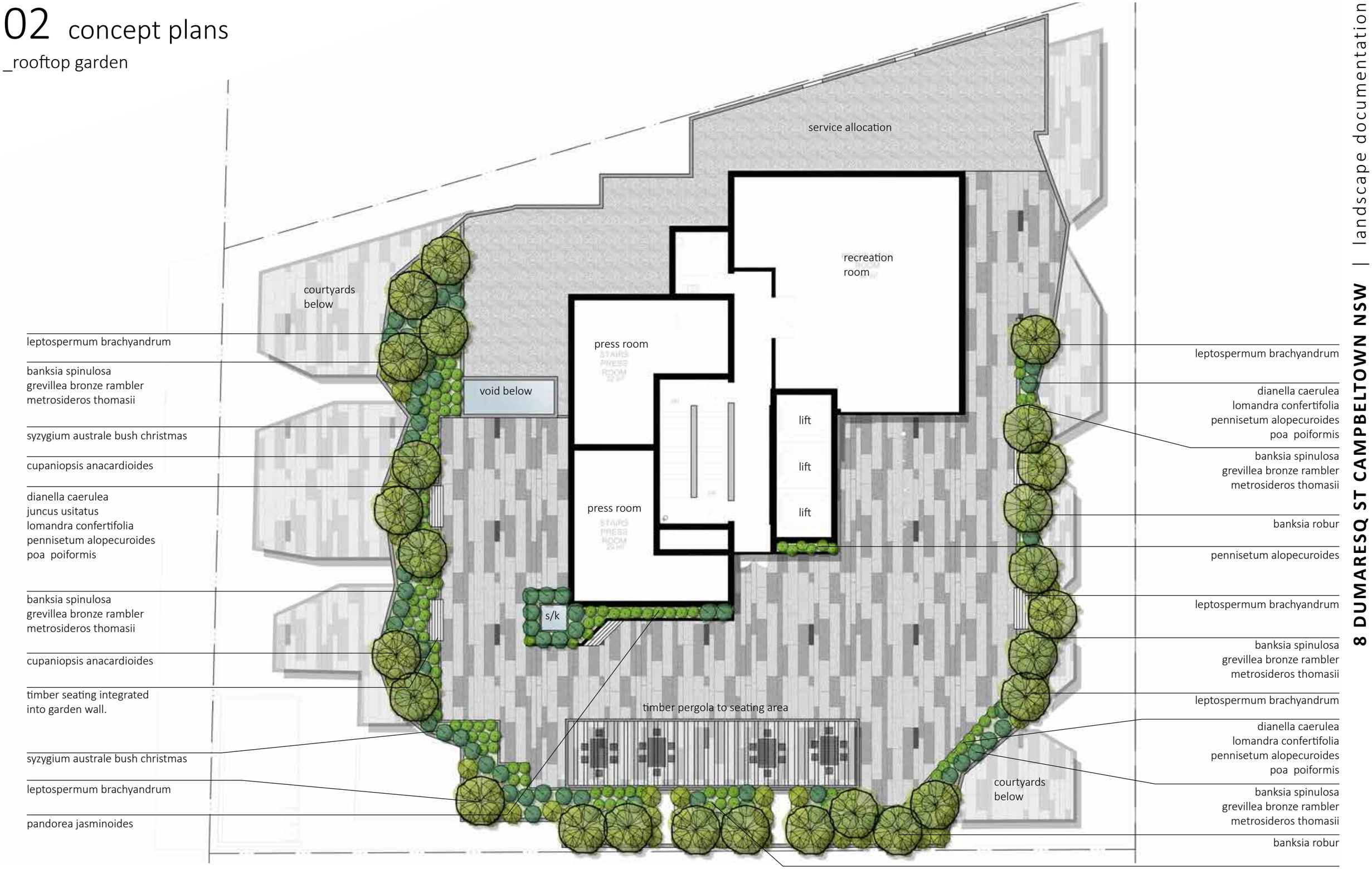
banksia robur

cupaniopsis anacardioides

leptospermum brachyandrum

02 concept plans

_rooftop garden



01 04 rooftop garden plan
1:150 @ A3

02 concept plans

_rooftop garden

01 rooftop garden section
05 1:100 @ A3

02 artist impressions
05 nts

02 concept plans

_podium garden

dianella caerulea
juncus usitatus
lomandra confertifolia
pennisetum alopecuroides
poa poiformis

banksia spinulosa
grevillea bronze rambler
metrosideros thomasii

syzygium australe bush christmas

leptospermum brachyandrum

dianella caerulea
lomandra confertifolia
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poa poiformis

leptospermum brachyandrum

dianella caerulea
lomandra confertifolia
pennisetum alopecuroides
poa poiformis

pool style fencing between
courtyard gardens.

banksia spinulosa
grevillea bronze rambler
metrosideros thomasii

dianella caerulea
lomandra confertifolia
pennisetum alopecuroides
poa poiformis

leptospermum brachyandrum

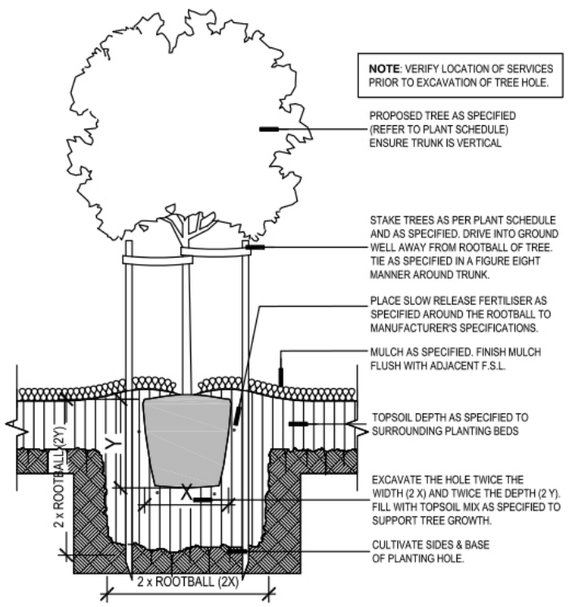
dianella caerulea
lomandra confertifolia
pennisetum alopecuroides
poa poiformis

banksia spinulosa
grevillea bronze rambler
metrosideros thomasii

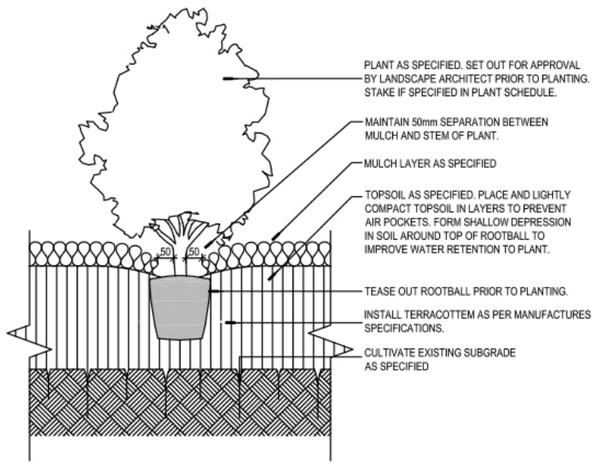
01/06 podium plan
1:150 @ A3

03 construction details

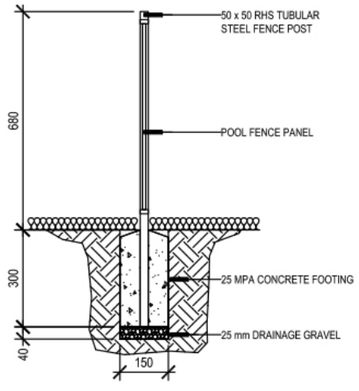
_rooftop garden _podium garden



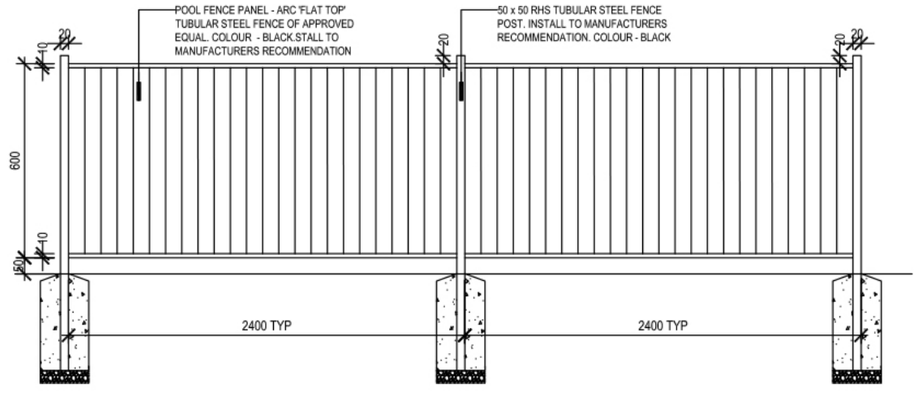
01 06 TREE PLANTING - IN GARDEN BEDS
nts



02 06 TYPICAL PLANTING
nts



SECTIONAL VIEW



ELEVATION

03 06 FENCE TYPE 1 - POOL FENCE
nts

04 specification notes

_rooftop garden _podium garden

SPECIFICATION NOTES

SCOPE OF WORK
The work includes the organisation for and supply of all relevant labour, materials, plant and equipment as required to execute the works.

The scope of work includes but is not limited to the following:
(to be confirmed with the builder)
Trimming of areas to be landscaped
Removal of deleterious material
Cultivation
Supply and spreading of additives
Topsoil
Design and installation of automatic irrigation system
Planting
Mulching
Gravels
Edging
Maintenance

EARTHWORKS
Earthworks shall involve the removal of existing compacted material, the cultivation of subsoil, the supply and mixing in of additives, the supply and spreading of topsoil and the fine grading of such soil and existing soil profiles to all landscaped areas to form the finished levels and profiles.
Install all surfaces with falls of minimum 3% away from the existing buildings, to edges or kerbs as required, to ensure drainage of surface water to the drainage systems around the site.

Finished surfaces shall finish flush with existing pits, covers, kerbs, edges and adjacent surfaces.

Preparation
Eradicate all weeds using environmentally acceptable methods, such as non-residual glyphosate herbicide in any of its registered formulae, at the recommended maximum rate.

Maintain all areas in a weed free state for the duration of the contract and Plant Establishment periods.

Removing compacted material
Excavate and remove from site compacted fill resulting from the building works. Cultivate to 300mm depth all pre existing site material that has been compacted during construction.

Import and spread topsoil
Import and spread premium topsoil mix to make up deficiencies as required and appropriate. Soil shall be free of weeds. Finished soil levels shall allow for mulch to finish 20mm below edges as specified herein.
Imported topsoil shall be Pioneer Garden Soil Mix GM1 SMS or approved equivalent. Apply wetting agent 'Hydroflo' to manufacturers specifications.

MULCH
Mulch to planting areas shall be approved hardwood chip mulch free of soil, stones, weeds, rubbish or any other deleterious materials. Spread mulch to garden bed areas to a depth of 75mm, to finish 20mm below adjacent surfaces. Keep mulch clear of plant stems. Spread mulch following planting and watering in. Avoid mixing of soil and mulch materials.
Do not use recycled garden mulch.

STAKES AND TIES
All trees and shrubs 25L or over shall be staked and tied.

SURFACE DRAINAGE
Refer engineers drawing for finished levels.

ROOT BARRIER
Root Barrier to be installed against back of kerb 600mm minimum depth. No more than 20mm below the Surface. 4m in length, 2m either side of the street tree. prior to back fill to satisfaction of engineers.

PLANTING AREAS
Cultivate insitu soil to 300mm and incorporate additives as specified above as required. Import topsoil as necessary. Finished soil depth to all garden areas shall be 300mm crowned towards centre of beds ensuring positive falls to drainage structures. Use 'Agriform' 10g fertilizer tablets to base of all plant root balls at manufacturer's recommended rate.

PLANTS
Provide plants with the following characteristics:
1. Large healthy root systems, with no evidence of root curl, restriction or damage.
2. Vigorous well-established stock free from pests and diseases, of good form consistent with the pot size, species or variety.
3. Hardened off, not soft or forced, and suitable for planting in the natural climatic conditions prevailing at the site.

Label at least one plant from each species in a batch with a durable, readable tag. Plant stock immediately after it is delivered to site. For stock 25L and over, including ex-ground ~ excavate a hole twice the diameter of the root ball and at least 100mm deeper than the root ball. Loosen compacted sides and base of holes to prevent confinement of root growth. Fill all holes to half depth with water in advance of planting, allowing time for water to soak away. After planting, fill hole with amended/imported soils.

TURF AREAS shall be cultivated to 150mm depth. Spread 50mm layer imported sandy loam topsoil prior to turfing. Mix 1kg/m2 'Terra Firma Organic Life' to topsoil. Turf shall be 'A' Grade couch or equal.

Carry out fine grading of improved soil to all landscaped areas to form finished levels with falls of minimum 3% away from the existing buildings, to edges or kerbs as required, to ensure drainage of surface water to the drainage systems around the site.

CONDUITS
The contractor is responsible for co-ordination with the building contractor to ensure that conduits under proposed paved or concreted areas have been installed. Conduits for irrigation purposes shall be 90mm PVC pipe - top min. 250mm below finished surface levels.

CONCRETE PAVING
Concrete Pavers, quarru texture, to be supplied by Urban Stone and installed to manufacturers recommendations. Paving colour is to match building exterior and spaced at 200mm distances with hardwood chip mulch fill. Ensure pavers are installed on sand base, are level and stable.

INSITU CONCRETE PAVING
Gray coloured concrete with broom finished to be installed to all PT1 (Driveways) and all PT2 (paths and patio) areas. Refer civil/structural engineer for all structural aspects including reinforcement, jointing, curing, compressive strength, etc.

IRRIGATION
Design and construct an automatic irrigation system to supply water to all garden beds, based on the following minimum requirements:
The weekly operating time should be within 8 hours per night.
The contractor is responsible for assessing the pressure and flow available at the site. The pipe sizing and flows per station are to be based on the available supply. The system will be constructed using a minimum of Class 12 PVC (c/w solvent welded joints) upstream of the solenoid valves and PN 25mm poly pipe downstream of the solenoid valves servicing the garden bed areas. Each tree shall have a minimum of Four (4) 7.6 ltr/hr drip emitters evenly spaced around its base. Shrubs shall have a minimum of Two (2) 7.6 ltr/hr drip emitters evenly spaced around its base. All groundcover plants shall have at least One (1) 3.8 ltr/hr drip emitter installed at its base.

Valve boxes should be located in garden beds. Future access to the valve box should be considered when the locations are determined.

Materials
Typical components for the system are listed below or similar approved:
Backflow prevention device.
A line sized pressure vacuum breaker or double check valve back flow prevention device shall be provided. This device shall meet all Local Authority requirements and shall be readily serviceable. Locate discreetly to approved location.

Controller.
A solar powered Toro IRRInet Compatible Irrigation Controller as recommend by the manufactors, complete with the following features:
~ Multi-programmable
~ multiple start times
~ water budget facility

Air/vacuum breaker as per local authority's requirement. Secure (lockable) valve boxes complete with associated fittings. ¾" Disc Filter and 1" Disk Filter (sized as appropriate). ¾" Pressure Reducing Valve (Low Flow). Pressure compensating drip emitters. Line Flushing Valves.

PIPE
Class 12 PVC (c/w solvent welded joints) upstream of all solenoid valves and to all turf spray heads.
Class 12 PVC (c/w solvent welded joints) upstream of the solenoid valves for all drip irrigation areas with 25mm LD poly supply lines downstream of valves.

FITTINGS
All solvent weld fittings are to be Class 18.
All fittings are to be pressure rated.
Fittings downstream of valves shall be "multi-flo" fittings only-no ratchet type clamps shall be used.

VALVES
All automatic valves will be globe configuration, 24 VAC, normally closed with flow control and manual bleed screw. All valves will be housed in a standard plastic valve box with a gravel bed within valve box.

LOW VOLTAGE WIRING
All low voltage wiring shall be suitable for direct burial (generally multi-core with polypropylene outer sheathing and polyethylene inner sheathing). No cable with PVC outer sheathing will be accepted. Wire joins are to be carried out with Scotch DBY direct burial splice kits or approved equivalent. There shall be no joins in the field. All joins shall be carried out at a valve box or in the controller cabinet. Contractor shall make allowance for One (1) spare wire as a backup incase of future damage to wire. Tape all wire to underside of main PVC supply lines in 3 meter increments to protect against damage due to future maintenance or repair.

Rain switch/sensor(es) shall be installed.

NOTE:
The contractor shall provide a plan of the proposed system prior to commencement of work. At Practical Completion, an as built plan (dimensioned) shall be provided showing all pipework, wiring layout and the correct location of all equipment associated with the irrigation system.

PLANTING ESTABLISHMENT
Establish and maintain the works for a period of thirteen (13) weeks from the Date of Practical Completion.
Establishment shall include the care of the contract areas by accepted horticultural practices, as well as rectifying any defects that become apparent in the works under normal 'use'. This shall include, but not be limited to, the following works;
- Repair and/or replace any defects due to failure and/or inferior quality materials and/or workmanship,
- Replace plants that have failed and/or have been damaged or died,
- Weed and pest control,
- Maintain all landscape areas in a neat and tidy condition at all times,
- Maintain fertilising and pruning as required,
- Check and adjust levels to attain those specified by addition or removal of mulch and/or topsoil.
- Hand watering

All planted beds are to be weeded to maintain same in a grass and weed
free condition. Carry out any other work that is specified or is necessary to establish the landscape works in a first class condition.

DEFECTS LIABILITY for all materials and workmanship will extend for a period of 52 weeks from date of practical completion.