



LEGEND

- Z1** ZONE 1 - NORTHERN BOUNDARY
SUPPLEMENTARY PLANTING
- Z2** ZONE 2 - BUND PLANTING
- Z3** ZONE 3 - EASEMENT PLANTING
CLIENT TO SEEK PERMISSION FROM
LANDOWNER TO AUGMENT EXISTING
VEGETATION
- Z4** ZONE 2 - BUND PLANTING
TO BE PROVIDED IF VEGETATION ON
ADJACENT RMS LAND IS REMOVED

VEGETATION MANAGEMENT

STRONGLY RECOMMEND SOIL TESTING DUE TO THE POOR
CONDITION OF EXISTING TREES AND TO ENSURE
ADEQUATE ESTABLISHMENT OF PROPOSED SPECIES

REFER TO SPECIFICATIONS FOR FURTHER DETAIL

ZONE 1 - NORTHERN BOUNDARY - SUPPLEMENTARY PLANTING

- EXISTING CONDITION:
- EXISTING TREES WITH SOME IN POOR CONDITION
 - LOW GROUND COVERS PRESENT
 - WEED SPECIES PRESENT
- PROPOSED WORKS:
- REMOVE WEED SPECIES
 - MONITOR EXISTING TREES AND WHERE HEALTH DOES NOT IMPROVE DURING FIRST 3 MONTHS OF MAINTENANCE PERIOD REMOVE AND REPLACE WITH ADDITIONAL *Casuarina* TREES
 - PROVIDE 30% GREEN SHADE CLOTH TO CHAIN WIRE FENCE TO PROVIDE ADDITIONAL SCREENING AND ALLOW LIGHT FOR PLANT GROWTH.
 - PROVIDE JUTE MATTING TO STEEP AREAS OF WEED REMOVAL
 - PROVIDE *Casuarina* TREES AND LOW MAINTENANCE GRASSES TO STABILISE AND PROVIDE SCREENING
 - MAXIMISE TREE RETENTION
 - PROVIDE SUPPLEMENTARY TREES AND GROUND COVERS

ZONE 2 - PLANTING OVER EXISTING HARDSTAND
(WESTERN BOUNDARY)

- EXISTING CONDITION:
- EXISTING STORMWATER DRAIN LOCATED ON BOUNDARY
 - A/C STRIP BETWEEN STORMWATER DRAIN AND BOUNDARY
 - EASEMENT CURRENTLY PROVIDES SCREENING TO A MAJORITY OF THE WESTERN BOUNDARY
- PROPOSED WORKS:
- RIP A/C BETWEEN STORMWATER DRAIN AND BOUNDARY TO 150mm AND REMOVE WHERE REQUIRED
 - PROVIDE ADDITIONAL TOPSOIL WHERE REQUIRED
 - PROVIDE MASONRY EDGE TO STORMWATER DRAIN AND ROAD TO CONTAIN IMPORTED TOPSOIL
 - PIN JUTE MATTING TO PREVENT EROSION AND RETAIN MOISTURE
 - PROVIDE *Casuarina* TREES AND LOW MAINTENANCE GRASSES TO STABILISE AND PROVIDE SCREENING
 - OPTION TO EXTEND LANDSCAPE TREATMENT FOR ENTIRE WESTERN BOUNDARY IF REQUIRED.

ZONE 3 - EXISTING VEGETATED EASEMENT

CLIENT TO SEEK LANDOWNER PERMISSION TO AUGMENT
VEGETATION WITHIN EASEMENT

- EXISTING CONDITION:
- EXISTING EASEMENT BETWEEN SUBJECT SITE AND OTHER INDUSTRIAL PREMISES
 - SIGNIFICANT VEGETATION PRESENT WHICH PROVIDES SCREENING FOR A MAJORITY OF THE WESTERN BOUNDARY
 - SMALL AREA CONTAINING SPARSE TREES ALLOWING FILTERED VIEWS INTO THE SITE (IDENTIFIED ON PLAN)
- PROPOSED WORKS:
- REMOVE WEED SPECIES
 - PROVIDE MASS PLANTING TO STABILISE SOIL
 - PROVIDE JUTE MATTING TO STEEP AREAS OF WEED REMOVAL
 - MAXIMISE TREE RETENTION
 - PROVIDE SUPPLEMENTARY TREES AND GROUND COVERS

ZONE 4 - PLANTING OVER EXISTING HARDSTAND
(EASTERN BOUNDARY)

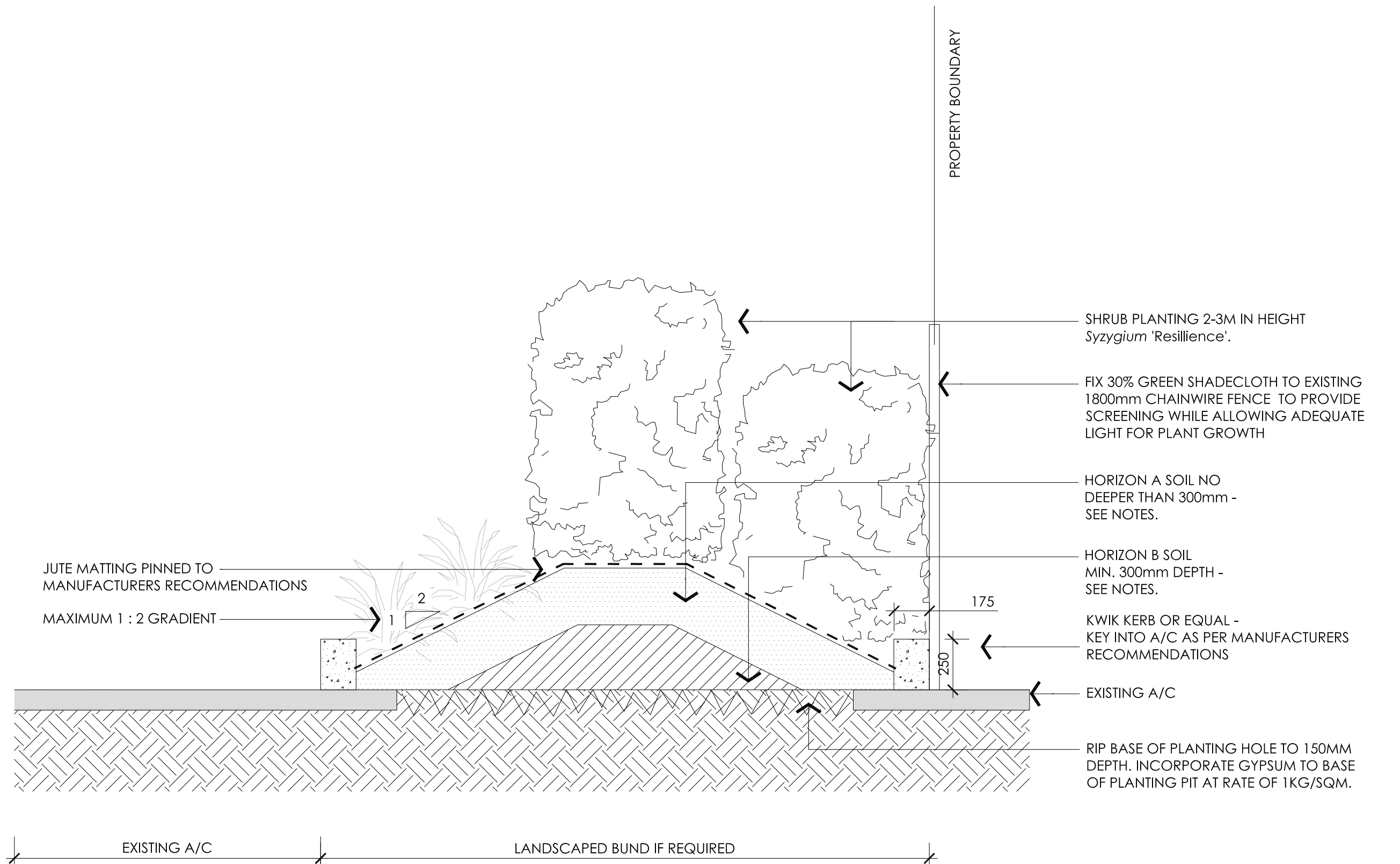
- EXISTING CONDITION:
- RMS VEGETATION CURRENTLY PROVIDES SCREENING TO ALL OF THE EASTERN BOUNDARY
 - 1.8M CHAIN WIRE FENCE ALONG PROPERTY BOUNDARY
 - A/C SURFACE WITHIN PROPERTY BOUNDARY
- PROPOSED WORKS (SHOULD EXISTING VEGETATION ON RMS LAND BE REMOVED):
- RIP A/C WITHIN BOUNDARY TO 150mm AND REMOVE WHERE REQUIRED
 - PROVIDE ADDITIONAL TOPSOIL WHERE REQUIRED
 - PROVIDE MASONRY EDGE TO CONTAIN IMPORTED TOPSOIL
 - PIN JUTE MATTING TO PREVENT EROSION AND RETAIN MOISTURE
 - PROVIDE *Syzygium* 'Resilience' AND LOW MAINTENANCE GRASSES TO STABILISE AND PROVIDE SCREENING
 - PROVIDE 30% GREEN SHADE CLOTH TO CHAIN WIRE FENCE TO PROVIDE ADDITIONAL SCREENING AND ALLOW LIGHT FOR PLANT GROWTH.

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D	09.09.15	CC		GF	PW				
C	31.07.15	DRAFT		GF	PW				
B	31.07.15	DRAFT		GF	PW				
A	24.07.15	DRAFT		GF	PW				
rev no:	date:	comments:	by:	verified:	rev no:	date:	comments:	by:	verified:
0									

PROJECT: MAYFIELD WEST RECYCLING FACILITY
CLIENT: BENEDICT
address: 412 king street newcastle nsw 2300
ph: 49 294 926
SITE: 80 TOURLE STREET MAYFIELD WEST
DRAWING: LANDSCAPE PLAN
fax: 49 263 069
www.terras.com.au



WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE. CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS.			
drawn: GF	scale: 1:750@A1	no in set: 1/3	date: 09.09.15
phase: CC	project no: 10944.5	DWG no: L01	revision no: D



NORTHERN BOUNDARY PLANTING

Section A-A
Scale 1:20

All trees supplied are to comply with NATSPEC's "Specifying Trees a guide to assessment of tree quality"

ABV	BOTANICAL NAME	COMMON NAME	HEIGHT	POT SIZE	SPACING
	TREES				
At	<i>Allocasuarina torulosa</i>	Forest She-Oak	10-20m	45L	2m cts
Cg	<i>Casuarina glauca</i>	Swamp She-Oak	15m	45L	2m cts
	SHRUBS				
Sr	<i>Syzygium</i> 'Resilience'	Resilience	2-3m	25L	1m cts
	SUPPLEMENTARY PLANTING				
Ca	<i>Carex appressa</i>	Tall Sedge	0.8m	2.5 Litre	6/m²
Fn	<i>Ficinia nodosa</i>	Knobby Blub-Rush	0.5-1m	2.5 Litre	6/m²
Lf	<i>Lomandra longilolia</i>	Mat Rush	1m	2.5 Litre	3/m²
Pa	<i>Pennisetum alopecuroides</i>	Swamp Foxtail	0.8m	2.5 Litre	4/m²

This schedule shall be read in conjunction with the landscape plans. Refer to the written specification for further information. The contractor shall check the schedule with the quantities shown on the drawing. Quantities shown in the plant schedule shall take precedence over quantities shown on the drawing. Refer all discrepancies, should they exist, to the superintendent before planting works commences. Order plants as soon as the head contract for the works has been let. Do not make substitutions unless approved in writing.

EASTERN BOUNDARY PLANTING

Section B-B
Scale 1:20

[illegible]

PROJECT:
MAYFIELD WEST RECYCLING FACILITY

CLIENT:
BENEDICT

address: 412 king street newcastle nsw 2300 ph: 49 294 926 fax: 49 263 069 www.terras.com.au

SITE:
80 TOURLE STREET MAYFIELD WEST

DRAWING:
LANDSCAPE DETAILS



WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALE. CHECK DIMENSIONS, LEVELS ON SITE PRIOR TO ORDERING MATERIALS OR COMPLETION OF WORKSHOP DRAWINGS.			
drawn: GF	scale: 1:20@A1	no in set: 2/3	date: 09.09.15
phase: CC	project no: 10944.5	DWG no: L02	revision no: D

All landscape works shall be carried out by a person or business eligible for membership with the Landscape Contractor Association of NSW or comparable trade organisation. The Contractor shall allow for all restriction to his operations caused as a result of other contractors, likely damage to existing structures, fences, retaining walls, pavements, services or other improvements either within or outside the site. The Contractor shall be responsible for ensuring that full and adequate protection from damage shall be provided to all finished surfaces and material subject to staining or other disfigurement, and shall be responsible for making good all damages and disfigurement.

Check with engineers drawings when available to see extent of earthwork, drainage, changes in and location of services, coordinated works as required.

REQUIREMENT: Within 14 days of the date of acceptance of tender, furnish proof of ordering the required materials, and advise immediately if any supply difficulties are encountered. Ensure Substitutions shall not be approved unless accepted in writing by the supervisor. The plant schedule shall be the accepted document for plant quantities and sizes to be used for the project. Where discrepancies arise between the drawings and the plant schedule seek clarification from the supervisor as soon as practicable.

PROTECTION: Protect trees to be retained from damage. Take necessary precautions. Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations against tree trunks, even for short periods. Prevent damage to tree bark. Do not attach stays, guys and the like to trees. Avoid compaction of the ground under trees.

WORK UNDER TREES: Do not add or remove topsoil within the drip line, use hand methods such that root systems are preserved intact and undamaged. Open up excavations under tree canopies for as short a period as possible.

ROOTS: Where it is necessary to cut tree roots, use means such that the cutting does not unduly disturb the remaining root system.

DAMAGES: Any damage to trees to be retained will be attended to by a qualified arborist who will prepare a report covering rectification works. Submit report to supervisor for approval. Conduct remedial works as required including removal and replacement if so recommended. All costs to be borne by the contractor.

NOTICE: Give minimum two (2) days notice unless otherwise indicated so that inspection may be made of the following, as applicable:

- Plants available on site for natspec compliance inspection prior to planting.
- Subgrades cultivated and/or prepared prior to placing topsoil.
- Plant material set out before planting.
- Completion of planting establishment work.

REFERENCED DOCUMENTS:

- AS 4419 Soils for landscaping and garden use. - 1998
- AS 4454 Composts, soil conditioners and mulches - 1997
- AS 4373 Pruning of amenity trees - 1996
- AS 2303 Tree stock for landscape use - 2015.

PLANTS: All plants shall be made available for inspection on site or at local nursery. The entire material represented may be rejected, except of plants with a correctable defect subject to satisfactory treatment.

TREES SHALL COMPLY WITH AS 2303:2015 Tree stock for landscape use.

BULK MATERIALS: 2 kg sample of each type specified. Submit bulk material samples, not less than 2 working days before bulk deliveries.

INSPECTION OF TREES:

Timing: Trees may be inspected before shipment.

Partial sampling: Expose a small section of the rootball, by washing, sufficient to permit inspection of root development from the stem to the outer extremity. After inspection, carefully replace soil.

Root systems: Root systems may be inspected using partial sampling at the following rates:

- <20 trees: 1 tree sampled
- 21 - 50 trees: 2 trees sampled
- >51 trees: 4%.

Forward order contracts: Submit regular reports in writing to the contract administrator. Include checks against specification requirements, and current photographs.

- Inspection frequency: 3 months
- Report frequency: 3 months.

Compliance

General: Non-compliance may lead to rejection of the entire batch.

Substitution: If non-complying trees are proposed, submit proposal in writing to the contract administrator. Only written approvals of substitution are recognised. Submit a copy of the written approval of substitution with the non-complying trees.

General: Submit proposals in writing to the contract administrator for proposed methods for holding trees beyond specified dates so that trees will continue to comply.

Shipment

Responsibility: Landscape Contractor.

Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide at the manufacturer's recommended rates. Regularly remove, by hand, rubbish and weed growth that may occur or recur throughout grassed, planted and mulched areas. Continue eradication throughout the course of the works and during the Planting Establishment Period so that a weed free area is established at completion of the establishment period..

Existing services on site may include but not limited to storm water drainage, water, and associated power service conduits. Locations of all services should be established prior to excavation and cultivation of planting beds and installation of trees etc. Do not excavate by machine within 1m of existing underground services without prior approval or identification of service locations. Services locations where shown are approximate only, the true location of actual in ground services must be determined by the contractor on site.

Critical design dimensions shall be obtained by the landscape contractor by survey before commencing work. Check engineers drawings where available to determine extent of earthworks, structures.

Sampling: As recommended in AS 4419 (2003) Appendix A.

- For each test, take six samples of each soil type. These should be taken from various locations. Each sample should be approximately one spade full in quantity.
- For each soil type, thoroughly mix the six samples together to obtain an 'average' sample. Ensure that mixing is carried out in a clean mixing container, with no impurities such as cement residue or imported soil etc present. Extract 1kg (approximately a 2L ice-cream container) final samples from each of the three mixed batches.
- Package and forward to the soil laboratory for testing, together with a site plan locating sources of soil samples and a record of any relevant details about the site and source locations.
- Type of Soil Test Required: Soil testing shall be undertaken in accordance with S&S specifications, for the purpose of analysing the characteristics and recommendations for use as a landscaping topsoil for a mixture of native species, exotic species, and turfing.
- Lead time: Allow a minimum of five full working days for completion of soil testing, and check with laboratory to ensure testing will not delay landscaping works. Supply soil tests to Company Representative once available.

- USGA PSA Sieve & Hydrometer
- HC3 Hydraulic Conductivity @ 3 pts (8,16,32 drops)
- LP_4419 Large Particles by 4419
- TOC_DC Total Organic Carbon (Dumas C)
- Wett_4419 Wettability by 4419
- Disp_4419 Dispersibility by 4419
- ECEC_NH4Cl Exchangeable Cations & Soluble correction (was CECAC SOL)
- EC_Sol Electrical Conductivity 1:5 Ratio
- P_M3 Phosphorus in M3 by ICP I
- NO3_Sol Soluble Nitrate

CULTIVATION: Cultivate bases or planting holes and beds 150mm, do not use augers unless followed with cultivation of sides and base. Do not disturb services or free roots; if necessary cultivate these areas by hand. Cultivate manually within 300 mm of paths or structures. Remove stones exceeding 25 mm, clods of earth exceeding 50 mm, and any weeds, rubbish or other deleterious material brought to the surface during cultivation. Trim the surface to the required design levels after cultivation.

ADDITIVES: Apply required additives to stockpiled site topsoil as required by soil tests.
Topsoil:

Where topsoil is to be stockpiled for reuse, incorporate additives as recommended in soil testing by cultivating through the topsoil. For excavated garden beds or backfill to planting holes, incorporate additives into stockpiled topsoil prior to placement.

Subsoil:
incorporate additives as recommended in soil testing by cultivating through the subsoil.

DEFINITIONS: [From AS 4419 - 1998, Soils for landscaping and garden use]

■TYPE 01	General purpose soil: A soil which is suitable for the growing of domestic plants.
■TYPE 02	Premium garden soil: A general purpose soil that contains additional organic matter [min 10% OM]
■TYPE 03	Topsoil: The original surface layer of soil from grassland, bushland or cultivated land.

Soil for the landscape works shall be free from weeds including but not limited to, onion weed, nut grass, clover, wandering jew, bindii and oxalis. The landscape contractor shall obtain a certificate from the soil supplier that the soil provided for the project is weed free and be made available to the client if requested. Soil shall be assumed to be placed to all mass planting bed areas and individual tree planting locations. The landscape contractor is responsible for the removal and/or disposal of all spoil or excess soil excavated in the process of implementing the landscape works. Soils shall comply with the texture classification 'Medium - (sandy Loam)' or 'Coarse - (sandy soil)'

Finished soil levels shall allow turf or mulch to be finished level to the top of timber edging, paving or concrete footpaths or as otherwise shown on drawings.

PLACING: Place the approved soil on the prepared subsoil. Spread and grade evenly, making the necessary allowances so that the required finished levels and contours may be achieved after light compaction. Prevent areas of excess compaction being caused by constructional plant. Avoid differential subsidence and produce a finished soil surface which is:

at design levels;

- smooth and free from stones or lumps of soil;
- graded to drain freely, without ponding, to catchment points;
- graded evenly into adjoining ground surfaces; and
- ready for planting.

GENERALLY

DESCRIPTION: Well rotted vegetative material or animal manure, or other approved material, free from harmful chemicals, grass and weed growth, and with a neutral Ph value.

REQUIREMENT: Provide proprietary fertilisers, delivered to the site in sealed bags marked to show manufacturer or vendor, weight, fertiliser type, N:P:K ratio, recommended uses and application rates. Use in accordance with the manufacturer's recommendations.

- Supply plants to the following quality:
 - are vigorous, well established, free from disease and pests, of good foliage, have large healthy root systems, with no evidence of root curl, restriction or damage;
 - are hardened off, not soft or forced, and suitable for planting in the natural climatic conditions prevailing at the site.
 - do not require staking to stand upright other than staking to control damage from strong winds or local conditions.
 - Staking should then be as detailed on the drawings and provide free movement with support only to protect from excessive movement.

SUBSTITUTIONS: Make no substitutions.

LABELLING: Label at least one plant of each species or variety in a batch with a readable tag.

REPLACEMENTS: Using plants of the same type, quality and size, replace any plants which are damaged whilst being transported to the site or during the work under the Contract, or which fail or are rejected. Trees which are vandalised are to be replaced using the same type, quality and size.

STORAGE: Deliver plant material to the site on a day to day basis, and plant immediately after delivery. If this is not possible, keep the plants in good condition on the site, adequately protected from frost, wind, sun and vermin by appropriate storage methods, including an on-site nursery of sufficient size, with provision for watering the stock.

POTTING-ON: Do not carry out potting-on unless authorised.

PERIOD: The Planting Establishment Period commences at the date of issue of a written certificate of practical completion from the superintendent.

PROGRAM: Furnish a proposed planting maintenance program with the tender

LOG BOOK: Keep a log book recording when and what maintenance work has been done and what materials, including toxic materials, have been used. Make the log book available for inspection on request.

RECURRENT WORKS: Throughout the Planting Establishment Period, continue to carry out recurrent works of a maintenance nature including, but not limited to, watering, mowing, weeding, rubbish removal, fertilising, pest and disease control, staking and tying, replanting, cultivating, pruning and keeping the site neat and tidy.

REPLACEMENTS: Continue to replace failed, damaged or stolen plants for the extent of the Planting Establishment Period.

MULCHED SURFACES: Maintain the surface in a clean and tidy condition and reinstate the mulch as necessary.

SITE WATER: The contractor shall be responsible for sourcing, checking availability and if required importing water to maintain the plants during the plant establishment period as required under this specification.

GENERALLY: Use mulch as scheduled which is free of deleterious and extraneous matter such as soil, weeds and sticks. Use organic mulches which are free of stones AND COMPLY WITH AUSTRALIAN STANDARDS SPECIFYING LESS THAN 5% FINES. Use first well rotted mulch chipped on site, chip to match ANL 'Forest Blend' 20-40mm mulch. Additional mulch ANL 'Forest Blend' or equivalent.

APPLICATION: Place mulch to the required depth, clear of plant stems, and rake to an even surface flush with the surrounding finished levels.

NOTE: Use proprietary items as specified below or similar item equal in workmanship, materials and design if approved by the Superintendent.

If requested by the superintendent a basic soil test shall be carried out at the contractors expense to ascertain the physical and chemical properties of the proposed imported soil where no certificate of soil type is provided.

LOCATION	DEPTH	SOIL TYPE
Tree / Mass Planting	Top 300mm	Imported premium garden soil [10% Compost] Or site topsoil ameliorated as per soil test recommendations.
Tree / Mass Planting	Below 300mm	General purpose soil - sandy loam Or site topsoil ameliorated as per soil test recommendations.

NOTE:
WHERE TREES ARE PROPOSED A MINIMUM OF 600mm SOIL IS TO BE PROVIDED

Landscape contractor shall provide superintendent notification of Checks on progress of the works required and obtain approval to proceed following checking at hold points below.

NOTE:
Landscape inspection to be undertaken 3 months after practical completion to determine the retention of existing trees within ZONE
should these trees require removal additional *Casuarinas* are to be planted as replacement.