



Engineering and Works Services Standards and Specifications

Section 9(c) Landscape, Rural & Urban Road Reserves

These Standards and Specifications are required to be practiced in the City of Busselton for Landscape, Rural and Urban Road Reserves. These Standards and Specifications will be maintained by the Director, Engineering and Works Services.

Revision No	Date	Section Amended	Prepared	Reviewed
A	October 2010	All	Engineering & Works Services	Infrastructure Development
B	June 2013	All	Engineering & Works Services	Infrastructure Development
C	October 2016	3.15 Entry Statements	Engineering & Works Services	Engineering and Facilities Services
D	February 2017	3.18 Local Law Relating to Street Lawns and Gardens	Engineering & Works Services	Engineering and Facilities Services
E	May 2017	4.1 Approved Urban Street Trees	Engineering & Works Services	Operational Services
F	June 2019	8. Removed Street Tree Application form	Engineering & Works Services	Operational Services

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1 Landscape, Rural & Urban Road Reserves

1.1 Introduction

These specifications are to address all landscaping requirements for developers, residents and City staff in providing standards to road reserves by provision of suitable guidelines and to the requirements of the City local law for Streets and Gardens.

This document provides guidance in general management and enhancement of road reserves within the City.

It also is the intention of this document to provide opportunities for residents and developers within the City to lessen the use of water, reduce nutrient run off into water ways, increase wild-life habitat and maintain the natural flora heritage of the City by implementation of a planted nature verge as an alternative to lawn areas.

Where other information is needed in relation to landscaping within the City please read Section 9 (a-g)

2 Urban Road Reserve or Nature Verges

2.1 General

The City supports and encourages the safe development of verges in urban areas, either in planted native vegetation or as maintained grass.

This Specification has been established to maintain a safe environment for motorists and pedestrians, provide access to all services/manholes, hydrants, service pits, posts, pillars, etc and to encourage landscaping to make verges attractive.

Retention of natural vegetation and use of native plant species is encouraged. Existing vegetation, trees and shrubs, whether natural or introduced, may not be removed without City approval.

No financial assistance will be given by the City for development, ongoing operation or maintenance costs to nature / road verges. However the City can supply approved street trees for new residences through local nurseries, an application form can be found on the City's website or at the City offices.

Any improvements placed or constructed on the public road reserve are placed there at the risk of the property owner. The City will endeavour to preserve the layout, but no guarantee can be given, as all services authorities have the right to construct and maintain services within the road reserve.

2.2 Definitions

The City The City of Busselton.

Crossing Crossing means a crossing giving access from a public thoroughfare to –
(a) Private land; or

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	(b) A private thoroughfare serving private land.
Footpath	That part of the actual road reserve set apart or constructed for use by pedestrians and cyclists.
Garden	Garden means any part of a thoroughfare planted, developed or treated, otherwise than as a lawn, with one or more plants.
Gravel	Rock which has been crushed to small stones.
Lawn	Lawn means any part of a thoroughfare which is planted only with grass, or with a similar plant, but will include any other plant provided that it has been planted by the local government.
Mulch	Mix of tree branches, bark, tree trunks and leaves which have been chipped to a small size and which may contain soils and other additives.
Nature Verge	Areas planted out in native vegetation and possible street trees.
Property Line	The boundary between actual road reserve (not the edge of the constructed road surface) and the land that abuts it thereon.
Road Reserve	The land between two adjacent property boundaries that provide a road and essential services corridor.
Road Verge	Areas planted out with grass and possible street trees.
Swale Drain	A depression in the road reserve that runs parallel to the edge of the constructed road surface; and is used to channel water away from the road and allows soakage where soil is suitable.
Verge	Verge means that part of a thoroughfare between the carriageway and the land which abuts the thoroughfare, but does not include any path.
Woodchips	Tree branches, trunks which have been chipped to a uniform size.

3 Landscaping the Verge Area (Nature Verge)

3.1 Principles

The nature verge is considered an urban road verge planted with either a lawn or low growing native plants and where practical complemented with street trees. The general principles for a nature verge is to provide a grassed or natural looking, low growing, easy care garden that fits into the surrounding area without interfering with surrounding infrastructure, safety of motorists and passage of pedestrians and cyclists.

3.2 Design

A Nature Verge Landscaping Plan is a requirement (**lawns do not require the submission of a landscape plan**) and must address all specifications within this document prior to implementation of any works. In order to gain the City's permission, a landscaping plan needs to be submitted showing the details of the proposed garden and the positions of any tree and shrub planting.

3.3 Approval

A City Officer will inspect the landscaping plan, and make any comments necessary to ensure the planned garden conforms to the City's Local Law and this specification. The plan may also be forwarded to service providers including Busselton Water for comment. The landscaping plan will be returned to the Applicant along with a letter of approval or the requirement to make amendments to the plan and any conditions that may apply.

3.4 Design Considerations

As part of the Nature Verge principles, the City accepts qualified design, implementation and maintenance of verges other than lawn by planting with native species. It will be required by the land owner or his/her representative to understand and accept that the liability for City and other service providers' future works may be rectified to the same level or standard as prior to the works.

Some of the design requirements include:

- Installation must be 'Water wise';
- Compacted materials and synthetic turf are not permitted;
- Maximise stormwater drainage infiltration in the road verge by using mulched native planting beds;
- Plants to be less than 75 cm at maturity and not contain sharp edges or poisonous properties;
- Pavers to a max 33% of area (not including crossover). Paving preference is red clay pavers, professionally installed, non slip and bedded flush to surrounding infrastructure with no trip points; 67% of remainder to be garden or lawn.
- Paved areas are not to be used for car parking or interfere with pedestrian movement or motorist sight lines or obstruct the public in any way;
- Planting to not interfere with vehicle or pedestrian sight lines;
- No loose stone aggregates;
- Pedestrians to have easily managed access path through verge (parallel to road) by existing footpath or allowance for access footpath at a minimum 2 metres from back of

kerb if no existing footpath. In some areas footpath may be on a different alignment and should be designed accordingly;

- Any reticulation to be set at ground level height;
- Mulch to be contained within designated area;
- Allowance for bins on hardstand and provide set back for future footpath of minimum 2 metres from edge of kerb or the required alignment;
- Flush ground levels with surrounding infrastructure are to be retained;
- No star pickets, rocks or other non frangible objects;
- No trees or shrubs are positioned that will interfere with services; and
- All safety issues are addressed.

3.5 Nature Verge Landscape Plans

Nature Verge Landscape Plans must be submitted for assessment prior to construction. Plan details must include:

- All surrounding infrastructure including road, crossovers, footpaths, powerlines, boundaries, services, inspection points and distance to nearest intersection;
- Plan layout of all planting and other materials to a nominated scale of no less than 1:100;
- Naming of all endemic native plant species to be used including their locality, height at maturity and spacing (no exotic species to be used);
- Irrigation details ensuring no water is to spray outside of verge planting area;
- Type of materials to be used other than plants and mulch (The City will prefer plants and mulch only);
- If no existing footpath, show pedestrian access to a minimum of 2 metres in width from back of kerb or 3 metres from edge of road seal if no kerb; and
- Maintenance requirement and maintenance regime.

3.6 Maintaining a Nature Verge

A garden of native trees and shrubs with mulch can be established upon approval of a Nature Verge landscape plan.

- The Applicant is to ensure that there is no spillage of vegetation onto road edges, dual-use paths, footpaths or covering of public utility facilities on the verge. Care must be taken that no branches, plants or runners protrude in such a way that pedestrians may bump into or trip when walking through the area - especially at night.
- All low planting is to be kept under 750 mm by pruning to ensure all sightlines for both traffic and pedestrians is maintained, be compact in shape to provide ease of maintenance and visually complimentary to the surrounding environment.
- Spiky plants should be avoided altogether and especially in areas near footpaths, road edges and crossovers. The City will require the landowner to remove these plants within the road reserve and are considered dangerous to pedestrians and their pets.
- Weed control using 80mm weed free mulch (not woodchips) overlay is acceptable.

3.7 Street Trees

- Trees shall not be planted on verges less than three (3) metres in width.

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- The general tree planting alignment is between 2.4 to 3 metres from property boundaries, in accordance with Utility Providers Code of Practice for WA.
- Trees shall not be planted within one (1) metre of an underground service.
- Trees growing to over five (5) metres shall not be planted under overhead electrical power lines nor any tree planted where it will grow to within one (1) metre of a power line. Where powerlines exist the preference would be to plant trees inside the front of the proponent's property. Trees will vary in height depending on conditions of individual sites and cannot be guaranteed to grow to a limiting height.
- No trees are to be planted within two (2.5) metres of crossovers, road kerbs or shoulders, man-holes, hydrants, inspection pits, posts and pillars, or within one (1) metre from a dual-use path or footpath. Exceptions can be where root barriers are installed at a minimum diameter of 1.2 metres and 900mm deep and will only be excepted where 0.6 metre clearance from back of kerb or footpath exists.
- No trees to be planted less than 10 metres from the corner. Measurements taken from back of kerb.
- All trees planted in the verge area are to be kept under-pruned to a minimum height of 2.1 metres clear as it matures.
- Large trees (higher than 10 metres at maturity) are not to be planted in residential areas where the verge is less than 10 metres wide.
- Spreading varieties (wider than 6 metres at maturity) are not to be planted unless they can be set well back to avoid conflict with traffic and pedestrian safety sight lines and access.
- Poisonous trees and shrubs are not permitted. The City will require the landowner to remove these plants within the road reserve and are considered Environmental Weeds.
- Upon request the City will supply trees of a mutually agreed species from the recommended species list; provided the property owner agrees to maintain them in a caring manner. The property owner may receive two trees for an average 20 metre verge frontage, four trees for a corner block and a maximum of six trees for a special rural or industrial area block dependent on service locations and safety alignments. The application form for "Street Tree (only) Application for Road Verge" can be collected from the City offices. Selection of trees must adhere to the City's plant species list for rural and urban trees suitable for road reserves.

3.8 The Applicant Supplies the Plants

- An approved species list is attached to this specification, that provides native plants that are considered beneficial in the requirements of nature verge planting.

3.9 Planting a Lawn on the Road Verge

- A lawn may be planted on the street/road verge without submitting a landscaping plan to the City. Flagged 25 x 25mm x 900mm high wooden stakes may be used with a roped or taped barrier to protect establishing lawns and street trees.
- Existing vegetation, trees and shrubs, whether natural or introduced, may not be removed without City approval.

3.10 Pedestrian/Cyclist Safety

- All landscaping must allow for pedestrian and cyclist access off the road and road shoulder. This is to provide for the safety of pedestrians and cyclists in normal and extra ordinary circumstances.
- The minimum clear width to be kept available, adjoining the road or shoulder is 2 metres from the back of kerb or edge of shoulder to allow an easement for safe pedestrian access away from the road edge.
- Where a path is situated along the property boundary then a minimum clear width of one (1) metre shall apply behind the kerb.
- The City may designate a location on one (1) or both sides of the road for a future footpath or dual use path.

3.11 Drainage and Levels

- The road verge is very important for storm water run-off and soakage and must remain permeable with excess water directed away from the pedestrian / cyclist access area.
- Swale drainage is sensitive to changes in levels. No fill or crossover is to be constructed which alters the levels of the verge area. If the verge area is filled to give an even grade from the property boundary to the kerb, then the adjoining property has no drainage and is prone to flooding. Verges should have a minimum 2% grade toward the kerb.
- Swale drainage and levels must be protected inclusive of any amended soils within the swale to aid infiltration or capture nutrients.
- Where a property is situated higher than the road, - stormwater run-off must be retained within private property and prevented from entering the road reserve, except by an approved method. The City requires retention on site at the rate of one (1) m³ of storage/soakage per 65m² of impervious area. It will be the property owner's responsibility to provide permeable surfaces for infiltration wherever possible within private property to lessen the likelihood of excess water being discharged into the road reserve.
- Where there is no kerbing or footpath, information can be obtained from the City's Engineering and Works Services Directorate regarding possible future plans for the road. Where kerbing is proposed, the location and height of the kerb will be indicated by a Engineering and Works Services Officer.

- The levels of verge areas shall be compatible with properties on either side and shall slope toward the kerb at a 1 in 50 grade (2%). The property line level or finished floor level (FFL) should be 150 mm above the top of the kerb. Where the City has designated one side of the road for a future footpath or dual-use path, levels are to be provided by Council's Engineering and Works Services Staff.

3.12 Tree Pruning

- Pruning of trees on road verge areas is the responsibility of the City if the trees have been planted and Western Power if naturally sown vegetation. Enquiries may be directed to Engineering and Works Services if there is an issue with branches growing into power lines.
- Tree removal from verges must only be approved and carried out by an authorised City Officer. The City will remove dangerous, diseased or dying trees upon request and prior inspection.
- Under pruning of trees to 2.1 metres from ground level as the tree develops in stature is required to allow pedestrian access and traffic sightlines.

3.13 Irrigation

- Where irrigation of the nature verge is needed, the irrigation system shall be installed and operated to avoid nuisance or hazard to pedestrians and shall have all pipes at depth of 150mm - 300mm and use pop up type sprinklers set flush with the ground level. Any reticulation that requires pedestrians to walk out onto the road to avoid spray shall be reconfigured at the request of the City. Please read in conjunction with *Section 9b Irrigation System Specifications*.
- Overspray of road and paths is not allowed (watering only to be used during water restriction allowance times).

When laying reticulation in the verge area in front of private property, the Applicant must:

- Ensure that all connections to public or private water supplies comply with their requirements and Australian Standards;
- Reticulation is to be controlled from the private property not from the verge area; and
- Any damage to public utility facilities is to be made good by the applicant.

3.14 Materials on Street/Road Verges

- Earth mounding, rocks or retaining walls or other non-frangible items/structures are not permitted as they may cause hazard or nuisance. The Applicant must not place or erect any fence, enclosure, rockery or other obstruction on, or about, a lawn or garden on the verge area.
- A flush kerb edge may be approved to the surrounding ground levels, with no trip points.
- Aggregates and loose gravel are not permitted in the street garden, due to spillage and safety concerns.

- Uniform size wood chips not permitted due to spillage concerns. Mulch is permitted where interlock of particles ensures non movement. Further topping up of mulch may be required once material starts breaking down.
- No items such as metal star pickets are to be used.

3.15 Entry Statements

- Notwithstanding anything else in this specification, the following applies;
- Entry Statements are not allowed within road reserves.
- Entry Statements that are in Public Open Space outside of road reserves are part of the landscape and are to be included in the Landscape Maintenance Agreement and bonded according to the requirements of Section 9(g) A Guide to Landscape Entry Statements (Subdivision).
- The City will consider Entry Statements located within private lots subject to the relevant planning approvals.

3.16 Removal of Materials from the Verge Area

- The City may at any time, require the owner or occupier to remove any tree, shrub, reticulation or structure from the street verge area at cost to the owner or occupier if it does not comply with the approved plan and these specifications.
- If the City is required to remove any materials from the verge area, the expense incurred may be recovered from the owner or occupier in a court of competent jurisdiction, where such materials contravene the Local Law or do not meet the specifications and approved plans or plans have not been submitted for approval by the City.

3.17 Local Law Relating to Street Lawns and Gardens

The City has a Local Law for street lawns and gardens under the Local Government Act 1995, for the control and regulation of vegetation and materials on road verge areas - "Activities in Thoroughfares and Public Places and Trading Local law 2015".

Permissible verge treatments

Notwithstanding clause 2.1(1)(a), an owner or occupier of land which abuts a verge may on that part of the verge directly in front of her or his land install a permissible verge treatment.

To avoid doubt, the general prohibitions of Division 1 (except clause 2.1(1)(a)) apply where a permissible verge treatment is installed.

A permissible verge treatment is—

- (a) the planting and maintenance of a lawn; or
- (b) the planting and maintenance of a garden provided that—
 - (i) clear sight visibility is maintained at all times for a person using the

abutting thoroughfare in the vicinity of an intersection or bend in the thoroughfare or using a driveway on land adjacent to the thoroughfare for access to or from the thoroughfare;

(ii) where there is no path, a pedestrian has safe and clear access of a minimum width of 2m along that part of the verge immediately adjacent to the kerb;

(iii) it does not include a wall or built structure;

(iv) it is not of a thorny, poisonous or hazardous nature; and

(v) no plant (except grasses or a similar plant) is within 6m of an intersection or within 2m of a carriageway.

Only certain verge treatments to be installed

A person shall not install or maintain a verge treatment which is not a permissible verge treatment, except under the authority of a permit.

Further details may be found on the City's Website <https://www.busselton.wa.gov.au/City-of-Busselton> link to Local Law.

3.18 Median / Roundabout Planting

Medians are considered the isolated land within a road carriageway separating oncoming traffic, this can include roundabouts. Medians are developed for various reasons to provide safety, aesthetics and engineering benefits.

Where medians / roundabouts are part of engineering design particularly in relation to Water Sensitive Urban Design (WSUD), the opportunity to provide water infiltration can be maximised by provision of a swale to allow stormwater to soak into the soil.

Where vegetation is added within a median / roundabout swale, care must be taken to ensure the vegetation does not limit the opportunity for water to infiltrate; this will need to be determined by:

- The soil profile - permeable sands versus impermeable clays;
- The plants to be used - fibrous tree root systems of large trees versus fine root systems of sedges or lawn;
- Where deciduous trees are considered within swales (not preferred) whether leaf fall will block pipe or lessen permeability; and
- Consideration for sedge planting to aid in nutrient stripping.

Where there are no swales within the median / roundabout then consideration must be given to planting requirements for safety and the suitability of the species to be used. Medians are difficult to maintain with the requirement for traffic management limiting easy maintenance access and the associated management requirements. Some of the requirements in non swale medians or roundabouts include:

- No planting of tree or plant species if the median is less than 2 metres wide;
- No planting to be higher than 750mm within median (other than approved trees);
- No planting to be higher than 750mm in a roundabout (other than specific feature dependent on location of the roundabout and the safety requirements);
- No planting to interfere with motorist or pedestrian sight lines;

- Use frangible stems (stem diameter to be less than 150mm at maturity unless specific approval has been given for an alternative); and
- Exceptions to the above may apply to the CBD area.

3.19 Verges within the CBD

Within Dunsborough and Busselton CBD areas, verges form part of a greater public access way system and require different treatments than typical residential urban verges. Requirements within CBD may include variable types of trees suitable for sun and shade within highly populated pedestrian zones, higher value placed on disability access, higher percentage of pavement covering, built furniture, etc.

Any verge works within the CBD will need to be designed in conjunction with the City to ensure all matters relating to urban design principles and future City projects (streetscapes) have been addressed and includes the requirements of the Busselton Town Centre Streetscape Manual or the Dunsborough Town Centre Streetscape Manual.

4 Nature Verge Species List

The trees and shrubs listed can generally be found at local or community nurseries within the City; however this will be dependent on availability at the time of purchase. For suitable outcomes in the long term benefits of planning a low maintenance verge area, forward ordering of plants prior to the works will ensure suitable species are available.

Some of the shrubs listed may have the potential to grow beyond 750mm in height dependent on soil types, fertilising and watering and must be pruned to keep within the required sight lines for vehicle and pedestrian safety as part of the required maintenance practices for nature verges.

Application forms for Street Trees can be collected from the City offices or from the City website

4.1 City Approved Urban & Rural Street Trees (Residential)

All trees have the potential to reach powerlines or interfere with underground services; preference is for street trees to be located inside the property line if there are limitations in space for planting on the verge.

Species	Common Name	Type	Growth habit	Flowers	Colour	Soil
Agonis flexuosa	WA Peppermint	Tree	Generally 6-8 metres, can tolerate variable conditions, local tree, Ringtail possum habitat, can be coppiced to provide multiple trunks to limit size	Oct/Dec	White	Sand/ Gravel
Corymbia ficifolia grafted	Red Flowering Gum	Tree	Generally 5-8 metres, grows in Walpole region, prefers some protection, requires some pruning to provide good shape	Dec/May	Red/Orange	Sand/ Loam/ Gravel
Allocasuarina fraseriana	Sheoak	Tree	5m - 15m	May/Oct	Brown	Sand/ Gravel
Melaleuca raphiophylla	Swamp Paper Bark	Tree	Up to 10m	Jul/Jan	White	Sand/ Clay / limestone

4.2 Preferred (Approved) Urban Shrub and Groundcovers

Other plants may be considered as long as they meet with the City's requirements including growth to be contained at 750mm high, are local SW species in the first instance, are water wise and not considered as environmental weeds. (see Section 9f Environmental Weeds or Section 9e Plant Species)

Species	Common Name	Type	Flowers	Colour	Soil
Anigozanthos flavidus	Kangaroo paw	Strappy leaf	Nov / Jan	Green / Red	Sandy / Clay / Gravel
Billardiera fusiformis	Australian bluebell	Shrub	All year	Blue	Variable
Calothamnus sanguineus	Silky leaved blood flower	Shrub	Mar / Jul	Red	Sandy / gravel
Calytrix flavescens	Summer star flower	Shrub	Dec / Jan	Yellow	Sandy
Carprobotus virescens	Coastal pigface	Groundcover	Set / Jan	Purple	Coastal
Conostylis aculeata	Prickly conostylis	Strappy leaf	Aug / Nov	Yellow	Variable
Conostylis candicans	Grey cotton head	Strappy leaf	Sept / Oct	Yellow	Sand / Limestone / Sand
Damperia linearis	Common Dampiera	Shrub	Aug / Dec	Blue	Gravel

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<i>Darwinia citriodora</i>	Lemon Scented Darwinia	Shrub	Aug / Oct	Red/orange	Gravel / Granite
<i>Dianella brevicaulis</i>		Strappy leaf	Oct / Dec	Blue / Purple	Sand / Clay
<i>Eremophila glabra</i> spp		Shrub / Groundcover	Various	Various	Various
<i>Ficinia nodosa</i>	Knotted club rush	Sedge	Oct / Jan	Brown / Cream	Various
<i>Frankenia pauciflora</i>	Common sea heath	Shrub	Jan / Feb	Pink / White	Sand
<i>Hardenbergia comptoniana</i>	Native Wisteria	Shrub/Climber	Jul / Oct	Blue / Purple / White	Sand
<i>Hypocalymma angustifolium</i>	White myrtle	Shrub	Jun / Oct	White / Cream	Sand / Clay / near watercourses
<i>Hypocalymma robustum</i>	Swan River myrtle	Shrub	Jun / Nov	Pink / Red	Sand / Gravel
<i>Kennedia coccinea</i>	Coral vine	Shrub / Climber	Aug / Nov	Orange / Pink / Red / Purple	Sand
<i>Leucophyta brownii</i>	Cushion bush	Shrub	Dec / Feb	Yellow	Sand
<i>Melaleuca trichophylla</i>		Shrub	Aug / Dec	Pink / Purple	Sand / Gravel
<i>Patersonia occidentalis</i>	Purple flag	Strappy leaf	Aug / Jan	Purple	Various
<i>Pimelea ferruginea</i>	Coastal pimelea	Shrub	Aug / Feb	Pink	Sand / Limestone / Granite

4.3 Preferred (Approved) Special Rural / Rural Street Trees

(All trees have the potential to reach powerlines or interfere with underground services; preference is for street trees to be located inside the property line if there are limitations in space for planting). Rural trees should only match tree species growing within the locality.

Species	Common Name	Type	Height	Flowers	Colour	Soil
<i>Agonis flexuosa</i>	WA Peppermint	Tree	Up to 10 m	Oct/Dec	White	Sand / Gravel
<i>Allocasuarina fraseriana</i>	Sheoak	Tree	5 m - 15 m	May/Oct	Brown	Sand / Gravel
<i>Corymbia calophylla</i>	Marri	Tree	Up to 40 m	Dec/May	White	Sand / Loam / Gravel/ Granite
<i>Eucalyptus marginata</i>	Jarrah	Tree	Up to 40 m	Jun/Jan	White	Sand / Clay / Gravel
<i>Eucalyptus patens</i>	Blackbutt	Tree	3 m - 25 m	Jul/Aug Nov/Feb	White	Gravel / Sand / Clay / Loam
<i>Melaleuca lanceolata</i>	Rottnest Ti-Tree	Tree	1 m - 8 m	Jan/Sep	White	Sand / Limestone
<i>Melaleuca priessiana</i>	Moonah	Tree	2 m - 9 m	Nov/Feb	White	Sand / damp
<i>Melaleuca raphiophylla</i>	Swamp paper bark	Tree	Up to 10 m	Jul/Jan	White	Sand / Clay / Limestone
<i>Melaleuca viminea</i>	Mohan	Tree / Large Shrub	1 m - 5 m	Jul/Nov	White	Sand / Clay

5 Rural Road Reserves

5.1 General

Where the Nature Verge is within Rural or Special Rural Areas then specific trees endemic to the road reserve (within the locality of the site) shall be used providing there is no conflict with powerlines, traffic sightlines and other services. Tree setbacks of a minimum 4 metres (>150mm mature stem diameter) from the edge of seal or face of kerb is required.

The rural road reserve is considered a City asset and must be treated in the following order prior to submitting a landscape plan to the City for approval prior to commencement of any work -

- Safety - Any planting must comply with the traffic and pedestrian requirements to the relevant Australian Standards for roads including sightlines.
- Engineering - Any planting must comply with the requirements of the relevant Australian Standards for roads and the protection of infrastructure (drains / road formations / culverts / bridges / lighting / power lines / etc).
- Environment - Use only local native species to enhance the natural road side environment.

Prior to undertaking any works a traffic management plan may be required as part of the Landscape Plan proposal.

5.2 Planting

Planting of vegetation to rural road reserves shall only be carried out within the property owner's nature verge area. All plantings must be of the same species as the surrounding natural bush areas to preserve the rural and natural environment of the area.

- No irrigation will be accepted within the rural road reserve unless a specific entry statement has been approved by the City with the irrigation requirement forming part of the entry statement proposal.
- Any planting carried out within a rural road verge must be planted to accommodate expected growth of each individual plant at maturity and does not encroach within 3 metres from the edge of seal or face of kerb. Trees or shrubs with a potential stem diameter greater than 150mm diameter shall be placed a minimum of 4 metres from the edge of seal or face of kerb. The area between the face of kerb or edge of seal and the planting edge is 3 metres for stem diameter <150mm at maturity. The 3 metres is considered a clear zone and must be kept free of vegetation to provide sufficient safety sight lines and provide access for maintenance works.
- Any planting will not be placed to interfere with driveway sightlines, intersection sightlines or cover any road signs. All vegetation must provide tapers from intersections, signage and driveways to ensure motorists have a clear view of approaching driveways, intersections, signage and other potential traffic hazards.
- Only frangible materials will be used within the road reserve.
- All vegetation must be placed a minimum 1.5 metres away from the property boundary (maintenance clear zone) to ensure property fence line is kept free of branches for the property owner to maintain their fence.

6 Roadside Revegetation Requirements for Non Vegetated Sites (rural).

6.1 General

1. City approval of Landscape Plan.
2. Accurate service locations should be identified prior to excavation.
3. Trees that will develop trunks larger than 100mm shall not be planted closer than 4m from the painted edge line or driving edge of the road or closer than 1.5m from adjacent property boundaries and fence lines.
4. Shrubs and ground covers shall not be planted closer than 3m from the painted edge line or driving edge of the road or closer than 1.5m from adjacent property boundaries or fence lines.
5. All planting to be located to preserve the visibility and integrity of road signs and intersections sight lines.

6.2 Rip mound and plant

1. Apply herbicide control of Glyphosate Biactive at 3L/Ha.
2. Site preparation by rotary hoeing along rip lines.
3. Rip to a min depth of 500mm and mound to a min height of 300mm.
4. Apply Glyphosate 360 at a rate of 2L/Ha and Simazine 500 at a rate of 4L/Ha prior to mulch application.
5. Apply natural mulch material evenly over mounds to achieve a minimum cover of 80mm.
6. Plant seedlings in the centre of the mounds directly above the rip line, approximately 2.0m apart or as specified by the relative plans and place a fertiliser tablet 200mm deep and 200mm away from the seedling.

6.3 Auger planting

1. Apply herbicide control of Glyphosate Biactive at and 3L/Ha Simazine 500 at a rate of 4L/Ha prior to mulch application.
2. Auger individual seedling holes with a CSIRO auger (mixes/not removes soil) to a minimum depth of 500mm and approximately 3m centre spaces.
3. Apply natural mulch material evenly over the site to achieve 50-70mm cover.
4. Plant seedling into prepared holes and place fertiliser tablet 200mm deep and 200mm away from each seedling.

6.4 DIRECT SEEDING – Premixed Topsoil and Mulched sites

1. Apply herbicide control of Glyphosphate Biactive at 3L/Ha if required.
2. Evenly spread seed at the specified application rate (Normally 4 Kg/Ha) evenly across entire site directly after topsoil / mulch respreading.
3. Apply broad spectrum fertilizer at 150Kg/Ha (To be approved prior to application - suggest Horticultural special / agras # 3 or similar).
4. Lightly harrow or chain the site to incorporate seed into the top soil horizons.

Note – Sites with no prior topsoil/mulch respread, additional soil preparation is required prior to application of seed.

5. On compacted sites, rip to a minimum depth of 500mm with minimum 1m spacings across the entire site.
6. For non mulched sites, apply natural mulch material evenly over the site to achieve 50-70mm cover.
7. Rotary hoe the area to incorporate mulch into soil and proceed as per Item 2.

7 Further Reading

Section 9a Landscape - General Guidelines.

Section 9b Landscape Irrigation System Specifications.

Section 9d A Guide to Landscape Public Open Space (POS).

Section 9e Landscape Plant Species.

Section 9f Landscape Species Environmental Weeds.

Section 9g A Guide to Landscape Entry Statements