1 Landscape Plan
1:100

legend:

note: drawing may not contain all items listed below

RL00.00 → proposed levels

ac	air conditioner condenser
acc	accessible
adhc	ageing, disability & home care
ap	access panel
bal(1)	balustrade (type)
bfc	broom finished concrete
boe	brick on edge
bol	bollard
cl	clothes line
col	column
dp	downpipe
drp	doorpost
ex.	existing
fb(1)	facebrick work (type)
ft(1)	fence (type)
gb	garbage bin
gt	gate
gtd	grated drain
hr(1)	handrail (type)
ht	hose tap
hwu	hot water unit
hyd	hydrant
kr	kerb ramp
lb	letter box
ofc	off form concrete
pp	power pole
rw(1)	retaining wall (type)
sfc	steel float concrete
swp	storm water pit
tfc	trowel finished concrete
tgsi	tactile ground surface indicator
tow	top of wall
wfc	wood float concrete

ex.contours & banking line

existing trees to be retained

existing trees to be removed

metal garden edging

fencing -for all fencing materials and types refer to the architects plans.

proposed trees

planting areas

turf

mulch path

sandstone boulders

Planning for Bushfire:
Note: Design complies with the requirement of an asset protection zone as outlined in the planning for Bush Fire Protection (2019) Appendix 4 of the NSW RFS Standards for Asset Protection Zones.
1. Tree in maturity should not touch or overhang the building.
2. Low limbs should be removed up to a height of 2m above the ground.
3. Grass should be kept mown (no more than 100mm in height)
4. Landscape area should be maintained free of leaf litter and debris. The gutter and roof should be maintained free of leaf littler and debris.
5. Ground fuels such as fallen leaves, twigs and branches should be removed on a regular basis.
6. Shrubs form 10% of the ground cover.

plant schedule

code	botanical name	common name	mature height	quantity	pot size	stake
Trees						
Ere	Elaeocarpus reticulatus 'Prima Donna'	Blueberry Ash	12.0m	2	100L	yes
Lis	Lagerstroemia indica 'Sioux'	Crepe Myrtle	6.0m	2	100L	yes
Shrubs						
Acs	Acmena 'Cherry Surprise'	Lilly Pilly	3.0m	85	200mm	no
Groundcovers, Grasses and Feature Plants						
Aci	Arthropodium cirratum	NZ Rock Lily	0.9m	96	200mm	no
Hsc	Hibbertia scandens	Guinea Flower	0.2m	25	140mm	no
Ljr	Liriope 'Just Right'	Just Right	0.5m	111	140mm	no
Llt	Lomandra longifolia 'Tanika'	Dwarf Mat Rush	0.5m	268	140mm	no
Mpa	Myoporum parvifolium 'Yareena'	Creeping Boobiala	0.1m	314	140mm	no
Pxa	Philodendron 'Xanadu'	Xanadu	0.6m	52	140mm	no
Tja	Trachelospermum jasminoides 'Tricolor'	Tricolor Jasmine	0.2m	64	140mm	no

Planning, Industry & Environment
NSW GOVERNMENT

Rev	Date	Issue
6	10.05.23	Part 5 Issue
5	24.04.23	Tender Issue (90%)
4	24.04.23	Part 5 Issue
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Landscape Consultant:
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Stormwater Consultant:
Greenview Consulting
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Architect:
Stanton Dahl Architects

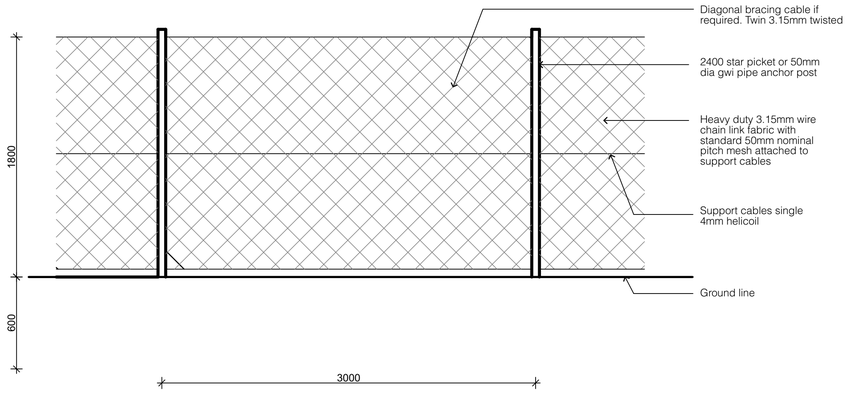
Project:
General Housing Development
at
25-29 Prospero Street, Maryland

Title:
Landscape Plan

File: 230318 25-29 Prospero St, Maryland_Landscape.pln
Plotted: 18/5/2023 12:30 pm

Status: Part 5 Submission

Date: 18/5/2023	Scale: 1:100 @ AI	S\d job no: 2869.23	Project no. BGWY9
Stage: Part 5	Drawn: MM	Checked: ML	Approved: ML
Drawing: L01	Sheet: 1 of 3		Rev: 6



1 elevation
not to scale

Installation
A continuous tree protection fence shall be erected around the perimeter of the tree protection zone (TPZ). Refer to (4) plan calculating the TPZ and should be situated as determined by the project arborist in accordance with AS4970 Protection of trees on development sites, Section 4, 4.3. The TPZ must be secured to restrict access. AS4687 Temporary fencing and hoardings specifies applicable fencing requirements.

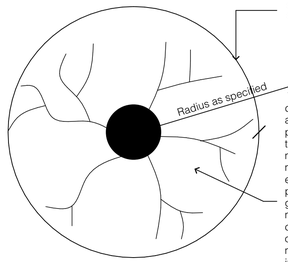
The tree protection fence shall be a minimum of 1800mm high chain link fabric on 2400mm star picket or 50mm dia gwi pipe anchor posts. They are to be driven 600mm into the ground ensuring fencing can not be moved, install diagonal cable bracing if required for stability.

Attach shade cloth or similar geotextile fabric to cover the fence panels and screen the TPZ from contamination.

The tree protection fence shall be installed prior to any demolition, clearing, grading or construction work. The tree protection fence is to remain in place in functioning condition until all construction is complete.

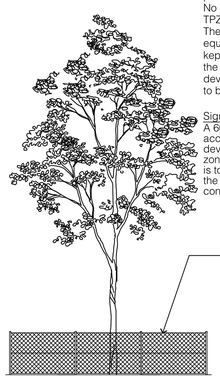
Prohibitions
No persons, vehicles, material, equipment or disposal of solid, liquid or chemical waste including concrete cleanup waste, painters waste or similar is permitted within the TPZ.
No excavation or soil removal permitted within the TPZ.
There is to be no storage of materials, rubbish, soil, equipment, structures or goods of any type to be kept or placed within 5 metres from the trunk or within the dripline of any tree for the duration of the development. This will ensure protection of the tree/s to be retained on or adjacent to site.

Signage
A 600mm x 450mm prohibition sign complying with in accordance with AS4970 2009 Protection of trees on development sites stating "no entry-tree protection zone" and including the site foreman's contact details is to be attached to the fence, visible from all areas of the site. The sign is to remain in place until all construction has been completed.

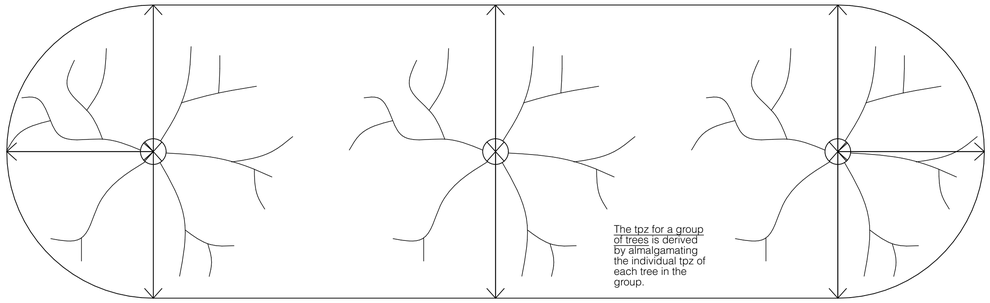


The area of the Tree Protection Zone to be mulched to a depth of 100 mm with organic material being 75% leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as that to where the mulch is to be applied, i.e. species-specific mulch. The depth of mulch and type as indicated, to be maintained for the duration of the project. Where deep excavation will expose the soil profile to drying out the root plate is to be protected by pegging jute matting across the ground surface 2 m back from the edge of the profile and 2 m down the face of the profile and is to be in one continuous sheet or layers up to 5 mm thick and overlapped 300 mm and pegged. Pegs are to be a minimum length of 200 mm and spaced at 500 mm increments in a grid pattern. Once installed mulch is to be placed on top of the jute matting previously described.

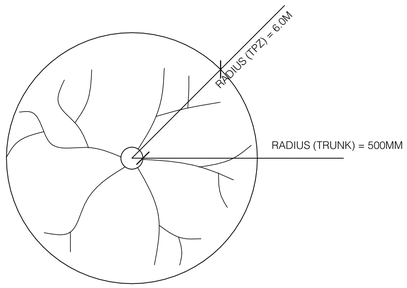
2 plan - tree protection fence construction
not to scale



3 elevation
not to scale



4 plan - calculating the tpz - grouped trees
not to scale



For single trunk trees,
The tpz is an area equivalent to a circle with a radius 12 x the trunk diameter (t) measured 1.5 metres above the ground.

ie. Single trunk tree with a 500mm trunk diameter (t) at 1.5 metres above the ground:
12 x t(12 x 500mm) = 6.0m radius tpz

For multi-trunk trees
With more than 1 trunk arising below 1.5 metres above the ground level, the tpz is an area equivalent to a circle with a radius 10 x the trunk diameter (t) measured at the base of the trunk.

Tree protection zone (TPZ)
The tree protection zone is the minimum area around a tree that must be left undisturbed to protect the root system and maintain the health and stability of the tree.

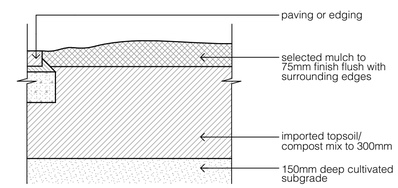
The TPZ is calculated using the methodology detailed in drawing (4) and (5), based on the British Standard BS 5837:2005 trees in relation to construction recommendations. Note that distances are measured from the outside edge of the trunk of the tree.

In some circumstances the TPZ may vary from the area calculated to take into consideration individual site factors - such as existing structures, the presence of rock outcrops or similar. Variations to the TPZ must be assessed and certified by an arborist.

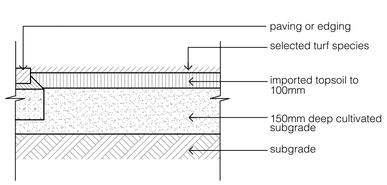
To help protect the tree a fence or similar barrier is generally erected around the perimeter of the TPZ - refer to drawing (1).

Prohibitions
No trenching, excavation, soil level changes, storage of materials, disposal of waste, mechanical equipment or other construction activities are allowed in the TPZ. Minor works that do not adversely impact on the tree may be carried out in the TPZ under the direct supervision of an arborist.

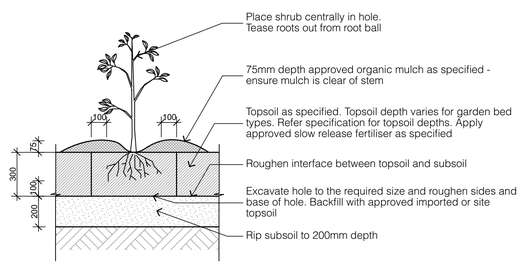
5 plan - calculating the tpz - individual trees
not to scale



6 Garden Bed Preparation Detail
1:10

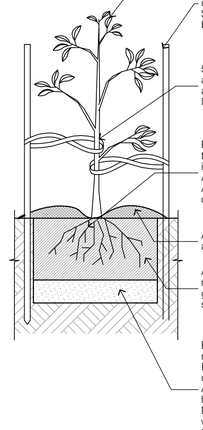


7 Turf Preparation Detail
1:10



8 Tree Planting Detail
1:20

Tree watering 1: 1st initial watering at the time of planting. Quantity of water will be adequate to saturate the root ball to its core.
Tree watering 2: post planting, provide a minimum of 15 litres of water (for tree in a 45 litre pot) to the newly planted tree per 7 days. Water at a slow rate not to displace mulch. For trees in pot size larger than 45 litres, provide quantity of water on third of that pot size.



Note: it is the responsibility of the contractor to confirm the location of all underground services prior to commencement of any excavation or staking works.
Strong central leading trunk to be evident at time of planting

All trees supplied must meet the criteria of AS2303-2018: tree stock for landscape use & be healthy specimens free of pests and diseases. Trees to be well watered of a maximum of 24 hours prior to planting

Set 3 of 50x50x2400mm hardwood stakes vertically and clear of root ball and canopy at 900mm spacing, offset a min. 200mm from underground services to ensure no damage is caused to services. Stakes must be positioned so as to prevent damage to structural branches and prevent rubbing on branches.

50mm wide hessian ties of good quality wrapped around the trunk and nailed or stapled to the stake. Tree tie is to be positioned as high as possible, looped around the trunk and not the branches, and be loose, however still be tight enough to prevent excessive movement

Position tree in hole with the top of the rootball at the same height as the surrounding ground and backfill with 50/50 blend of site soil and imported organic topsoil. Imported organic topsoil must be as per AS:4419 2003: soils for landscape & gardens.
At the time of planting, if the roots are matted, slice the bottom 50mm off and apply the spade to the bottom in each quadrant.

Apply and spread mulch (as per AS4454-2012) to a depth of 150mm and 1200mm diameter from tree. No mulch is to be touching the tree.

Apply 500gms of gypsum to the planting site at a radius of a minimum 1200mm diameter from centre of hole. Apply 500gms of gypsum to inside of hole. Lightly compact soil at the base to prevent settling.

Excavate a planting hole with sloping sides 3 times the width of the rootball. Break up sides and base.
If digging in soil of low permeability, the hole should be wider and deeper. In this instance backfill will be required at base of hole.
Augers are not to be used for excavation of the planting hole. Planting hole is to be watered prior to planting.
No tree is to be planted into naturally waterlogged soil. If soil is waterlogged, planting must be rescheduled to allow sufficient time for the soil to dry out.

9 Tree Planting Detail
1:20

Planning, Industry & Environment
NSW GOVERNMENT

Rev	Date	Issue
6	10.05.23	Part 5 Issue
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Architect:
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Project:
General Housing Development

at
25-29 Prospero Street, Maryland

Title:
Tree Protection & Details

File:
230318 25-29 Prospero St, Maryland_Landscape.pln

Plotted: 10/5/2023 9:48 am

Status: Part 5 Activity Submission

Date: 10/5/2023	Scale: 1:20, 1:10 @ A1	S|d job no: 2869.23	Project no. BGWY9
Stage: Part 5	Drawn: MM	Checked: ML	Approved: ML
Drawing: L02	Sheet: 2 of 3		Rev: 6

LANDSCAPE NOTES:

GENERAL

1. The Landscape drawings have been based on site survey and building layout information. Check boundaries, levels, dimensions and locate services on site prior to starting work.
2. Landscape plans are to be read in conjunction with all architectural and other project consultant's drawings and specifications and with such other written instructions as may be issued during the course of the contract.
3. Any discrepancies between landscape/architectural or other project consultant's drawings shall be reported to the landscape designer prior to any works being carried out.
4. All works are to be carried out in accordance with drawing notation and/or written specifications where applicable.
5. Works and supply of materials not covered by drawing notation or written pecification are to be carried out in accordance with AS Codes, LCA guidelines and the By-Laws and Ordinances of the relevant Building Authority and/or manufacturer's recommendations as applicable.
6. All dimensions and locations of works are to be checked on site and confirmed by the landscape/building site supervisor prior to the commencement of any works.
7. Dimensions shall not be obtained by scaling from structural drawings. Dimensions are indicated in millimeters unless otherwise specified.
8. The contractor shall at all times implement adequate erosion and sediment control measures where applicable, (details noted on the construction management plan)
9. The position of services indicated on drawings (when applicable), are approximate and must be confirmed on site prior to the commencement of any site works.
10. Refer to Architectural drawings for fence types, retaining walls, paving and decking details.

AUSTRALIAN STANDARDS

All materials and workmanship should be in accordance with the relevant Australian standards:
AS1684 - Residential Timber Framed Construction Part 1
AS1720.1 - 1997 (Amendment 4 - 2002) Timber Structures - Design
AS4419 - 2002 Soils for landscaping and Garden Use
AS3600 - 2009 (Amendment 1 - 2012) Concrete Structures
AS1012 - Methods of Testing Concrete
AS3610 - 1996 Formwork for Concrete
AS/NZ4455 - Part 1 2008 and Part 2 2010 Masonry Units, Pavers, Flags and Segmental Retaining walls - Masonry Units
AS1428.1 - 2009 (Amendment 2010) Design for Access and Mobility - General requirements for Access - New Building Works
AS1428.3 - 1992 Requirements for Children and Adolescents with Physical Disabilities
All pavements shall comply with AS/NZS 4586:1999 standards Class W (low) for slip resistance

SERVICES

Before landscape work is commenced. The Landscape Contractor is to establish the position of all service lines and ensure tree planting is carried out at least 3 metres away from these services. Service lids, vents and hydrants shall be left exposed and not covered by any landscape finishes (turfing, paving, garden beds etc.) Finish adjoining surfaces flush with pit lids.

SITE PREPARATION

Clear site of any builders rubbish and set up erosion and sediment control as per councils requirements.
All existing trees and/or vegetation to be retained, is to be preserved and protected from any damage occurring during the execution of landscape works. The root systems of existing retained plants are not to be disturbed. Landscape operations carried out within the root zone is to be carefully carried out using hand tools. Storage of materials, Mixing of materials, vehicular parking, disposal of building materials and stockpiling shall not be carried out within 3m of the drip line of these trees/vegetation. Grade site to achieve proposed final grades. Stockpile soil if suitable for reuse or provide landscape soil that meets Australian Standards to replace site top soil.

DRAINAGE.

Subsoil drainage: Where applicable, flexible 90mm subsoil, socked, drainage coil is to be installed to all planting areas defined by retaining walls, interfaces between planting/lawn areas and paving, kerb lines, footpath edges etc. on natural ground. The subsoil drainage lines are to be installed and covered with free draining gravel at the base of retaining walls and planting areas, as above, and sufficiently buried to ensure they are covered with 100mm free draining gravel and 150mm topsoil. The gravel is to be covered with 3-4 oz non-woven filter fabric.
Surface drainage: The contractor is to ensure adequate drainage is provided to all newly paved/hard surface areas, linking either to existing drainage sump pits or to new pits constructed by the contractor.
The Subsoil and Surface drainage system is to be linked to the site's storm water system.

SOIL PREPARATION

Soil compliance - Soil test results must confirm compliance of the proposed soil with AS 4419 and the "Soil type(s)" specified below as defined by AS 4419-2003. Soil for landscaping must be site soil or imported topsoil that is tested for horticultural suitability by a NATA accredited laboratory and provide for the site specific vegetation performance objectives. A qualified Agronomist must provide certification that soil amelioration works have been undertaken in accordance with the conditions and relevant specification, approved documentation of all relevant approvals.
Phosphorus levels in soil - For phosphorus-sensitive plants (i.e. many natives) ensure the soil complies with paragraph 5.8 (page 8) of AS4419.
Nitrogen- Include / apply plant-available nitrogen for low nitrogen mulches to prevent nitrogen deficiency from nitrogen drawdown.
All proposed planting areas are to be deep ripped to a depth of 300mm and clay soils are to be treated with a clay breaker. If existing top soil suitable for reuse it may be reused. 75mm depth of ANL Organic Garden Mix to be imported and combined with 25mm depth Greenlife compost or approved equivalent. Additive to be to a depth of 100mm, cultivated with existing garden bed soil to 250mm depth. Weed matting (non-plastic type) to be provided under all private courtyard garden beds. Install 75mm of selected mulch.

NEW PLANTING

All plants shall be true to type and size, conform with those species listed in the Plant Schedule on the drawings, be vigorous, well established, of good form consistent with species or variety, not soft or forced, free from disease or insect pests with large healthy root systems and no evidence of having been restricted or damaged. Immediately reject dried out, damaged or unhealthy plant material before planting. All stock is to be container grown for a minimum of six (6) months prior to delivery to site.
Plants shall have been hardened off and suitable for planting in the climatic conditions prevailing at the site. Trees shall be of uniform appearance and have a single leading trunk and proportionate and balanced crown.
The Contractor shall be responsible for the health of plants from time of delivery, and no consideration will be given to any claim arising from the Contractors neglect or failure to observe any defects in the plants at time of delivery.
Remove plant from container without disturbing the root ball and place centrally and plumb in the hole with the top of the root-ball level with the surrounding surface level. Backfill root-ball with an Organic garden soil-mix, lightly tamp and water thoroughly to eliminate air pockets.
Install plant material as per plan. Keep planting areas moist, stake plants as required and 'water in'.
Ensure soil-mix is not placed over the top of the root-ball and that the plant stem remains the same height above the ground as it was in the container. Soil-mix for backfilling of plants shall conform to AS4419-1998.
Weed matting (non-plastic type) to be provided under all private courtyard garden beds.

TREES

Refer to Tree Planting Detail when applicable.
The trees shall comply with NATSPEC Specifying Trees: a guide to assessment of tree quality (2003) or Australian Standard AS 2303 – 2015 Tree stock for landscape use, and be planted and maintained in accordance with Councils street tree planting specifications.
Install root barrier to site services as required.

STAKING AND TYING

Stakes shall be straight hardwood, free from knots and twists, pointed at one end and sized accordingly to plant size to be staked.

a) 5-15L pot size	1 x (1200 x 25 x 25mm)
b) 35-75L pot size	2 x (1500 x 38 x 38mm)
c) 100L & greater pot size	3 x (1800 x 50 x 50mm)

Ties shall be 50mm wide hessian webbing or approved equivalent nailed or stapled to stake. Drive stakes a minimum one third of their length, avoiding damage to the root system, on the windward side of the plant.

TURF

Excavate/ grade areas to be turfed to 120mm below the required finished levels. Do not excavate with 1500mm of any existing tree to be retained. Ensure that all of the surface water runoff is to be directed towards the inlet pits, kerbs etc. and away from buildings. Ensure that no pooling or ponding will occur. Rip subgrade to 150mm deep. Install 100mm depth of 5 parts imported topsoil mixed with 1 part compost. Just prior to spreading turf, spread 'shirleys no. 17 lawn fertiliser' over the topsoil at the recommended rate. Lay Sir Walter Buffalo turf rolls closely butted. Fill any small gaps with topsoil. water thoroughly.

PROTECTION OF EXISTING TREES

Protection of existing trees to be retained on site, trees shall be adequately protected to council requirements for the duration of the building contract. Storage of materials, mixing of material, vehicular parking, disposal of building materials and stockpiling shall not be carried out within the drip line of these trees.
Any roots damaged during the building operations shall be cleanly cut off inside the damaged or exposed area.
Trees are to be monitored for health during the building contract ensuring the root zone has not been damaged or has dried out.
Tree root pruning shall be undertaken by an experienced Arborist with a qualification in tree surgery.

MULCHING

On completion of planting, all areas are to be mulched using non toxic Cypress Mulch or similar that meets Australian Standards to a depth of 75m. A water catchment dish is to be provided around the base of each plant. Keep mulch clear of all plant stems and rake to an even surface finishing 25mm below adjoining levels. Ensure mulch is watered in and tamped down during installation. Keep mulch clear of any plant stems.

FERTILISER

MASS PLANTING AREAS: All newly planted areas are to be fertilised with an organic life, slow release fertiliser (Osmocote 8-9 month / Agriform (R) 21g) which is to be adequately watered in. Native plants with Osmocote zero Phosphorus 5-6 month slow release. Apply as per manufacturer's instructions.
ADVANCED TREES: Pellets shall be in the form intended to uniformly release plant food elements for a period of approximately nine months equal to Shirleys Kokei pellets, analysis 6.3:1.8:2.9. Kokei pellets shall be placed at the time of planting to the base of the plant, 50mm minimum from the root ball at a rate of two pellets per 300mm of top growth to a maximum of 8 pellets per tree.

METAL EDGING

Metal edging shall consist of 100 x 5mm, galvanized, flat bar steel, secured in place with either 75x25x300mm treated pine pegs driven into the ground, or with 400mm re-inforced rod welded to steel at 1000mm centers and hammered into the ground. Edging is to finish flush with adjoining lawn surfaces with the pegs recessed 20mm below top of edging. In general edging is to be provided at all interfaces between lawn and planting areas.

BOULDERS

Approx. 300mm - 600mm sandstone boulders. Ensure boulders have a flat base and are stable.

LANDSCAPE MAINTENANCE PROGRAMME

Maintenance shall mean the care and maintenance of the landscape works by accepted horticultural practice as rectifying any defects that become apparent in the landscape works under normal use. This shall include, but shall not be limited to, watering, mowing, fertilising, reseeding, re-turfing, weeding, pest and disease control, staking and tying, replanting, cultivation, pruning, aerating, renovating, topdressing, maintaining the site in a neat and tidy condition as follows:-

1.0 GENERAL

The landscape contractor shall maintain the landscape works for the term of the maintenance (or Plant establishment) period to the satisfaction of the council. The landscape contractor shall attend to the site on a weekly basis. The maintenance period shall commence at handover and continue for a period of 52 weeks maintenance for the Post- Completion Period which also includes a 3 Month Maintenance period for minor building matters.

2.0 WATERING.

Grass, trees and garden areas shall be watered regularly so as to ensure continuous healthy growth. The minimum acceptable watering required is equal to 25mm of natural rainfall or its applied equivalent during each period of one (1) week, around individual plants, maintain a completely weed and grass free watering saucer of a minimum diameter of one (1) metre.

3.0 RUBBISH REMOVAL

During the term of the maintenance period the landscape contractor shall remove rubbish that may occur and reoccur throughout the maintenance period. This work shall be carried out regularly so that at weekly intervals the area may be observed in a completely clean and tidy condition.

4.0 REPLACEMENTS

The landscape contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost during the maintenance period. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis not exceeding two (2) weeks after the plant has died or is seen to be missing.

5.0 STAKES AND TIES

The landscape contractor shall replace or adjust plant stakes, and tree guards as necessary or as directed by the Landscape Architect. Adjust ties to give adequate support to the plants, replace broken or damaged ties as necessary and straighten stakes. Remove stakes and ties at the end of the maintenance period if so directed.

6.0 PRUNING

Trees and shrubs shall be pruned as directed by the Landscape Architect. Pruning will be directed at the maintenance of the dense foliage or miscellaneous pruning and beneficial to the condition of the plants to improve plant shape and form or to clear footpaths and driveways. Any damaged growth shall be pruned. All pruned material shall be removed from the site.

7.0 MULCHED SURFACES

All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times.

8.0 PEST AND DISEASE CONTROL

Control pathological diseases or insect pests by physical removal. Where physical removal is not possible use registered non- toxic sprays, applied in accordance with manufacturer's instructions.

9.0 WEED ERADICATION

Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide (eg. 'Roundup') in any of its registered formulae, at the recommended maximum rate. Regularly remove by hand, weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 750mm diameter around the base of trees in grassed areas. Continue eradication throughout the course of the works and during the maintenance period.

10.0 FERTILISING

Apply follow up concentrated organic fertiliser to all turfed areas once during the maintenance period 10 weeks after completion.

11.0 LAWNS

Mow at max 10-day intervals, trimming all edges, remove all weed growth or grass around base of all plants in turf or by hand in grass areas within the isolated planting area edging and within one (1) metre diameter area in grass, do not use nylon line type edge trimmers around base of trees - replace or repair failed turf and bare patches.

12.0 SOIL SUBSIDENCE

Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the landscape contractor at no cost to the client.

ONGOING MAINTENANCE SCHEDULE OF PLANTING AND TURF AREAS

OCCUPATIONAL HEALTH AND SAFETY (OHS)
Services are to be provided safely and in accordance with relevant OHS regulations and with continual regard for the safety of the public and developer employees.

MOWING

- All grassed areas shall be maintained in a weed free state. Weed growth with grass areas must not exceed 10% of the total grass area.
- Grass clippings shall be distributed evenly over the surface and at no time shall the layer of clippings be at such a depth that it will affect or damage the lawn area.
- Ensure one does not mow over any litter or debris. Prior to mowing, all areas shall be inspected and are to be cleared of litter and debris, including but not limited to paper, plastic, glass, rocks, branches, garden refuse, timber, spoil, etc. Such material shall be disposed of off-site. The contractor must take an environmentally responsible approach to the collection, sorting and recycling (where appropriate) of materials collected in the interests of waste minimisation. Green waste recycling is encouraged.
- Sharps are to be collected by the developer and disposed of appropriately. The contractor should be fully aware of the associated problems of needle stick injury and therefore handle sharps accordingly.
- Grass height shall be kept between 40 mm – 70mm in height.
- All turf is to be cut evenly and sharply across the surface to a height of 40mm. The method of measurement of the mowing height shall be the average height from the ground to the uppermost extent of the blades when held up vertically. No more than one-third (1/3) of the grass length should be removed in any one mowing.
- Wherever possible grass shall be cut in parallel lines so that all grassed areas are left with a neat and tidy appearance. On successive cuts the grass must be mowed in the opposite direction or at variable directions, to avoid windrows developing and to prevent grass seed stalks lying in one direction and remaining uncut. After mowing, all hard surfaces such as footpaths and roads shall be cleared of cut material.
- The needs of the public must be considered before mowing commences. At all times, the contractor must be courteous and respectful of the needs of these users.
- All nature strips abutting reserves or Council-managed facilities shall be mown and maintained to the same standard as the facilities.
- The contractor should use discretion in the selection of appropriate machinery suited to the task and must take into consideration ambient site conditions. Ground surface damage as a result of the use of machinery inappropriate to the conditions will be the responsibility of the contractor to reinstate.

Monthly:
Weeding - Weed garden areas manually or with approved herbicide. Prior approval required for Herbicide use. Approved Herbicide use to be in accordance with regulation rates and manufacturer's recommendation. Protect plants from overspray and avoid if rain is likely within 12 hour period. Prevent reproduction of weeds by removal of seedlings and established weeds before seed set. This work should be carried out regularly at least once a month so that the planted and mulched areas are weed free when observed at monthly intervals.
Leaf Litter Removal - Do not remove leaf litter from planted areas unless depth of litter is impacting on plant growth. Remove leaf litter from pathways
Pest & Disease Control - Check for incidence of fungal and insect attack. Avoid use of chemical sprays Apply appropriate treatment for fungal and insect attack if necessary subject to approval
Plant Removal and Replacement - Inspect for failed or dying plants requiring replacement and record probable cause. Replant after dead or failed plant removal.
Mulch - Ensure mulch is kept clear of plant stems at all times. Drainage pits are to be cleared of mulch and other material regularly so that all pits are cleared when observed at monthly intervals or after significant storm events.
Check irrigation system is operating correctly.

Spring:
Mulching - Reapply mulch to maintain to a depth of 75mm
Plant Fertiliser - Fertilise all plants at specified rates based on soil testing results. Prior approval required for fertiliser use. Slow release fertiliser N:P:K ratio– 18:3:10 at manufacturer's recommended rate per plant. Initial fertilising at planting based on soil testing results
Pruning & Trimming - Shrubs & groundcover - Tip prune to encourage density. Length removed depending on vigour of previous plant growth. Pruning should reflect the natural growth, flowering and regrowth habit of the individual species. Generally prune after flowering. Prune hedges in late Spring.
Turf Fertiliser - Apply fertiliser at rates as recommended by manufacturer.
Turf Mowing - Every 3 weeks in spring & autumn Do not mow under wet conditions. Mow at heights of between 40 to-60mm & remove no more than 1/3 of the leaf blade at any one time. Do not use nylon line type edge trimmers around base of trees.
Turf Decompaction & Aeration - Inspect for compaction and thatching. Carry out aeration treatment if required. Carry out with dethatching or verticutting equipment.

Summer:
Pruning & Trimming - Climbers - Prune long leaders which cannot be reattached to climbing frame. Train leaders onto wires.
Turf Mowing - Every 2 weeks in summer. Do not mow under wet conditions. Mow at heights of between 40 to-60mm & remove no more than 1/3 of the leaf blade at any one time. Do not use nylon line type edge trimmers around base of trees.

Autumn:
Turf Fertiliser - Apply fertiliser at rates as recommended by manufacturer.
Turf Mowing - Every 3 weeks in spring & autumn Do not mow under wet conditions. Mow at heights of between 40 to-60mm & remove no more than 1/3 of the leaf blade at any one time. Do not use nylon line type edge trimmers around base of trees.

Winter:
Pruning & Trimming - Shrubs & groundcover - Tip prune to encourage density. Length removed depending on vigour of previous plant growth. Tip pruning involving the removal of the top 25mm or growing tip of each branch, should be used with shrubs and groundcover to encourage development of new shoots during the active growing season. Be careful not to remove the buds before the flowering season in those plants that have terminal flowers. Prune hedges.
Turf Mowing - Every month in winter. Do not mow under wet conditions. Mow at heights of between 40 to-60mm & remove no more than 1/3 of the leaf blade at any one time. Do not use nylon line type edge trimmers around base of trees.
Turf Replacement - Inspect for failed turf requiring replacement and record probable cause.

As Required -
Pest & Disease Control - Check for incidence of fungal and insect attack. Avoid use of chemical sprays Apply appropriate treatment for fungal and insect attack if necessary subject to approval. If chemical control is considered necessary, these should be mixed and applied in strict accordance with manufacturer's directions. Do not spray in windy or extreme weather.
Plant Removal and Replacement - Replant after dead or failed plant removal. All plants that have died or failed (lost more than 50% of their normal foliage cover) shall be replaced with the same species and commercially available size as the plant to be replaced. Generally plant material shall be uniformly high quality stock equal to best available for 'retail sale'. The root systems shall be balanced in relation to the size of the plant. Plants shall be healthy well grown, hardened off specimens of good shape and free from pests and diseases and in accordance with 'Specifying Trees: a guide to assessment of tree quality' (Clark 2006).
Pruning & Trimming - Remove deadwood from trees if required. Pruning should reflect the natural growth, flowering and regrowth habit of the individual species. Generally prune after flowering. Pruning will be directed at the maintenance of the dense foliage or miscellaneous pruning and beneficial to the condition of the plants to improve plant shape and form or to clear footpaths and driveways. Any damaged growth shall be pruned. All pruned material shall be removed from the site. Train leaders of climber onto wires.
Weed Control in Turf - Remove weeds from turf areas manually or with approved herbicide in accordance with manufacturer's recommendation
Turf Replacement - Remove failed turf, prepare surface & lay new turf in accordance with original turf specified.
Watering - Grass, trees and garden areas shall be watered regularly so as to ensure continuous healthy growth. The minimum acceptable watering required is equal to 25mm of natural rainfall or its applied equivalent during each period of one (1) week, around individual plants, maintain a completely weed and grass free watering saucer of a minimum diameter of one (1) metre.
Stakes and Ties - Replace or adjust plant stakes, and tree guards as necessary. Adjust ties to give adequate support to the plants, replace broken or damaged ties as necessary and straighten stakes. Remove stakes and ties after one year.
Mulch - Ensure mulch is kept clear of plant stems at all times. Drainage pits are to be cleared of mulch and other material regularly so that all pits are cleared when observed at monthly intervals or after significant storm events. The overflow area is to be cleared of weeds on a regular basis and particularly after significant storm events.
Check irrigation system is operating correctly.
Check paved areas and clean if slippery with a high pressure hose. Check retaining walls and planter boxes for signs of failure. Check seats and tables for signs of wear and tear and ensure all fastenings are secure. Maintain BBQ s per manufacturer's details (if required).

Planning for Bushfire:
Note: Design complies with the requirement of an asset protection zone as outlined in the planning for Bush Fire Protection (2019) Appendix 4 of the NSW RFS Standards for Asset Protection Zones.
1. Tree in maturity should not touch or overhang the building.
2. Low limbs should be removed up to a height of 2m above the ground.
3. Grass should be kept mown (no more than 100mm in height)
4. Landscape area should be maintained free of leaf litter and debris. The gutter and roof should be maintained free of leaf littler and debris.
5. Ground fuels such as fallen leaves, twigs and branches should be removed on a regular basis.
6. Shrubs form 10% of the ground cover.

IRRIGATION

SCOPE OF WORKS

The contractor (as part of a Design & Construct (D&C) contract) is to design, supply, and install a sub-surface irrigation system. Irrigation is to be provided to all mass planting areas and tree pits. Refer to Landscape Plan for locations.
There will be one central control room (Location to be confirmed), this is where the timer panel will be located. The solenoid and tap locations are to be confirmed on site by superintendent.

Council states the need to conserve water and this requirement is expected to be factored into the design and construction of the irrigation systems.

Contractor is to coordinate with client regarding entitlement boundaries. Irrigation zoning to suit

PERFORMANCE STANDARDS

The Contractor is responsible for the design, supply, and install an irrigation system that will reliably supply sufficient water to sustain the gardens specified.
The following table presents the assessed water demand for the different types of plants to be planted. It is a requirement that the irrigation system is able to supply at least these quantities of water.

PLANTING TYPE	PERIOD		
P1 (Week 1)	P2 (Week 2 to 3)	P3 (Week 4 to Week 52)	Ongoing Irrigation
150-200mm	1.5 L / Day	0.5 L / Days	1L / Week
300-400mm	3 L / Day	1.5 L / Days	3 L / Week
100L-400L	9 L / Day	4.5 L / Days	5L / Week
Turf	15L / sqm per week during summer - 7L / sqm per week during winter		

Each component of the irrigation system and the overall design is required to confirm to all pertinent Australian Standards.

DESIGN REQUIREMENTS

The Contractor's D&C Irrigation Plan will provide the following information for review and approval.
- An overview of the system including a sketch plan showing the intended layout;
- The pipeline diameter (inner diameter), material, rating and methods of joining (if joints are applicable);
- The depth the pipeline will be buried and the off-set distances to any shrubs, paths, road or building;
- The brand and model of any pumps to be installed, including a copy of the pump curves and the approximate difference in elevation between from the high and low points of the system and the location of the pump; and
- The proposed location and brand of any ancillary equipment such as valves, solenoids, and/or soil moisture probes or measuring gauges and any measures to protect against corrosion.

The Contractor will also provide a short description listing:
- Features of the irrigation system that help conserve water;
- How the system is designed to operate – for example does it offer flexibility of automatic and manual operations;
- How the risk of root intrusion is addressed;
- The length of warranty of all equipment provided;
- A brief description of the maintenance requirements of the system;
- Any additional features of the system which is considered to enhance water conservation.

HEALTH AND SAFETY

The Contractor will be responsible for Health and Safety of the works and ensuring any excavations are adequately barricaded and or covered. The Contractor is also to ensure that they know the location of existing services prior to excavation.

STOCKPILING

The Contractor is to agree the location of any stockpile areas with the Superintendent in advance. The stockpile location must not interfere with traffic or pedestrian access.
The Contractor is to take care to protect materials from the elements as appropriate, and for example should not allow pipes to be exposed to sunlight for prolonged periods of time, or placed in a position where they may be scratched.

EXISTING SERVICES

The Contractor will be held responsible for any damage to existing services or infrastructure on the site caused by the Contractor.

ENVIRONMENTAL PROTECTION

The Contractor is to manage the works in a way that will protect the environment. This is expected to include stopping sediment entering the stormwater drains, and avoiding wasting water. Any costs associated with protecting the environment are to be incorporated into the Contractor's fee.

HOLD POINTS

The Contractor will provide 48 hours notice for the following inspections from the Superintendent or their designated representative:
- Arrival to site of pipelines and pumps. These are to be inspected to check the integrity and brand of the materials prior to installation. In particular it will be checked that the pipes are not too scratched;
- Installation of the pipework prior to backfill. The Superintendent or their representative will visually inspect the irrigation system before it is backfilled. The testing will check that the integrity of the irrigation system is intact and that an adequate supply of water is distributed throughout the pipelines;
- Testing of the irrigation programming system; and
- Practical completion of the works.

AS CONSTRUCTED DRAWINGS

The Contractor shall submit "As Constructed" drawings of the irrigation system before Practical Completion will be awarded. The As Constructed drawings will be prepared to the same scale and on the same sized standard sheets as the approved design drawings and will show the locations and depths of all pipelines and ancillary equipment.

OPERATION MANUAL

The Contractor will provide an Operating Manual prior to Practical Completion which will contain:
- Operating instructions for the system;
- Programming instructions for the control system;
- Details of all equipment used in the system;
- Recommendations for the frequency of irrigation; and
- Full maintenance and servicing instructions.

The Contractor will provide two copies of the Operation Manual to the Superintendent.

MAINTENANCE PERIOD

The Contractor will be responsible for maintaining the works for 12 months after the issuance of the Certificate of Practical Completion. Towards the end of the Maintenance Period the Superintendent or their representative will inspect the work with a soil moisture probe which is to be supplied by the Contractor. The Superintendent or their representative may direct the contractor to excavate any areas that appear to be of concern due to the state of health of the plants or the results of the soil moisture probe. The excavation and repair of any damaged equipment will be deemed to have been included.
Refer to Architectural drawings for fence types, retaining walls, paving and decking details.

Planning, Industry & Environment
NSW GOVERNMENT

Rev	Date	Issue
6	10.05.23	Part 5 Issue
5	24.04.23	Tender Issue (90%)
4	24.04.23	Part 5 Issue
3	11.04.23	Tender Issue (90%)

do not scale drawings. check all dimensions on site.
figured dimensions take precedence.

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Project:
General Housing Development
at
25-29 Prospero Street, Maryland

Title:
Landscape Specification and Maintenance Plan

File: 230318 25-29 Prospero St, Maryland_Landscape.pln
Plotted: 10/5/2023 9:41 am

Status: Part 5 Activity Submission

Date: 10/5/2023	Scale: @ A1	S\d job no: 2869.23	Project no. BGWY9
Stage: Part 5	Drawn: MM	Checked: ML	Approved: ML
Drawing: L03	Sheet: 3 of 3		Rev: 6