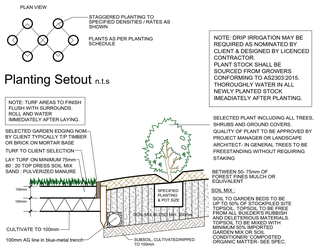

## Plant List

| ID | Botanical Name | Common Name | Pot Size | Mature Height | Mature Spread | Qty |
|---|---|---|---|---|---|---|
| **Trees** | | | | | | |
| CA | Cupaniopsis anacardioides | Tuckeroo | 45L | 10 - 15m | 3.5 - 6m | 4 |
| WF | Waterhousia floribunda | Weeping Lilly Pilly | 45L | 5 - 10m | 3.5 - 6m | 8 |
| **Shrubs** | | | | | | |
| **Ground Covers** | | | | | | |
| **Grasses** | | | | | | |
| LT | Lomandra 'Tanika' | Dwarf mat rush | tube | 0.45 - 0.6m | 0.6 - 0.9m | 86 |
| **Climbers** | | | | | | |




TYPICAL SOIL PREPARATION WITH GARDEN EDGE
Scale: NTS

LANDSCAPE WORK SPECIFICATION
Project:

**PRELIMINARIES**

**1.01 GENERAL**

The following general conditions should be considered prior to the commencement of landscape works:
-The landscape plans should be read in conjunction with the architectural plans, hydraulic plans, service plans and survey prepared for the proposed development.
-All services including existing drainage should be accurately located prior to the commencement of landscape installation. Any proposed tree planting which falls close to services will be relocated on site under the instruction of the landscape architect.
-Installation of conduit for required irrigation, electrical and other services shall be completed prior to the commencement of hardscape works and hardstand pours.
-All outdoor lighting specified by architect or client to be installed by qualified electrician
-Anomalies that occur in these plans should be brought to our immediate attention.
-Where an Australian Standard applies for any landscape material testing or installation technique, that standard shall be followed.

**1.02 PROTECTION OF ADJACENT FINISHES**

The Contractor shall take all precautions to prevent damage to all or any adjacent finishes by providing adequate protection to these areas / surfaces prior to the commencement of the Works.

**1.03 PROTECTION OF EXISTING TREES**

Existing trees identified to be retained shall be done so in accordance with AS 4970-2009. Where general works are occurring around such trees, or pruning is required, a qualified Arborist shall be engaged to oversee such works and manage tree health.
Existing trees designated on the drawing for retention shall be protected at all times during the construction period. Any soil within the drip-line of existing trees shall be excavated and removed by hand only. No stockpiling shall occur within the root zone of existing trees to be retained.

Any roots larger in diameter than 50mm shall only be severed under instruction by a qualified arborist. Roots smaller than 50mm diameter shall be cut cleanly with a saw.

1.8m high temporary fencing shall be installed around the base of all trees to be retained prior to the commencement of landscape works. The location of this fencing will be as per the TPZ defined by the consulting Arborist. If no Arborists report is available, install fence around the drip line of these trees, or a minimum of 3m from the trunk. The fencing shall be maintained for the full construction period.

**1.04 EROSION & POLLUTION CONTROL**

The Contractor shall take all proper precautions to prevent the erosion of soil from the subject site. The contractor shall install erosion & sediment control barriers and as required by council, and maintain these barriers throughout the construction period. Note that the sediment control measures adopted should reflect the soil type and erosion characteristics of the site.

Erosion & pollution control measures shall incorporate the following:
- Construction of a sediment trap at the vehicle access point to the subject site.
- Sediment fencing using a geotextile filter fabric in the location indicated on the erosion control plan or as instructed on site by the landscape architect.
- Earth banks to prevent scour of stockpiles
- Sandbag kerb sediment traps
- Straw bale & geotextile sediment filter.
- Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting

Refer to "Sitewise Reference Kit" as prepared by DLWC & WSROC (1997) for construction techniques

**SOIL WORKS**

**2.01 MATERIALS**

Specified Soil Conditioner - Mass planting in natural ground
The specified soil conditioner for mass planting shall be an organic mix, equal to "Soil conditioner", as supplied by Oz Landscaping Supplies.
Note that for sites where soil testing indicates toxins or extremes in pH, or soils that are extremely poor, allow to excavate and supply 300mm of imported soil mix.

**Specified Soil Mix - Turf**
The specified soil mix for all turf areas shall be a min 75mm layer of imported soil mix consisting of 80% washed river sand (reasonably coarse), and 20% composted organic matter equivalent to mushroom compost or soil conditioner, or other approved lawn top dress.

**Site Topsoil**
Site topsoil is to be clean and free of unwanted matter such as gravel, clay lumps, grass, weeds, tree roots, sticks, rubbish and plastics, and any deleterious materials and materials toxic to plants. The topsoil must have a pH of between 5.5 and 7.

**2.02 INSTALLATION**

**a) Testing**
All testing is to be conducted in accordance with AS 4419-2003 Soils for landscaping and garden use for an in depth soil analysis for pre-planting and diagnostic assessment of the soil.
Tests shall be taken in several areas where planting is proposed, and site soil modified to ensure conditions are appropriate for planting as stated above.

Note that a soil test conducted by "SESL Australia" or approved equal shall be prepared for all commercial, industrial and multi-unit residential sites. The successful landscape contractor shall implement the recommendations of this test.

**b) Set Out of Individual Trees & Mass Planting Areas**
All individual tree planting positions and areas designated for mass planting shall be set out with stakes or another form of marking, ready for inspection and approval. Locate all services.

**c) Establishing Subgrade Levels**
Subgrade levels are defined as the finished base levels prior to the placement of the specified material (i.e. soil conditioner). The following subgrade levels shall apply:
-Mass Planting Beds - 300mm below existing levels with specified imported soil mix.
-Turf areas - 100mm below finished surface level.
Note that all subgrades shall consist of a relatively free draining natural material, consisting of site topsoil placed previously by the Civil Contractor. No builders waste material shall be acceptable.

**d) Subgrade Cultivation**
Cultivate all subgrades to a minimum depth of 150mm in all planting beds and all turf areas, ensuring a thorough breakup of the subgrade into a reasonably coarse tilth. Grade subgrades to provide falls to surface and subsurface drains, prior to the placement of the final specified soil mix.

**e) Drainage Works**
Install surface and subsurface drainage where required and as detailed on the drawing. Drain subsurface drains to outlets provided, with a minimum fall of 1:100 to outlets and / or service pits.

**f) Placement and Preparation of Specified Soil Conditioner & Mixes.**
-Trees in turf & beds - Holes shall be twice as wide as root ball and minimum 100mm deeper - backfill hole with 50/50 mix of clean site soil and imported "Organic Garden Mix" as supplied by Oz Landscape Supplies or approved equal.
-Mass Planting Beds - Install specified soil conditioner to a compacted depth of 100mm. Place the specified soil conditioner to the required compacted depth and use a rotary hoe to thoroughly mix the conditioner into the top 300mm of garden bed soil. Ensure thorough mixing and the preparation of a reasonably fine tilth and good growing medium in preparation for planting.
-Turf Areas - Install specified soil mix to a minimum compacted depth of 75mm
Place the specified soil mix to the required compacted depth and grade to required finished soil levels, in preparation for planting and turfing.

**PLANTING**

**3.01 MATERIALS**

**a) Quality and Size of Plant Material**
In General, the principles & standards outlined in "Specifying Trees - a guide to assessment of tree quality" by Ross Clark will be demanded in the quality of all planting stock specified. These principles include, but are not limited to:
*Above - Ground Assessment:*
The following plant quality assessment criteria should be followed:
*Plant true to type, Good vigour and health, free from pest & disease, free from injury, self-supporting, good stem taper, has been pruned correctly, is apically dominant, has even crown symmetry, free from included bark & stem junctions, even trunk position in pot, good stem structure Below - Ground Assessment:*
*Good root division & direction, rootball occupancy, rootball depth, height of crown, non-auckering* For further explanation and description of these assessment criteria, refer to Ross Clark's book.

All Plant material shall be to the type and size specified. No substitutions of plant material shall be permitted without written prior approval by the Landscape Architect. No plant shall be accepted which does not conform to the standards listed above.

**b) Fertilizers**
Fertilizers shall be approved slow release fertilisers suitable for the proposed planting types. Note that for native plants, specifically Proteaceae family plants including Grevillea species, low phosphorus fertilizers shall be used.

**c) Mulch**
Mulch shall be leaf litter mulch equal to "Cypress Mulch" as supplied by Flower Power. Mulch shall be completely free from any soil, weeds, rubbish or other debris.
Mulch to roof gardens in high wind areas to be 20mm pebbles installed on weedmat, or heavy duty erosion control matting equivalent to 750gsm Jute Matting pegged per manufacturers instructions.

**d) Turf**
Turf shall be "Kakadu" Buffalo or equivalent (unless stated otherwise), free from any weeds and other grasses, and be in a healthy growing condition.

**3.02 INSTALLATION**

**a) Setting Out**
All planting set out shall be in strict accordance with the drawings, or as directed. Note that proposed tree planting located near services should be adjusted at this stage. Notify Landscape Architect for inspection for approval prior to planting.

**b) Planting**
All plant material shall be planted as soon after delivery as possible. Planting holes for trees shall be excavated as detailed and specified. Plant containers shall be removed and discarded, and the outer roots gently teased from the soil mass. Immediately set plant in hole and backfill with specified soil mix, incorporating the approved quantity of fertiliser for each plant type. Ensure that plants are set plumb vertically and root balls set to the consolidated finished grades detailed on the drawings. Compact the backfilled soil and saturate by hand watering to expel any remaining air pockets immediately after planting.

**c) Staking and Tying**
Trees shall be of a quality that, when planted, are freestanding, without the aid of stakes or ties, else they will be rejected.

**d) Mulching**
Mulch should be spread so that a compacted thickness of 75mm is achieved after settlement in all planting beds and around each individual plant. Apply immediately following planting and watering in, ensuring that a 50mm radius is maintained around the trunk of each plant.
In all planter boxes, mulch to finish between 25-50mm below top of planter.
There shall be no mixing of soil and mulch material.

**e) Turfing**
Moisten soil prior to the turf being laid. Turf shall be neatly butt jointed and true to grade to finish flush with adjacent surfaces. Incorporate a lawn fertilizer and thoroughly water in. Keep turf moist until roots have taken and sods/rolls cannot be lifted. Keep all traffic off turf until this has occurred. Allow for top dressing of all turf areas. All turf shall be rolled immediately following installation.

**f) Garden edging**
The Contractor shall install garden edging to all mass planting beds adjoining turf or gravel mulched areas, and where required. The resultant edge shall be true to line and flush with adjacent surfaces.
Garden Edging: *to be Treated Pine Timber edging (Unless otherwise specified by Client).*

**g) Root Barrier**
Ensure root barrier is installed to all edges/junctions between the garden bed and adjacent hard surfaces including but not limited to retaining walls, carparking, paths, underground pipes and tanks and buildings within a 3m radius of the trunk of any proposed trees.
Root barrier: *Equivalent to treemax root barrier.* Install root barrier to manufacturer's instructions.

**h) Stepping Stones**
Precast concrete slabs of 400-500mm SQ (or similar approved dimensions) shall be placed as indicated on plan at 200mm intervals. Finish and colour of stepping stones shall be nominated by the client. Install stepping stones as detail, flush with adjoining elements. Compact area under stepping stones locally where stepping stones occur in garden areas and generally where stepping stones occur in pea gravel/decorative pebble areas

**i) Pea Gravel/Decorative Pebble**
Compact area for pea gravel and Decorative Pebble installation with vibrating plate compactor before installation of pea gravel or Decorative Pebble.

Gravel/Pebbles are to be installed loose to the gap between the installed stepping stones. They are to finish flush with the adjacent paved surface and be topped up should they settle after installation. At the edges of a stepping stone and gravel/pebble area the gravel/pebble is to be retained by a garden edge.

Gravel Inlays: *Equivalent to 10mm Cowra White pebble*
Pebbles: *Equivalent to 20mm Cowra White pebble*

**HARDSCAPE WORKS**

**4.01 GENERAL**

The Contractor shall undertake the installation of all hardscape works as detailed on the drawing, or where not detailed, by manufacturers specification.
- *Paving - refer to typical details provided, and applicable Australian Standards.*
- *Permeable paving may be used as a suitable means of satisfying Council permeable surface requirements, while providing a useable, hardwearing, practical surface.* In most instances, the client shall nominate the appropriate paving material to be used.

Australian Standards shall be adhered to in relation to all concrete, masonry & metal work. Some details are typical and may vary on site. All hardscape works shall be setout as per the drawings, and inspected and approved by the Landscape Architect prior to installation. All workmanship shall be carried out in a tradesman-like manner. Any queries or problems that arise from hardscape variations should be bought to the attention of the Landscape Architect.

**IRRIGATION WORKS**

**5.01 GENERAL (PERFORMANCESPECIFICATION)**

*New irrigation systems to planting areas shall be a Commercial Grade Irrigation System conforming to AS 3500 & the latest Sydney Water Code*

The irrigation system shall be installed prior to all planting works. It shall incorporate a commercially available irrigation system, with dripper lines for all trees, and suitable jet sprinkler heads for the shrub species specified. It shall also incorporate a suitable back flow prevention device for the scale of works, an in-line filter, check valves, and suitable high and low density poly hose fittings and PVC piping to achieve flow rates suitable for specified planting.

The landscape contractor shall check the existing pressure available from the ring mains and size irrigation piping to suit. Supply shall be from local hose cock where available. All piping and fittings are to be buried 50mm below the finished soil levels in garden bed areas, and secured in position at 5m centre with galv wire pins. Sizing of pipes shall be done so as to ensure that the working pressure at the end of the line does not decrease by more than 5%.
Upon completion of installation, the system shall be tested and all components are to be satisfactorily functional and operational prior to approval. Should any defect develop, or the capacity or efficiency of the system decline during the agreed maintenance system, then these faults shall be immediately rectified.

Detailed drawings of the entire proposed irrigation system shall be made available to the client for records and future maintenance of the system.

**CONSOLIDATION AND MAINTENANCE**

**6.01 GENERAL**

The consolidation and maintenance period shall be 12 months beginning from the approved completion of the landscape works (Practical Completion) except in the case of street trees, which shall be maintained for a period of 24 months. A qualified landscape maintenance contractor shall undertake the required landscape maintenance works. Consolidation and maintenance shall mean the care and maintenance of Contracted works by accepted landscaping or horticultural practices, ensuring that all plants are in optimum growing conditions and appearance at all times, as well as rectifying any defects that become apparent in the contracted works.

This shall include, but not be limited to, the following items where and as required:

- Watering and planting and lawn areas / irrigation maintenance.
- Clearing litter and other debris from landscaped areas.
- Removing weeds, pruning and general plant maintenance.
- Replacement of damaged, stolen or unhealthy plants.
- Make good areas of soil subsidence or erosion.
- Topping up of mulched areas (every 6 months).
- Spray / treatment for Insect and disease control.
- Fertilizing with approved fertilizers at correct rates.
- Mowing lawns & trimming edges each 14 days in summer or 18 days in winter
- Maintenance of all paving, retaining and hardscape elements.

On the completion of the maintenance period, the landscape works shall be inspected and at the satisfaction of the superintendent or landscape architect, the responsibility will be signed over to the client.

## REVISION

| REV | DESCRIPTION | DES | CHK | APPD | DATE |
|---|---|---|---|---|---|
| E | GENERAL AMENDMENTS | LP | | | 15.08.22 |
| D | GENERAL AMENDMENTS | LP | | | 04.05.22 |
| C | GENERAL AMENDMENTS | LP | | | 07.04.22 |
| B | ISSUE FOR DA SUBMISSION | LP | | | 26.11.21 |
| A | ISSUE FOR REVIEW | LP | | | 15.11.21 |

MERAKI GREEN
LANDSCAPE ARCHITECTURE

| | |
|---|---|
| DESIGNED | LP |
| CHECKED | |
| DRAWN | |
| CHECKED | |
| APPROVED | |
| RPEQ No. | DATE |

AURIZON APPROVALS
REVIEWED
DESIGN LEADER DATE
AUTHORISED
ENGINEERING MANAGER DATE

AURIZON



DRAWING TITLE

# LANDSCAPE PLAN

# PROPOSED DEVELOPMENT

# Aurizon/Hexham Operation Depot HEXHAM

STATUS
PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

PROJECT No. 2180

DRAWING NUMBER AUR-E-LP01A-7490

REVISION E