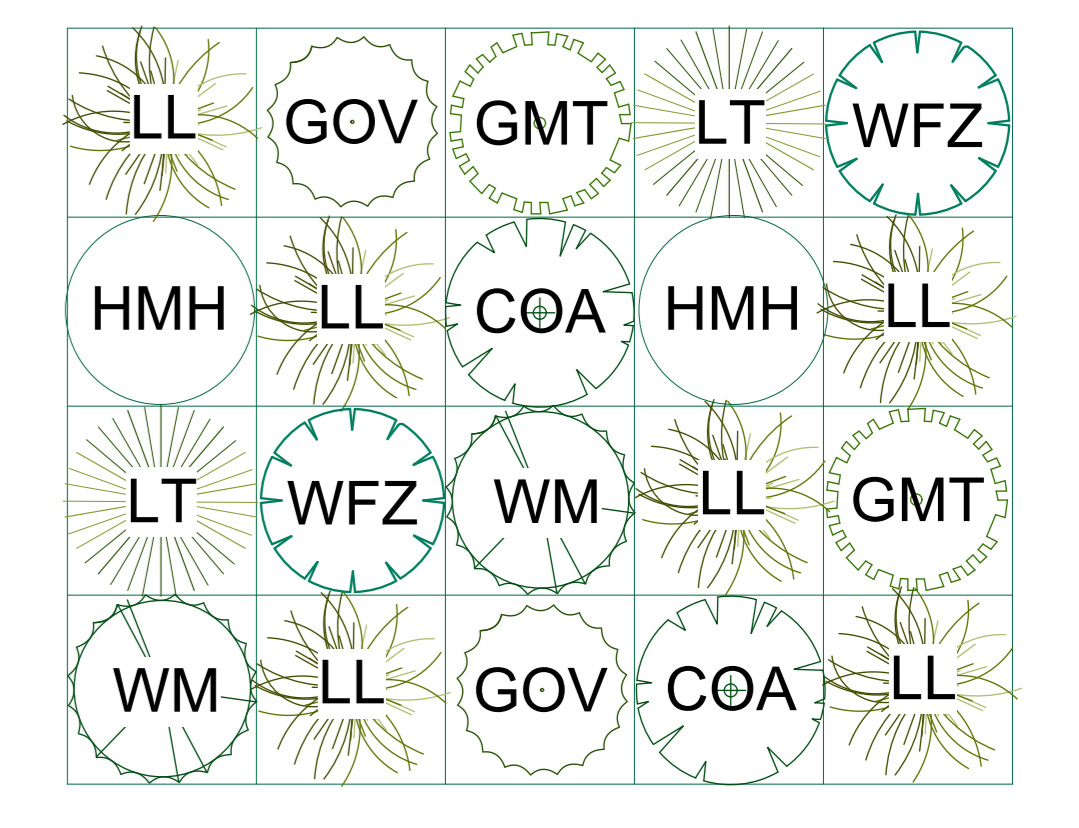
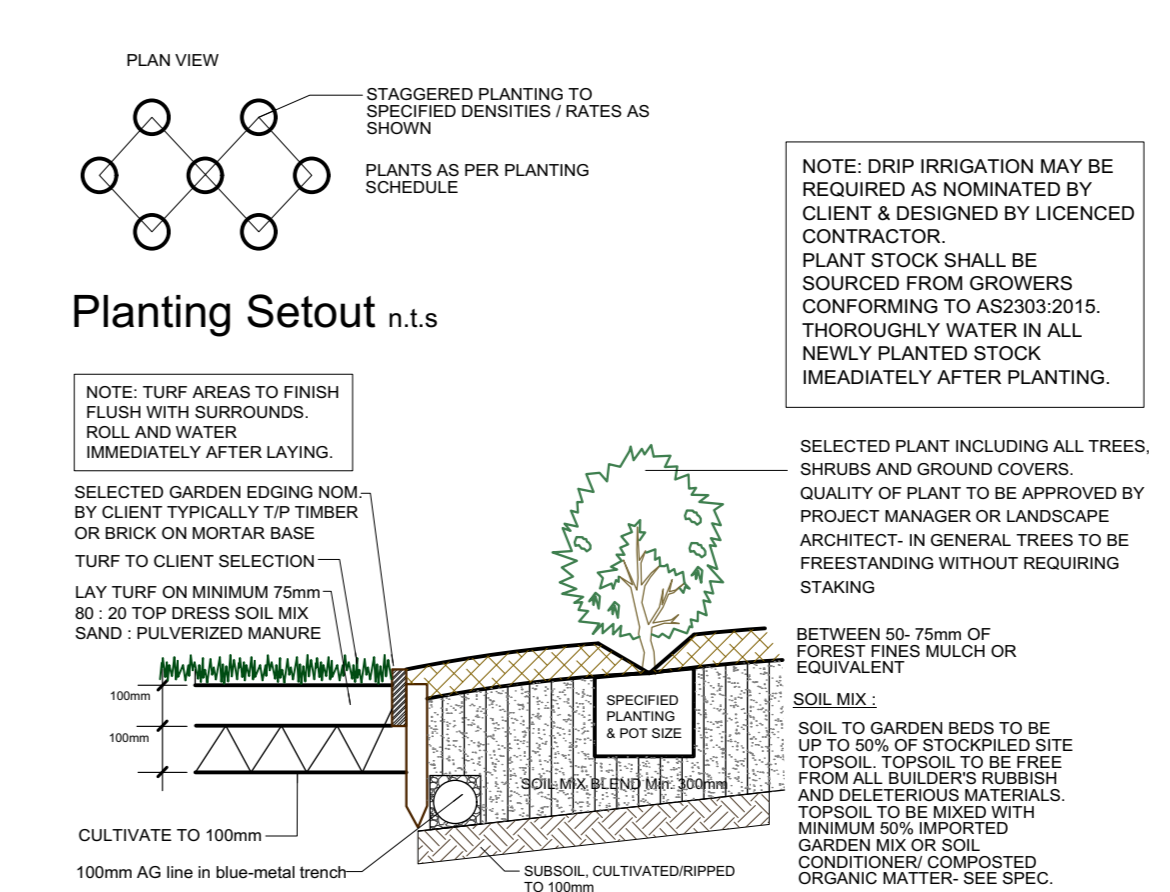


ID	Botanical Name	Common Name	Pot Size	Mature Height	Mature Spread	Qty
Trees						
CA	Cupressus amarcordifolia	Tuckeroo	45L	10 - 15m	3.5 - 6m	9
ER	Elaeocarpus reticulatus	Blueberry Ash	45L	5 - 10m	3.5 - 6m	15
GF	Glochidion Ferdinandii	Cheese Tree	45L	8m	5m	5
WF	Waterhouseia floribunda	Weeping Lily Pilly	45L	5 - 10m	3.5 - 6m	10
ZGV	Zelkova serrata 'Green Vase'	Green Vase	45L	12m	10m	7
Shrubs						
COA	Correa alba	Correa alba	200mm	1m	1m	55
CyC	Cyathea cooperi	Lacy Tree Fern	200mm	12m	4m	20
GOV	Goodenia ovata	Hop Goodenia	140mm	1.2-5m	1-3m	113
GR	Grevillea 'Gold Rush'	Gold Rush	200mm	1m	1m	22
HMH	Hardenbergia 'Mini-Ha-Ha'	Mini-Ha-Ha	140mm	0.3 - 0.45m	1.5m	239
WF	Westringia fruticosa	Coastal Rosemary	200mm	1.5m	1.5m	72
WFZ	Westringia fruticosa 'Zena'	Zena Compact Native Rosemary	200mm	1m	1m	56
WM	Westringia mundi	Mundi	200mm	0.6m	1.5m	128
Ground Covers						
AA	Asplenium australasicum	Bird's-Nest Fern	200mm	0.9 - 1.5m	2.0 - 3.5m	66
BSL	Blechnum 'Silver Lady'	Silver Lady	200mm	0.75 - 0.9m	0.3 - 0.6m	45
GMT	Grevillea 'Mt Tamboritha'	Woolly Grevillea	140mm	0.3 - 0.45m	1.2 - 2.0m	113
VH	Viola hederacea	Native Violet	100mm	0.0 - 0.3m	1.2 - 2.0m	45
Grasses						
LT	Lomandra 'Tankia'	Dwarf mat rush	140mm	0.45 - 0.6m	0.6 - 0.9m	337
LL	Lomandra longifolia	Spiny-headed Mat-Rush	tube	0.75 - 0.9m	0.9 - 1.2m	242
Climbers						



NOTE: 4mx5m SETOUT INDICATIVE OF PATTERN AND SPACINGS. PATTERN TO BE TESSELLATED AND FLIP/ROTATED AS DESIRED TO GIVE VARIETY TO ADJACING AREAS. SET OUT ALL PLANTS BEFORE PLANTING. ADJUST NUMBERS TO GROUPINGS TO SUIT QUANTITIES ON PLANT SCHEDULE AS REQUIRED.

LANDSCAPE WORK SPECIFICATION
Project:
PRELIMINARY

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 free planting shall take into account the location of existing services and any proposed free planting shall take into account the location of existing services and any proposed free planting shall take into account the location of existing services.
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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 for 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 staking 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 Arborists report is available, install fence around the drip line of these trees, or a minimum of 3m from the trunk. The fence 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 fabric in the locations indicated on the erosion control plan or as instructed on site by the landscape architect.
- Earth banks to prevent runoff of silt.
- Sandbag bank sediment traps.
- Stone bank & geotextile sediment filter.
- Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting.

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

2.01 MATERIALS
2.01.1 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 material specified. These principles include, but are not limited to:
- Above-ground assessment.
- The following plant quality assessment criteria should be followed:
- Plant free to type, good vigour and health, free from pest & disease, free from injury, self-supporting, good stem type, has been pruned correctly, is securely dominant, has even crown symmetry, free from induced bark & stem junctions, even trunk position in soil, good structure & form.
- Crown assessment:
- Good root division & direction, rootball occupation, rootball depth, height of crown, non-suckering, no 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. The edges of the accepting stores which does not conform to the standards listed above.

2.01.2 Fertilizers
Fertilizers shall be approved slow release fertilizers suitable for the proposed planting crop. Note that for native plants, specifically Proteaceae plants including Grevillea species, low phosphorus fertilizers shall be used.

2.02 INSTALLATION
2.02.1 Site Topsoil
Site topsoil 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.

2.02.2 Testing
All testing to be conducted in accordance with AS 4149:2003 Soils for landscaping and garden use for an in depth soil analysis for pre-planting and diagnostic development 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 to stated above.
Note that a soil test conducted by "BSL 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.

2.02.3 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.

2.02.4 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 subgrade shall consist of a mix of clean soil and imported natural material, consisting of site topsoil placed previously by the Civil Contractor. No builders waste material shall be acceptable.

2.02.5 Subgrade Cultivation
Cultivate all subgrade to a minimum depth of 150mm in all planting beds and all turf areas, ensuring a thorough break-up of the subgrade into a reasonably coarse with Grade subgrade to provide full surface and subgrade aeration, prior to the placement of the first specified soil mix.

2.02.6 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.

2.02.7 Placement and Preparation of Specified Soil Conditioner & Mixes
- Turf & Turf & beds: Holes shall be twice as wide as root ball and minimum 100mm deeper - backfill top with 50/50 mix of clean soil and imported 'Organic Garden Mix' as supplied by OZ Landscaping 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 ground bed soil. Ensure thorough mixing and the preparation of a reasonably fine lilt and good growing medium as preparation for planting.
- Turf Areas: Install specified soil mix to a minimum compacted depth of 150mm. Place the specified soil mix to the required compacted depth and grade to required finished soil levels, in preparation for planting and sowing.

2.02.8 Mulch
Mulch shall be leaf litter mulch equal to "Cypress Mulch" as supplied by Power Power. Mulch shall be completely free from any soil, weeds, rubbish and any deleterious materials and materials toxic to plants. The topsoil must have a pH of between 5.5 and 7.

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

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

2.02.11 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 washed from the soil mass. Immediately set plant in hole and backfill with specified soil mix, incorporating the approved quantity of fertilizer for each plant type. Ensure that plants are set plumb vertically and not balls set in the consolidated finished grade detailed on the drawing. Compact the backfilled soil and saturate by hand watering to expel any remaining air pockets immediately after planting.

2.02.12 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.

2.02.13 Turning
Mulch should be spread so that a compacted thickness of 75mm is achieved after settlement of 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.

2.02.14 All plant material, mulch & earth to finish between 25-50mm below top of planter. Turf shall be no mixing of soil and mulch material.

2.02.15 Turf
Mulch shall be laid prior to the turf being laid. Turf shall be neatly but jointed and true to grade in finish flush with adjacent surfaces. Incorporate a lawn fertilizer and thoroughly water in. Keep turf moist until roots have taken and sods can 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.

2.02.16 Garden edging
The Contractor shall install garden edging to all mass planting beds adjoining turf or adjacent hard surfaces including but not limited to retaining walls, carpens, paths, underground pipes and tanks and buildings within a 3m radius of the trunk of any proposed trees.
Equivalent to Treemax roof barrier. Install roof barrier to manufacturer's instructions.

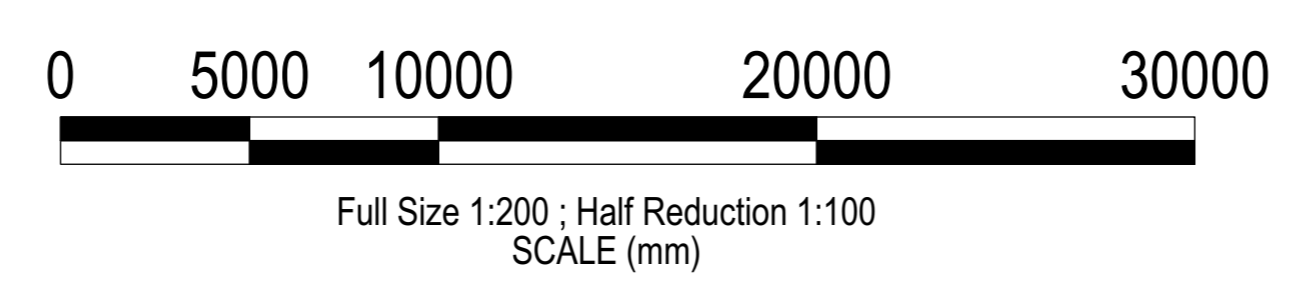
2.02.17 Sleeping Stones
Sleeping stones shall be of 400-500mm SQ (or similar approved dimensions) shall be placed as indicated on plan at 200mm intervals. Finish and colour of sleeping stones shall be determined by the client. Install sleeping stones as detail. Finish with adjoining elements. Compact area under sleeping stones locally where stepping stones occur in pebbles or mulch areas (level 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 landscape elements.
On the completion of the maintenance period, the landscaper works shall be inspected and at the satisfaction of the superintendent or landscape architect, the responsibility will be signed over to the client.

2.02.18 Hardscapes WORKS
4.01 GENERAL
The Contractor shall undertake the installation of all hardscapes works as detailed on the drawing, or where not detailed, by manufacturer's specifications.
- 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 suitable, 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 hardscapes works shall be set out 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 hardscapes variations should be brought to the attention of the Landscape Architect.

5.01 GENERAL (PERFORMANCE SPECIFICATION)
New irrigation systems to planting areas shall be a Commercial Grade Irrigation System conforming to AS 3502 or 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 100mm lines for all trees, and suitable for the specific needs of the shrub species specified. It shall also incorporate a suitable back flow prevention device for the system of works, an in-line filter, check valves, and suitable high and low density poly pipe fitting 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 foot hose cock where available. All piping and fittings are to be buried 50mm below the finished soil level in garden bed areas, and secured in position at 50mm 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 satisfactory functional and operational prior to approval. Should any defect develop, the capacity or efficiency of the system, which shall be maintained for a period of 24 months. A qualified detailed drawings of the entire proposed irrigation system shall be made available to the client for records and future maintenance of the system.

6.01 GENERAL
The completion and maintenance period shall be 12 months beginning from the approved condition of the specified construction work (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. Consultation 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 all planting and lawn areas / irrigation maintenance.
- Clearing litter and other debris from landscaped areas.
- Removing weeds, pruning and general plant maintenance.
- Replenishment of organic mulch as detail. Finish with adjoining elements.
- Make good areas of soil subsidence or erosion.
- Trimming all mulched areas (level 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 landscape elements.
On the completion of the maintenance period, the landscaper works shall be inspected and at the satisfaction of the superintendent or landscape architect, the responsibility will be signed over to the client.



REV	DESCRIPTION	DES	CHK	APPD	DATE
C	GENERAL AMENDMENTS	LP			07.04.22
B	ISSUE FOR DA SUBMISSION	LP			26.11.21
A	ISSUE FOR REVIEW	LP			15.11.21



DESIGNED	LP	AURIZON APPROVALS
CHECKED		REVIEWED
DRAWN		
CHECKED		DESIGN LEADER DATE
APPROVED		AUTHORISED
RPEQ No.	DATE	ENGINEERING MANAGER DATE



DRAWING TITLE
LANDSCAPE PLAN
PROPOSED DEVELOPMENT
Aurizon/Hexham Operation Depot
HEXHAM

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PRELIMINARY ISSUE NOT FOR CONSTRUCTION	2180	AUR-E-LP01A-7490	C