

# CITY OF BALLARAT



Sustaining growth. Strengthening communities.



## Landscape Design Manual

August 20, 2012: Version 5

# City of Ballarat Landscape Design Manual

August 20, 2012: Version 5

## Contents

<b>1.0 Introduction .....</b>	<b>5</b>
1.1 Definitions: .....	6
<b>2.0 Earthworks.....</b>	<b>7</b>
2.1 Dial Before You Dig.....	7
2.2 Filling .....	7
2.2.1 Placing and Compaction .....	7
2.2.2 Backfilling .....	7
2.3 Excavated Rocks .....	7
2.4 Environmental Protection .....	8
2.4.1 Site Litter Retention and Sediment Control.....	8
<b>3.0 Preparatory Work .....</b>	<b>9</b>
3.1 Existing Tree Protection .....	9
3.2 Standard Subsoil Drainage Detail.....	9
3.3 Soil Preparation .....	10
3.4 Topsoil and Soil Testing.....	10
3.4.1 Existing Soil.....	10
3.4.2 Imported Soil.....	11
3.5 Weed Eradication .....	12
3.5.1 Herbicides.....	12
3.5.2 Noxious Weeds.....	12
<b>4.0 Garden Beds.....</b>	<b>13</b>
4.1 Garden Bed Construction.....	13
4.1.1 Existing Soil.....	13
4.2 Shrub & Groundcover Planting Techniques/Procedures.....	13
4.3 Garden Edging .....	14
4.3.1 Spade Edging .....	14
4.4 Mulch.....	15
4.4.1 Garden Bed Mulch: .....	15
<b>5.0 Tree Planting.....</b>	<b>16</b>

5.1 Tree Planting and Staking in reserves and nature strips.....	16
5.1.1 Intersection Site Distances and Clear Zones .....	17
5.1.2 Tree Staking.....	17
5.3 Tree Specifications .....	18
<b>6.0 Lawn Areas .....</b>	<b>20</b>
6.1 Grassing .....	20
6.2 Nature Strips .....	20
6.3 Parks and Reserves.....	21
<b>7.0 Irrigation.....</b>	<b>22</b>
7.1 Systems Components.....	22
7.2 Systems Installation.....	22
7.2.1 Commissioning .....	22
7.2.2 Static Tests .....	22
7.2.3 Commissioning Procedure .....	22
7.2.4 Clean Site.....	23
7.2.5 Completion.....	23
7.2.6 Guarantee.....	23
7.3 As-Built Drawings .....	23
7.4 Maintenance Manual .....	23
<b>8.0 Playgrounds .....</b>	<b>24</b>
8.1 Developing Play Spaces – Hierarchy of Provision .....	24
8.2 Play Value of a New Play Space.....	24
8.3 Playground Safety .....	25
8.4 Provision of Playgrounds in the City of Ballarat.....	25
8.5 Equipment Requirements .....	27
8.6 Installation Requirements .....	27
8.7 Process .....	28
8.8 Additional Park Elements .....	29
<b>9.0 Miscellaneous Works.....</b>	<b>31</b>
9.1 Wetland Establishment .....	31
9.2 Pathways .....	31
9.2.1 Gravel Paths .....	31
9.2.2 Concrete Paths .....	31
9.3 Infrastructure .....	33
9.3.1 Paving.....	33

9.4 Estate Entrance Features .....	33
<b>10.0 Construction Documentation .....</b>	<b>34</b>
10.1 Site Representative .....	34
10.2 Construction Inspections and Hold Points .....	34
<b>11.0 Practical Completion, Maintenance and Handover .....</b>	<b>36</b>
11.1 Practical Completion Obligations .....	36
11.2 Maintenance Obligations .....	37
11.3 Handover Obligations.....	37
11.4 Bonds.....	38
<b>APPENDIX 1 - Practical Completion Checklist .....</b>	<b>39</b>
<b>APPENDIX 2 - Maintenance Checklist .....</b>	<b>41</b>
<b>APPENDIX 3 - Landscape Handover Checklist.....</b>	<b>43</b>



# 1.0 Introduction

This Landscape Design Manual (LDM) is to be read in conjunction with the City of Ballarat Infrastructure Design Manual (IDM). It is an adjunct to the IDM specifically for Landscape Design and Standards. The LDM has been developed by the City of Ballarat as a guide to specifying, installing and maintaining all landscape within the City of Ballarat. The LDM sets out all the landscaping requirements for newly developed residential subdivisions, and landscape works on City of Ballarat land.

The LDM is to be used as a reference tool by Council representatives when assessing permit applications, by landscape design consultants for consideration during the preparation of landscape plans for Council submission, and by landscape contractors, site representatives and council representatives in the field during the landscape construction and maintenance periods.

The LDM is a device for Council to ensure that the quality and workmanship of landscape works undertaken within the municipality are of a standard that is in accordance with accepted industry standards, and sound horticultural and conservation practices.

The assessment of works against this LDM should be undertaken with a degree of flexibility and acknowledgement that alternative, and equally appropriate approaches, can be considered.

All landscape works must be documented and endorsed by Council within the detailed landscape plans forming part of the approved planning permit. This may include the requirement for the following documents to be to be read in conjunction with the Landscape Plan:

- City of Ballarat Infrastructure Design Manual (IDM).
- Urban Design Manual – Part A: Street and Park Furniture Guidelines.
- Urban Design Manual – Part B: Landscape Character Area Guidelines.
- Ballarat Open Space Strategy.

It may also require the Site Representative to prepare the following documents to be to be read in conjunction with the Landscape Plan:

- Vegetation Management Plan
- Tree Management Plan
- Weed Management Plan
- Native Vegetation Offset Plan
- Site Management Plan
- Environmental Management Plan
- Sediment and Erosion Control Plan
- Litter Control Plan
- Landscape Maintenance Plan

**Please Note:**

- It is recommended that a meeting be arranged with Council Representatives prior to the submission of the landscape and urban design plans.
- It is the developer's responsibility to ensure all relevant authorities are notified and requirements are met.
- These standards do not waive any responsibilities or approvals required by other authorities.
- Prior to any works commencing, consideration shall be given to the Flora and Fauna Reports, Native vegetation management and offset reports, and Cultural Heritage Assessment and its recommendations.
- All material brought onto the site must be disease and pathogen free.

**1.1 Definitions:**

Site Representative:	The person responsible for part or all of the landscape works.
Contractor:	The company/person contracted to undertake the construction and maintenance of the entire works or part of the works, or their authorized representative.
Proprietor:	The owner of the land.
Council Representative:	The person nominated by City of Ballarat to provide comment on the landscape plan/s during the approval and construction process.
CoB	City of Ballarat
HP:	Hold point
PC:	Practical Completion, when the construction and planting has been completed and the development enters into the maintenance stage.
HO:	Handover, when the development is deemed to be ready for the final handover to Council.

## **2.0 Earthworks**

### **2.1 Dial Before You Dig**

All onsite contractors must have appropriate Dial before You Dig information onsite and available for on the spot inspections by Council Officers. Failure to do so may result in works being halted until such information can be provided. Any damage to utility infrastructure will be the responsibility of the developer.

### **2.2 Filling**

Wherever possible, material should be obtained from site. Should imported soil be required, written approval of the fill material must be provided to the Council Representative.

Imported fill shall be externally tested and certified prior to delivery on site or the reuse of site won material. Material shall be free of any deleterious material, including weed material or seed, vegetation, debris, building waste, asbestos and rock.

All rubbish must be removed from the site at the contractor's/developer's expense.

#### **2.2.1 Placing and Compaction**

Structural fill shall be spread and compacted in accordance with the requirements of the current applicable Australian Standards.

#### **2.2.2 Backfilling**

Unless otherwise noted on drawings, backfilling and compacting for irrigation trenches and minor excavations may be site-won materials, provided such filling is sound material free of perishable material or any material that will not form stable fill and is to the satisfaction of Council. All vegetation, topsoil, debris, building waste, rock and rock floaters shall not, under any circumstances, be used as filling, and all such materials shall be separated out from any site-won material considered suitable for filling.

### **2.3 Excavated Rocks**

Any earthworks, including the removal of excavated rocks, must be in accordance with the Environmental Management Plan for the site.

Should excavated rocks need to be removed from the site, it must be ensured that the removal process will not cause major disturbance to adjacent works or the surrounding site.

Under no circumstances should rocks be moved into existing waterway reserves without approval from Councils representative. Earthworks on waterways should retain as much embedded and surface material as possible.

## **2.4 Environmental Protection**

Any works performed must be in accordance with the site management plan in regard to the protection from sediment movement off the site into waterways and storm water systems. Remnant vegetation is to remain and should be protected prior to work commencing and Council representative advised of protection plan.

### **2.4.1 Site Litter Retention and Sediment Control**

The site management plan must include a site litter retention plan and a sediment control plan e.g. Fencing downwind of the predominant wind direction, regular site clean ups, rubbish removal and disposal and sediment traps as required. Methods available for controlling the movement of sediment on the site include:

#### Hay bale sediment fences

The hay bales should follow the contours of the land as much as possible and be embedded into the ground, butted together as tightly as possible and secured.

#### Geotextile sediment fences

The geotextile fabric should be secured with the bottom of the fabric buried to make it secure, and to ensure that water is not able to pass underneath the fabric untreated.

#### Grass filter strips

Grass filters can be used on the footpath adjacent to and flush with the top of the kerb. The filter strip consists of a single roll of turf laid along the kerb with a 1.5m long strip laid perpendicular to the kerb every 10m.

The site must be progressively stabilized and rehabilitated as the project progresses to minimize the area of unstable ground. The maintenance of sediment control devices must continue until the site has been adequately stabilized and the risk of erosion is minimized.



## **3.0 Preparatory Work**

### **3.1 Existing Tree Protection**

Existing trees to be retained shall be protected on construction sites in accordance with Australian Standard AS4970 "Protection of Trees on Development Sites": This will include but not be limited to;

Erect a temporary tree protection fence 1.8 high temporary chain wire fencing at the drip line of the tree to set up a Tree Protection Zone (TPZ) before work commences.

No access, stockpiling of materials, soil disturbance, excavation works or storage of machinery to be allowed inside the TPZ. The extent and the alignment of the fence must be in accordance with location set out at pre-site inspection. The fence should be retained and maintained for the duration of construction.

In the case that temporary vehicular movement is required across the TPZ, heavy plywood or metal sheets laid over coarse bark mulch can be used for short term protection. These should be removed as soon as movement is complete.

Where services are to be implemented through the root zone of a tree to be retained, their alignment should be bored rather than placed in open trenches, to ensure that root severance does not occur. New services should be located in a single bore hole.

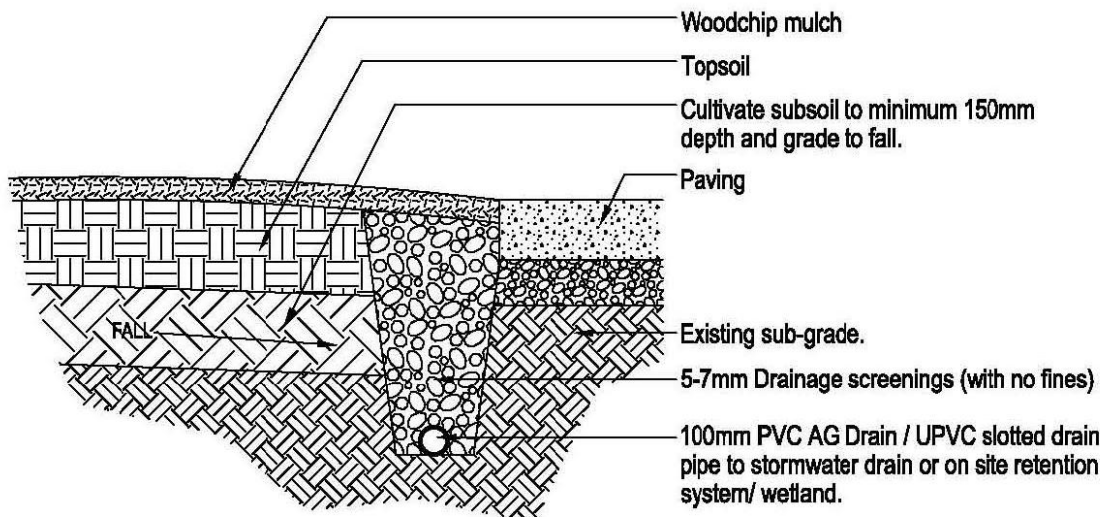
Should root excavation be required, the work should be carried out by a qualified arborist by hand digging or the use of an air knife. Root cutting should be done by hand, not backhoe or other mechanical equipment, to avoid tearing of roots.

All tree pruning works are to be carried out by a qualified arborist. Any works carried out within the TPZ are to be supervised by a qualified arborist and no signs, fences or other items are to be attached to trees at any time.

The Contractor shall cause no damage to trunk or branches of the existing tree unless otherwise specified to be removed or pruned. If damage is caused that affects the health of the tree or results in the death of the tree, the contractor shall be liable for the replacement and /or financial compensation to the values determined by the City of Ballarat's Tree Valuation Template (Burnley Method).

### **3.2 Standard Subsoil Drainage Detail**

Where appropriate, provide subsoil drainage to prevent the ponding of surface water in garden beds or grassed areas adjacent to hard paving.



### 3.3 Soil Preparation

For minimum requirements regarding soil preparation for garden bed and grassed areas, Refer to section Garden Bed Construction (Section 3) and Lawn Area (Section 5).

### 3.4 Topsoil and Soil Testing

Where possible, site topsoil should be used for garden beds and lawns. In acquiring site soil, the top 100mm layer shall be stripped of soil and vegetation and stockpiled on the site. Soil for use in garden bed and lawn areas may then be obtained from the stockpile soil provided the soil meets the requirements as stated below.

#### 3.4.1 Existing Soil

- Free from perennial weeds and their roots, bulbs or rhizomes.
- Free from building rubble, including bricks, concrete, plaster, timber, oil or any other matter deleterious to plant growth.
- Free from rocks or stones greater than 5mm diameter, but in any case, to have less than 5% stone by dry weight.
- Texture to be light to medium friable.

### 3.4.2 Imported Soil

Should imported soils be required, the subsoil shall be ripped and cultivated to a depth of 300mm to combine with existing soil/base (refer to Australian Standard AS4419 "Soils for Landscaping and Garden Use").

- Free from perennial weeds and their roots, bulbs or rhizomes.
- Free from building rubble, including bricks, concrete, plaster, timber, oil or any other matter deleterious to plant growth.
- Free from rocks or stones greater than 5mm diameter, but in any case, to have less than 5% stone by dry weight.
- Ph to be 6.0 - 7.0.
- Texture to be light to medium friable.
- Free from silt material.
- Non-hydrophobic

The soil shall conform to the following sieve analysis:

AS Sieve Size (mm)	% Passing by Mass
9.001	100
.35	100
1.18	90-100
0.600	70-80
0.300	45-55
0.150	20-30
0.075	5-15
0 002	3-5

The Contractor is responsible to make allowance for the stockpiled topsoil to be tested prior to spreading. Three (3) samples of the site won soil shall be randomly selected from different locations. The samples shall be comprehensively laboratory tested by a nominated agency, as per the requirements above, for approval by Council.

The laboratory report shall be accompanied with recommendations for amelioration measures required to improve any deficiencies. Laboratory certificates shall accompany the sample soil mix submitted for approval at the commencement of the work, including details of the soil source.

If the site topsoil fails to conform to the above tests, the material may be ameliorated, in accordance with the recommendations of the laboratory report, to reach the relevant Australian Standards and the above requirements, as identified above. If the material is deemed unsuitable for amelioration, imported topsoil (meeting the above requirements) shall be used in landscape construction. A laboratory certificate shall accompany the imported soil demonstrating the mix is in accordance with the above requirements.

During the progress of the works, the Superintendent shall select two further samples of soil mix for analysis, to confirm compliance with the above requirements. In the event that the subsequent tests reveal unacceptable deviations from the approved, tested samples, the Contractor, at his expense, will be responsible for undertaking further amelioration processes.

### **3.5 Weed Eradication**

Please note: Contact should be made with Council's Parks and Gardens Department regarding weed control.

A Weed Management Plan, where applicable, shall be followed and implemented throughout the landscape works period.

- The Weed Management Plan is to incorporate:
- Weed management prior to landscape works;
- brought on site; and
- Weed management at the completion of landscape works with recommended ongoing management practices.
- A weed eradication program shall be implemented to all areas scheduled for lawn and planting. Following topsoil placement, fine grading, and the installation of a fully functioning irrigation system (where applicable), establish a regular watering program that will encourage germination and growth of weeds over a two to three week period to remove weed seed bank from the soil.

The Contractor shall wait an additional one to three weeks, depending on extent of weed desiccation, to remove residual weed foliage and roots prior to the planting and seeding operation.

#### **3.5.1 Herbicides**

Only herbicides registered for use in Victoria may be used. All herbicides and pesticides are to be used in strict accordance with any and all local authority requirements or restrictions, and with the manufacturer's instructions at the recommended rates. Herbicides may only be applied by a qualified contractor, certified specifically for herbicide applications.

#### **3.5.2 Noxious Weeds**

All declared noxious weeds should be removed or treated accordingly. (ref CALP Act)

## 4.0 Garden Beds

### 4.1 Garden Bed Construction

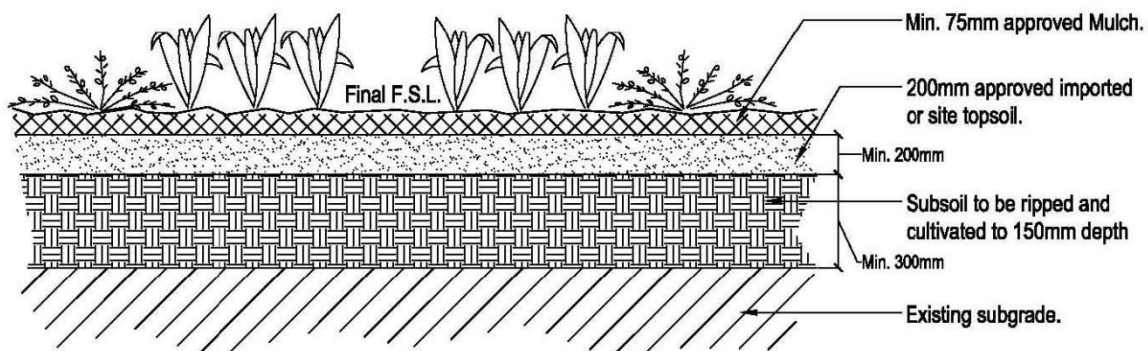
All garden beds shall be excavated to a minimum depth of 300mm. Where possible, site soil should be stockpiled and used for the garden beds. Subgrade within planting areas is to be ripped to a minimum depth of 150mm and cultivated with gypsum at a rate of 2.5kg/m<sup>2</sup>. All soil, whether existing on site or imported must meet the requirements as stated below.

#### 4.1.1 Existing Soil

Refer to 2.4

The subsoil is to be graded and lightly compacted to reestablish a finished soil level of a minimum of 300mm below paving level throughout. The soil is to be evenly compacted throughout to approximately 70% modified maximum dry density.

Supply and place 200mm minimum depth of approved garden soil, to establish a finished grade that is 100mm below paving and general levels throughout. Supply and place 75mm depth of approved mulch.



Note:  
Topsoil shall be free from stones greater than 25mm.

### 4.2 Shrub & Groundcover Planting Techniques/Procedures

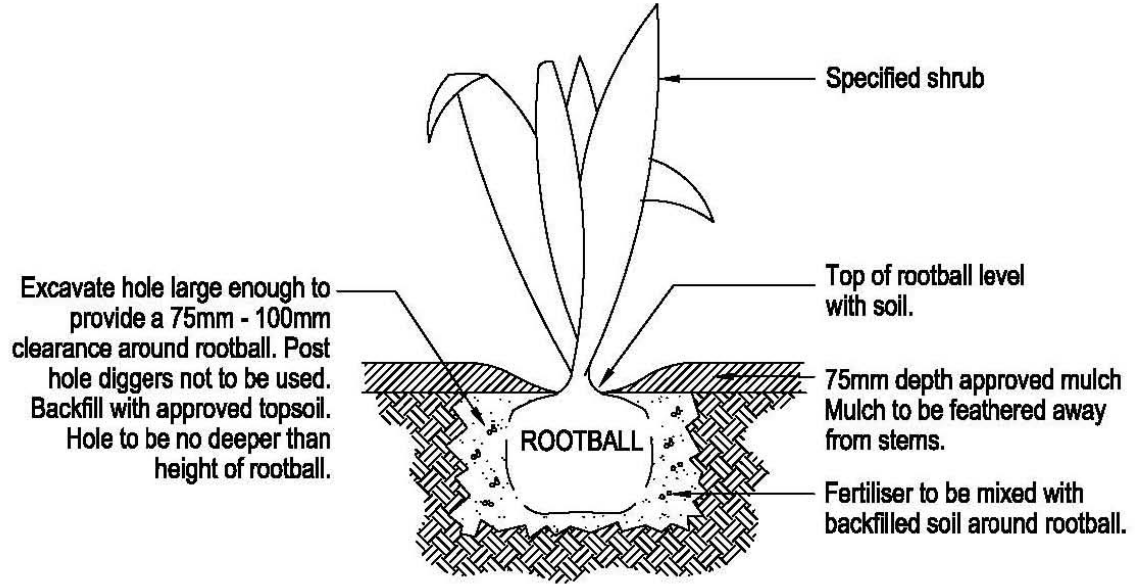
Excavate planting holes in accordance with the planting diagram below. Excess excavated soil shall be evenly spread throughout planting areas by the Contractor.

Mix 12 month slow release fertilizer granules with the broken up soil. Do not use granules on species which may be intolerant of fertilizer. Use appropriate fertilizers for indigenous (low PH) or non indigenous plants

The Contractor shall be responsible for the handling and planting of trees and in particular shall prevent protect the root mass from all forms of damage during the planting operations.

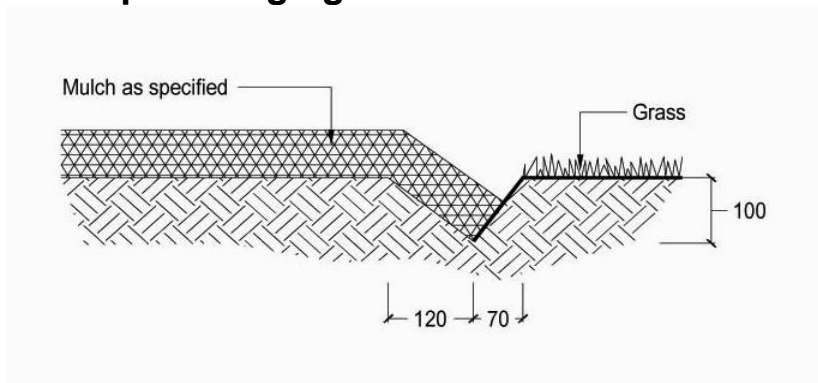
All planting setouts shall conform to the planting documentation in specified densities, sizes and numbers. Any change to plant set out to be approved by the Site Representative and Council Representative.

- Post hole diggers must not be used. The contractor must ensure there is no glazing of the sides of the holes as a result of the method of digging the hole.
- All hessian and other packaging material must be removed prior to planting.
- Prior to planting, water the plant in the pot and fill the planting hole with water.
- Ensure the hole is backfilled immediately on the placement of the plant.



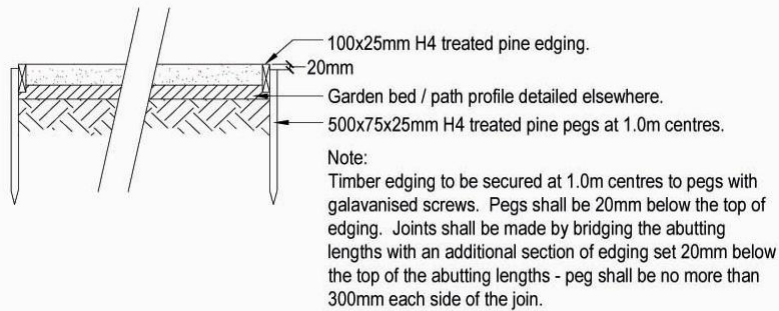
### 4.3 Garden Edging

#### 4.3.1 Spade Edging



3.3.2 Timber Edging





Steel Metal edging may also be used instead of the standard timber edging. Check manufacturer's specification regarding installation.

## 4.4 Mulch

### 4.4.1 Garden Bed Mulch:

Mulch for all planting areas shall be bark mulch or otherwise approved by Council. 80% of particles shall be in the size range 20-35mm in plan, and 5-10mm in thickness. No particle is to exceed 50mm in plan. Mulch is to be free of weed material and seed, debris and foreign matter.

Contractor is to submit a 5kg bag sample to the Council Representative for approval, prior to delivery to site. All mulch used shall comply with the approved sample. The Contractor shall spread a 75mm thickness of approved mulch on all garden beds and 150mm thickness of mulch on all trees in accordance with Council's detailed specifications. The stems of all plants shall be kept free of mulch to protect the stem from possible rot.

NB: Mulch found to contain any recycled building materials (i.e. chipboard, pine pallet etc.) will be rejected.

## 5.0 Tree Planting

Please note: Locations of existing utilities networks must be obtained from Dial Before You Dig Ph: 1100 prior to any excavation taking place on public land. Any damage to utilities will be the responsibility of the developer.

General:

- As a general 'rule of thumb' provide one advanced street tree in the centre of each residential allotment in a high density subdivision;
- Where the allotment is to be used for unit development and a central crossover is proposed, place a street tree on either side of the crossover;
- Where practical, provide consistent, equal spacing between trees;
- Locate trees along nature strip centre line where possible;
- As a general rule, spacing between trees to be no less than 8-10m for small trees, 10-12m for medium sized trees, and 12-15m for larger trees.
- Trees in parks and reserves must be located at least 3m apart and 3m from garden beds and fixed structures to allow for future mowing.
- The planting of tubestock or smaller street trees may be considered in special circumstances.

Trees to residential streets to be planted a minimum distance from the following:

- 1.2m from pedestrian pathways;
- 2.0m from pedestrian pathways in reserves;
- 3m from driveways;
- 4m from power poles;
- 4m from light poles;
- 2m from service assets, including junction boxes, pits etc
- 2m from service conduit crossing;
- 3m from fire plugs;
- 2m from domestic service tapping points; and
- 2m from storm water outlet points.

**N.B. Where these distances are not attainable, root barriers may be appropriate in some instances and on the advice of a relevant professional with approval for the council representative.**

### 5.1 Tree Planting and Staking in reserves and nature strips.

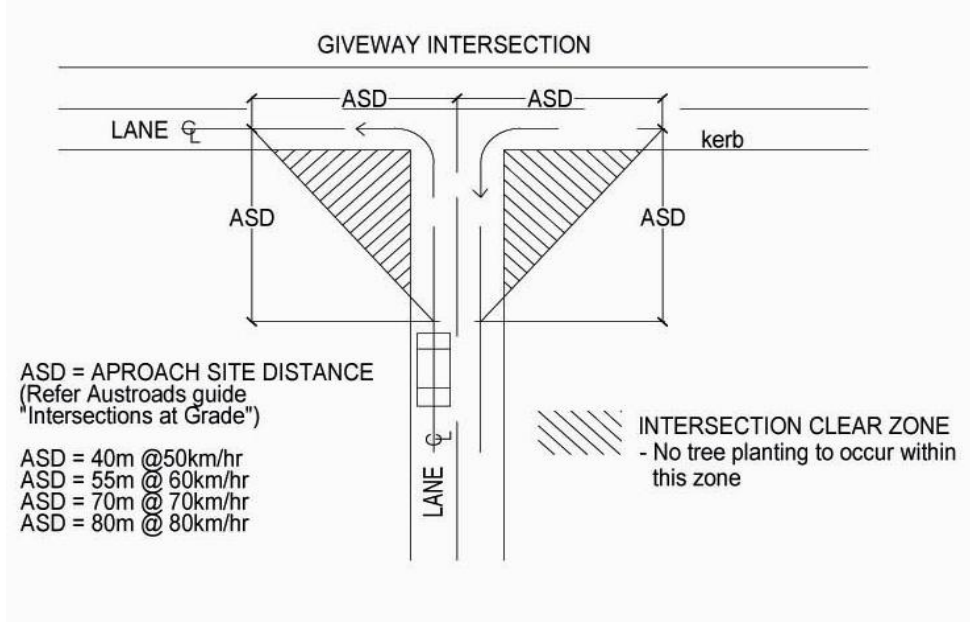
**Please note: Locations of existing utilities networks must be obtained from Dial Before You Dig Ph: 1100 prior to any excavation on public land.**

Wooden or recycled plastic stakes only are to be used. No metal stakes are permitted in any circumstances. Tree ties are to be Hessian ties, secured to each of the stakes. No 'shoe string' or nylon ties are permitted.

### 5.1.1 Intersection Site Distances and Clear Zones

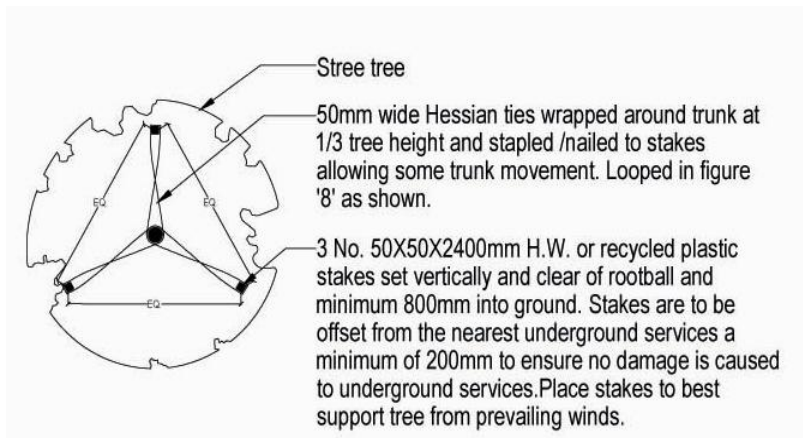
The diagrams below are the Austroads guide to 'Clear Zones' at road intersections.

For traffic safety, the Approach Distances (ASD) shown should be retained in all instances where the speed limit on the major road is 60km/hr or above. However, the vast majority of intersections are on minor residential roads where the speed limit is restricted to 50km/hr. In this instance, the distance may be safely reduced to 10m.



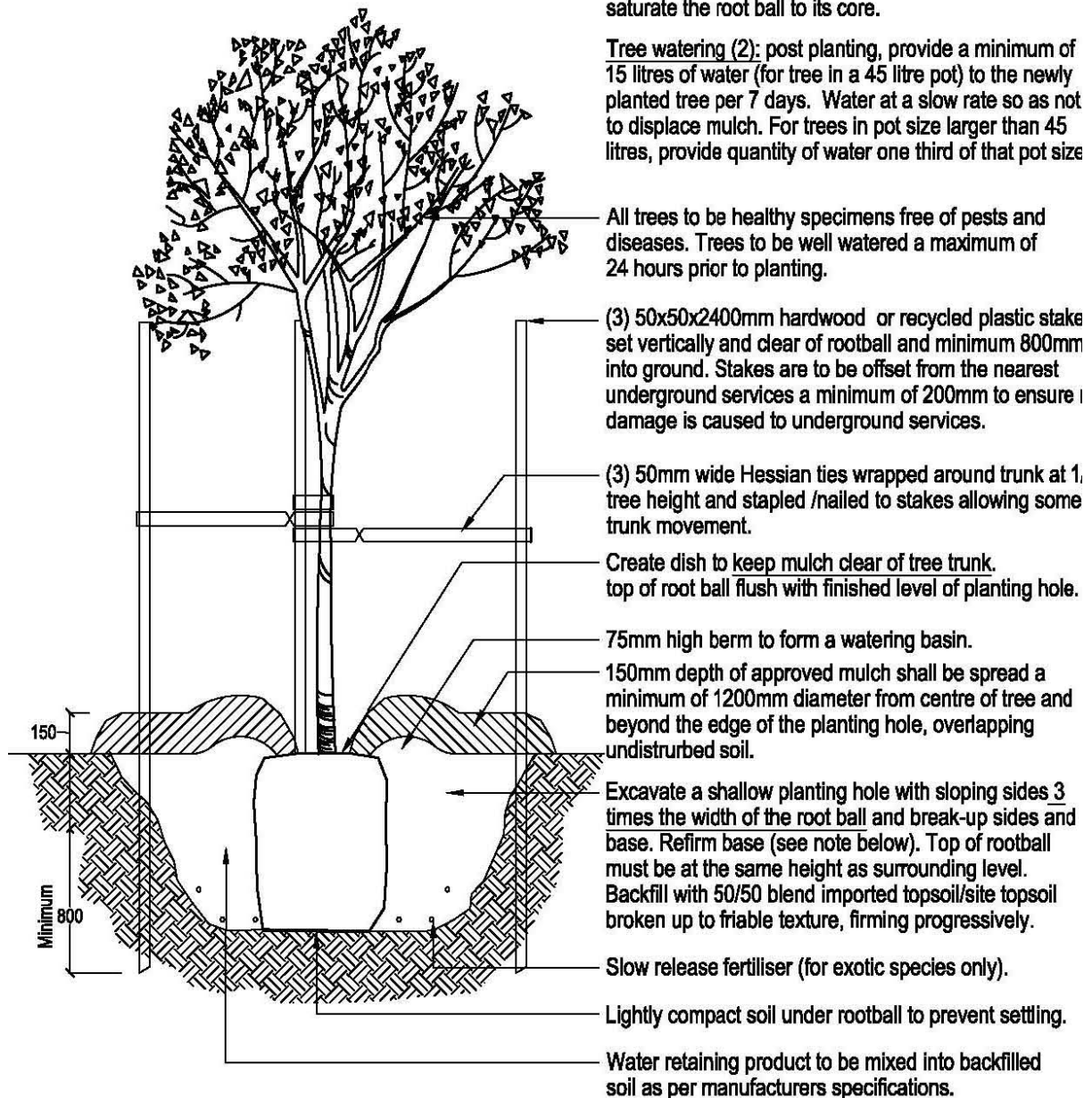
Note: ASD on the terminating road can be reduced to 10m at intersections between two 50km/hr roads only

### 5.1.2 Tree Staking



**Tree watering (1):** Immediately after planting, tree shall be watered thoroughly regardless of weather conditions. 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 so as not to displace mulch. For trees in pot size larger than 45 litres, provide quantity of water one 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.

### 5.3 Tree Specifications

When selecting trees to be planted, it is the responsibility of the Site Representative to ensure that the tree height and caliper ratio falls within the parameters of the Size Index table below.

Options available for tree planting:

Tree species, size, type and planting locations will be endorsed in the approved Landscaping Plan.

### **Advanced Trees**

Trees must be a minimum of 1.8m in height and a minimum pot size of 45l. The caliper of the tree must be calculated and must fit within the parameters of the table below.

Caliper: The stem or trunk diameter measured at a nominated point, generally 300mm above soil level.

Trees that fall below the Size Index are to be rejected by the Site Representative. To calculate the size index the following formula must be used:

Size Index: Product of tree height (m) x tree caliper (mm).

Pot Size in Litres	Size Index (mm)
45 (500mm)	57- 74
60	77 – 99
75	83 – 107
100	111 – 143
150	154 – 200
200	194 – 251

### **Tubestock**

Tubestock shall be supplied in 150mm forestry tubes, or as specified in the plant schedule, and where the species are indigenous to the Ballarat region they shall be propagated from local provenance seed only. Species shall be true to form and shall not be taller than 500mm above the tube.

All trees are to be fully maintained by the developer for an 18 month period following Practical Completion sign off by Council.

## 6.0 Lawn Areas

### 6.1 Grassing

The following table provides a summary of approved grass species.

Dryland / Summer mix: for use in parks, nature strips and open space reserves except sporting grounds or adjacent to a waterway.	50% Premier Rye Blend with 50% warm season grass (Couch). Alternate blends or seeding techniques will be considered and must be approved by the Council Representative.
Sport and Recreational Areas	50% Premier Rye Blend with 50% warm season grass (Couch). Alternate blends or seeding techniques will be considered and must be approved by the Council Representative.
Wetland and Waterways	Indigenous natives only. Couch and kikuyu is not to be used in areas adjoining waterways, wetlands, or areas of native vegetation.

NB. The maximum slope for grassing is 1:6 to cater for mowing requirements. A concrete mowing strip shall be provided to all lawn areas abutting a wall. The mowing strip shall be 150mm wide and 75mm in depth smooth troweled concrete, over 50mm FCR base.

For any works within the Environmental Overlay e.g. along waterways, indigenous native grasses should be used. The proposed seed mix shall be prepared and approved by the council representative. The Relevant Catchment management Authority approval must be obtained if applicable.

Prior to grassing, all soil preparation work shall be completed in accordance with approved project specification clauses.

Instant turf or sprigging is Council's preferred method of grassing, however, hydro-mulch using the approved seed mixes shown above is acceptable. For the site to be handed over to Council, a minimum standard must be followed to meet Council specifications. Hydro-mulch must not be used throughout the summer months unless it is to be straw mulched or equivalent treatment and watered twice weekly.

All waterways and native vegetation must be protected from overspray of slurry.

### 6.2 Nature Strips

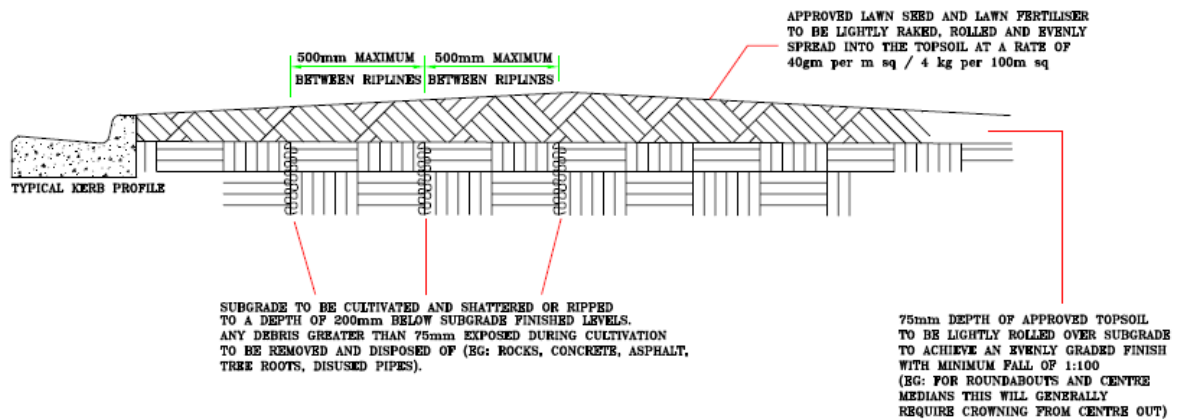


Nature strip treatment is a requirement of the streetscape landscaping plan approval process.

Nature strip treatment includes grassing (as defined in 'Lawn Areas' of this document), except where street trees and associated mulch rings are located. In areas where building works are being undertaken, the establishment of nature strip grassing or any other acceptable treatment approved by the Council Representative may be delayed for a defined period of time. In these instances, PC can be approved for the overall landscape works within the development and the 2 year maintenance period can commence prior to the grassing occurring. However, the grass nature strips must be established with a 2<sup>nd</sup> cut, prior to the end of the 1<sup>st</sup> year maintenance period. Failure, for any reason, to establish the nature strips within the first year of maintenance, will lead to an extension of the maintenance period of the entire site.

The Site Superintendent Representative is responsible to ensure that, at all times, either prior to the grassing process or after the seed, sprigging or turfing has been undertaken, the site is in a clean and tidy condition, free of rock, weed and rubbish and the grass mown.

Once the nature strips have been completed, the Site Representative is required to contact Council and make arrangements for an inspection to be undertaken.



### 6.3 Parks and Reserves

A number of options are available for grassing parks and reserves is direct seeding, instant turf or sprigging, however hydro mulch may be acceptable in some instances.

The grassed areas of all parks and reserves must be germinated and showing even coverage with no significant bare patches and must be at second cut stage prior to Practical Completion.

# 7.0 Irrigation

## 7.1 Systems Components

Any areas to be irrigated need to be confirmed and approved by council. All 'as built' drawings are to be submitted to Council by the site representative.

- Any irrigation systems to be installed are to be sub surface.
- Automatic controller, dual program 240V or solar power connection and associated control wiring. Battery powered systems are not permitted.
- Irrigation systems need to abide by the permanent water saving restrictions.
- Approved vandal resistant stainless steel irrigation controller enclosure located adjacent to the backflow device position, and mounted on a 75mm thick concrete pad.
- Automatic rain shutoff device.
- Commission the entire system and maintain against malfunction for a period of 18 months from date of practical completion.
- All systems must be fitted with an inline filter system.

## 7.2 Systems Installation

### 7.2.1 Commissioning

The contractor must be responsible for the testing and satisfactory performance of the complete irrigation system.

### 7.2.2 Static Tests

Prior to commissioning, ensure valve stations close satisfactorily. Pipe work and fittings to be pressure tested to the satisfaction of the Council Representative to ensure there are no water leaks in the system prior to control valve installation.

### 7.2.3 Commissioning Procedure

Upon completion of the above static tests in the presence of the Council representative, the system is to be commissioned in accordance with the following procedure:

- Open each valve to test irrigation system operation. During this procedure, only one valve station is to be open at any one time.
- Test the system by continuous operation for a minimum of 3 minutes for each valve.

#### **7.2.4 Clean Site**

Upon completion of the contract, leave the site in a tidy condition, free from rubbish and surplus excavated materials to the satisfaction of the Council Representative.

#### **7.2.5 Completion**

Complete contracted work in accordance with contract documents and written variation orders issued by the Council Representative.

#### **7.2.6 Guarantee**

All irrigation work shall be guaranteed by a written Certificate of Guarantee provided at the time of hand over.

#### **7.3 As-Built Drawings**

An instruction manual must be provided to the Council Representative with a copy of the as-built drawings when applying for the Certificate of Practical Completion.

Drawings are to clearly and accurately show mainline pipe runs and sizes, valve types and controller locations, all dimensioned from fixed structures such as buildings, kerbs etc.

Clearly and accurately notate dimensions of control valve and gate valve locations. Provide two sets of as-built irrigation drawings and the controller box key to the Council Representative at the handover inspection.

#### **7.4 Maintenance Manual**

All component literature shall be compiled into a well organised folder and submitted to the Council Representative in preparation for final handover.

## 8.0 Playgrounds

Play is an activity that people of all ages enjoy and Council's role is to provide a good quality and well distributed range of opportunities throughout the urban and rural areas of the municipality.

This includes the provision of play spaces in parks, youth activity spaces in both urban spaces and parkland, and areas that promote natural play and playful activity in green open spaces.

The City of Ballarat endeavours to provide play opportunities that are:

- Inviting and welcoming
- Integrated and complementary
- Diverse
- Accessible
- Healthy and active
- Provided for everyone
- Safe
- Well distributed throughout communities
- Comply with the relevant standards



Wendouree West Recreation Reserve

### 8.1 Developing Play Spaces – Hierarchy of Provision

Play spaces will be provided on regional, district, neighbourhood and local levels to provide diverse and accessible play opportunities throughout the municipality.

Play spaces will be planned and developed on a precinct basis to ensure that all residents in Ballarat have access to the full range of play experiences within their community. All residents in urban areas should have safe access to a play space within 500 metres of their homes.

### 8.2 Play Value of a New Play Space

The following table provides examples of the **diversity of play** that can be considered in the design and provision of play spaces and is useful in reviewing proposals:

<b>Physical Play</b>	Swinging, Running, Hanging, Climbing, Sliding, Jumping, Balancing, Crawling, Bouncing, Spinning, Rocking, Skipping.
<b>Cognitive/Creative Play</b>	Exploration, Observation, Use of Language, Music, Looking, Listening, Individual play, Role play, Imaginative play.
<b>Social Play</b>	Communication, Co-operative play, Conversation, Group play.

<b>Environment*</b>	Textures, Sand, Landscape, Pathways, „Secret Places”, Deciduous Trees, Moveable Objects, Water, Earth.
---------------------	--

\*Difficult to achieve in an “off the shelf” playground, however Council considers the development of Natural Play Spaces as part of its network of complementary play spaces.

### 8.3 Playground Safety

According to Kidsafe Victoria, whilst play is essential for children’s growth, development and learning and that play spaces encourage physical activity, stimulate children’s curiosity and imagination and provide opportunities for social interaction; there is a risk of injury associated with playgrounds and they need to be considered in playground design.

Hazards include:

- Height of fall from equipment
- Inadequate guardrails
- Inadequate safe play surfaces
- Entrapment hazards
- Trip hazards, objects that protrude, and pinch points
- Inadequate maintenance of equipment
- Equipment that is not recommended for use in playgrounds, such as plank swings, boat swings, roundabouts, maypoles, climbing rockets and old machinery.

The Australian Standards for Playgrounds should be consulted by anyone planning, designing, building or maintaining a playground. It is important to note that the Australian Standards are a minimum benchmark.

Council will not consider any playgrounds that do not meet the minimum benchmark, and reserves the right to reject or request modification to installations if it believes there is a potential or perceived risk.

### 8.4 Provision of Playgrounds in the City of Ballarat

#### ***Neighbourhood Playgrounds***

*Good quality and basic level of provision catering for short duration visits by local residents who will often walk to the nearby play space within 500m of home. Offering a safe and well designed space for play that can be supervised by adults.*

Target Age: Toddlers/Junior  
2-7 years

Budget: \$30,000 approx.  
Possible Equipment:



- Swings: Community double swing (1 Junior and 1 Toddler seat) or alternative swing type piece of equipment.
- Combination Unit (Climbing Frame/Platform) with:
  - Range of climbing, sliding, hanging or crawling options
  - Imaginative Play Items e.g. Lookouts, Counter Panels, Steering Wheels
  - An alternative way of getting up and down – E.g. Rope climber
  - Colorbond Roof
- Rocker/Dual Rocker

### ***District Playgrounds***

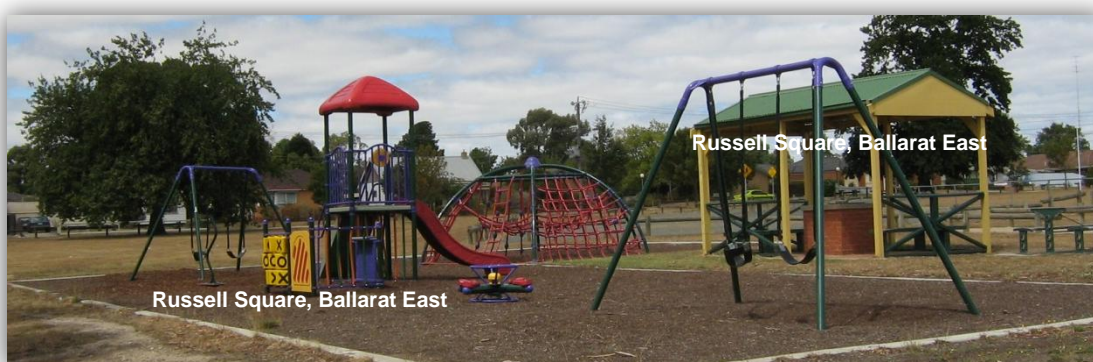
*Extensive provision that attracts people from up to approximately 2km distance. May involve a reasonable length of stay and also provides a neighbourhood level of provision as well for people who live closer.*

Target Age: Junior/Senior  
2-7yrs & 8-12yrs

Budget: Up to \$100,000 approx.

Possible Equipment:

- Swings: Could be a number of combinations including for example:
  - Senior Double Swing & Junior Double Swing
  - Senior Double & Tyre Swing
  - Basket Swing
- Combination Unit with:
  - Lookouts – Binoculars etc.
  - Colorbond Roof
  - Junior Slide (Primrose or similar light colour)
  - Stair access
  - Various ways of getting up and down – Eg. Rope climber, Fireman's pole.
- Rocking Element, Single Rocker, Dual Rocker/See Saw
- Spinning Element, Eg. Single Spinner, Dual Spinner
- Climbing Element, Eg. Nets
- Activity Panels installed in edging to allow access from outside of soft fall area.





## 8.5 Equipment Requirements

### a) Australian Standards

All equipment and fall zones should comply with all relevant Australian Standards including but not limited to AS/NZS 4685, 4422, 4486. Evidence to be provided detailing full compliance when submitting plans to Council for approval.

### b) Equipment Type

- Equipment to be selected from steel, aluminium, HDPE plastic and rubber.
- Any roof is to be made of colorbond where possible.
- Timber to be avoided for the apparatus itself.
- Fixings shall be weather resistant and attached with anti-theft fasteners.
- Colour selection shall be in character with Reserve (eg. for heritage Reserves only heritage colours shall be used). Please note: Lighter coloured slides are desirable.
- Consideration needs to be given to passive surveillance and ability to see through equipment to supervise children.

### c) Equipment Layout

- All separate pieces of equipment shall be installed within the one soft fall area.
- Slides to be orientated away from the North and West.
- Spacing of 1500mm between equipment pieces where possible for maintenance equipment to access area to maintain soft fall.
- Consideration given to the layout of equipment to minimise the size of the soft fall area, whilst maintaining fall zones required.
- Consideration given to paths of travel of children using the playground to avoid clashes with swing paths, slide runoffs and track ride paths.
- Consideration given to shape of the area to ensure it is easy to mow and maintain around the edges.

### d) Equipment Height

Where suitable, play equipment is to be installed to a depth that allows the compacted soft fall (250mm deep) to finish flush with existing ground level, and consequently any soft fall indicator plates.

Therefore excavation will be required to achieve a depth of 250mm across the playground area (with relevant fall for drainage) for the installation of soft fall, with the top of the edging to finish flush with the existing ground level.

## 8.6 Installation Requirements

### a) Installer

All equipment must be installed in accordance with the relevant Australian Standards and the manufacturer's recommendations.

It is preferable that the supplying company's recommended tradespeople or alternatively locally qualified and experienced tradespeople carry out the installation.

### b) Edging

Where the site is suitable, the top of the edging is to finish flush with existing ground surface. It is to be 175mm wide X 200mm high 20 MPa concrete (with 10mm trowled radius top edges) installed over 50mm consolidated depth of class 2 20mm NDFCR over sub base.

Where required by Council, plastic recycled edging (250mm in height) is to be installed using appropriate spikes for above ground playgrounds. Further information available if required.

### **c) Drainage**

Within excavated playground soft fall area, sub grade with min 1:50 (2%) fall needs to drain to a central spine with 100mm agricultural pipe with geotextile sleeve installed in a 150mm (min depth) trench with 20mm screenings to a legal point of discharge. Drainage plans to be provided to Council on completion of project. Swale/Table drains may be required around the site to direct surface water away from the playground.

### **d) Soft fall**

The soft fall mulch is to be supplied by Hortopine (Ph. 5339 1825). The certified playground mulch is to be installed at depth of 300mm to allow for settling and compaction over time to 250mm, in order to meet minimum Australian Standard of 200mm.

The extent of the soft fall area needs to comply with manufacturer's requirements and all relevant Australian Standards and certification provided to Council.

### **e) Spoil**

As excavation is required, suitable spoil (upon Council's approval) is to be spread onsite to Council requirements to back fill to concrete edging. Any additional and/or unsuitable spoil will be required to be removed from site.

### **f) Site Safety**

During construction, site is to be fully parawebbed to protect park users. Parawebbing is to remain in place until the playground has been signed off by a Playground Auditor and City of Ballarat Council Officers.

### **g) Site Reinstatement**

All rubbish, loose concrete or excess building materials shall be removed from site and clean excavated spoil free of rocks and debris in excess of 50mm size used to backfill to concrete edging. Compact spoil and finish by top dressing with topsoil (100mm deep) to 25mm below top of edging. Finish with hardy lawn seed to suppliers recommendation.

## **8.7 Process**

The specifier/designer shall prepare and submit the following information for Council's approval **prior** to ordering or installing equipment:

a) A scaled diagram of the reserve showing the location and dimensions of soft fall areas, the topography or levels of the land or equipment.

- b) The existing and proposed site immediately surrounding the equipment (eg existing and proposed trees, seats, picnic facilities, water bodies, roads etc) within a minimum 50 metre radius.
- c) Any proposed drainage or services to the equipment.
- d) The type, depth and details for containment of any undersurfacing.
- e) Details of any proposed fencing and gates.
- f) The brand, model number, colours, and accompanying illustrations, photos or list of individual components of the playground equipment.
- g) Any additional information that the specifier/designer thinks is relevant.
- h) Final plans and installer details.

Please note: On completion of playground installation, a Playground Auditor is to provide written confirmation of the playground's compliance with Australian Standards. It would be worthwhile checking proposed plans with Playground Auditor prior to installation.

## **8.8 Additional Park Elements**

Consideration needs to be given to:

### **Shade**

Natural shade will be developed through the planting of appropriate tree species in and around play spaces.

If shade is required in a built form, a shelter may be provided in regional and district parks alongside the play space to provide shaded seating/picnic facilities. Shade can be provided within the play elements of a play space by maximising roof coverage and undercover / under-deck spaces.

### **Barriers and Fencing**

Play spaces will be developed as an integral part open public spaces where barriers are minimised and seamless movement to and from the play space into the surrounding setting can occur.

Barriers may be considered where:

- An immediate safety concern exists alongside a road or similar danger.
- In some complementary play spaces that offer confined play for groups of young children and/or some types of disability.
- Separation of activities is justified through a planning process.

### **Seating**

A seat shall be installed in a "neighbourhood" park within 10 metres of the soft fall area in a location that provides for unobstructed viewing of the overall playground and with the sun behind. In a "district" park, a picnic table in addition to a seat shall be installed.

Seats and picnic tables shall be supplied as per Council's standard customised "Fiesta" range from Furphy's Foundry and shall be installed and fixed to concrete slabs in accordance with Council's specifications.

Play is necessary for the development of the health and wellness of individuals and families across our community.

The provision of well planned, accessible and complimentary play opportunities for people of all ages, interests and abilities throughout the municipality is highly important in achieving the stated health and well being outcomes that this community strives for.

---



## 9.0 Miscellaneous Works

### 9.1 Wetland Establishment

Refer to Melbourne Water Guidelines, “Constructed Wetland Systems: Design Guidelines for Developers”. All wetlands must be constructed to Melbourne Water guidelines.

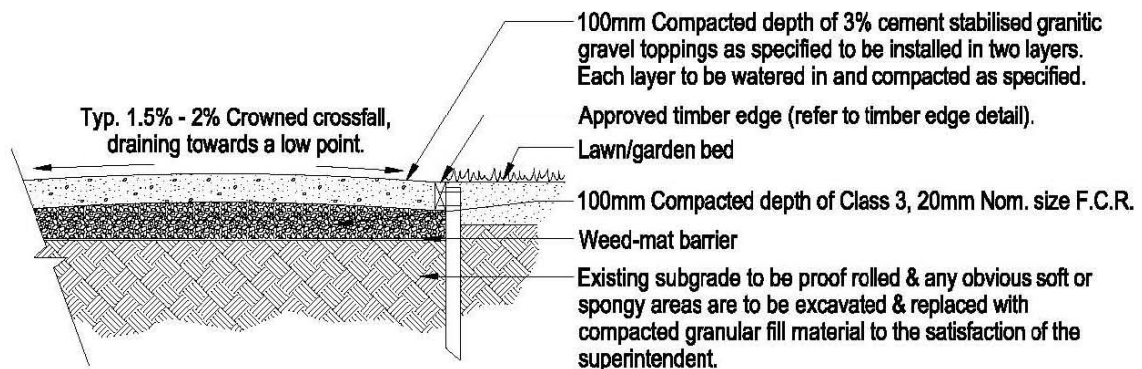
[http://www.melbournewater.com.au/content/library/wsud/Melbourne\\_Water\\_Wetland\\_Design\\_Guide.pdf](http://www.melbournewater.com.au/content/library/wsud/Melbourne_Water_Wetland_Design_Guide.pdf)

As built drawings of all waterways must be provided to the City of Ballarat.

### 9.2 Pathways

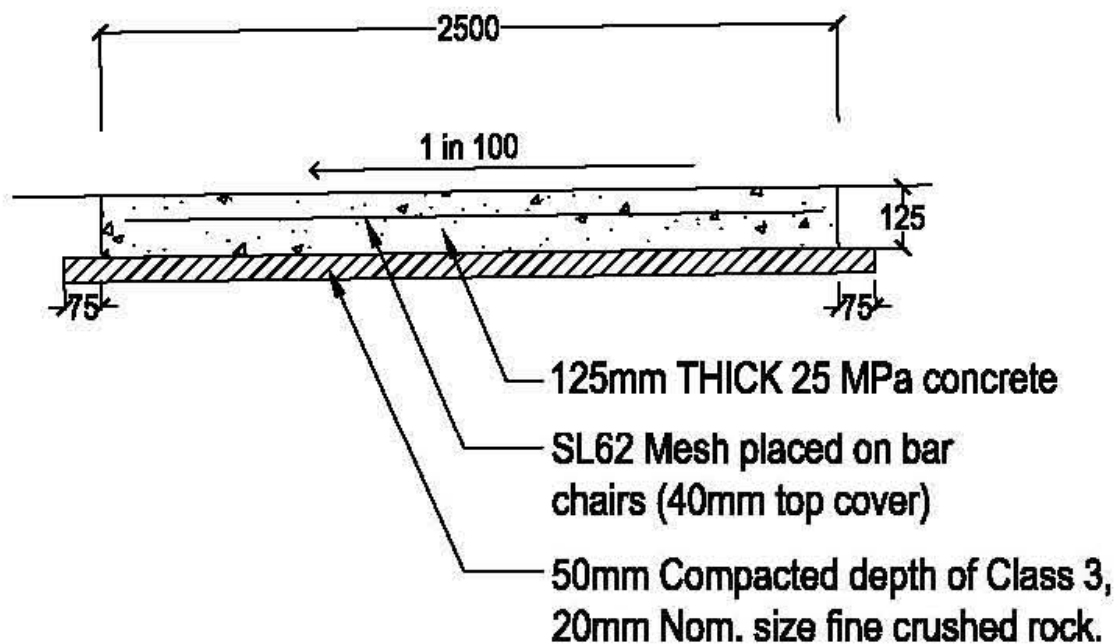
#### 9.2.1 Gravel Paths

Where gravel material such as Granitic sand is used, the gravel must be stabilised. Pathway widths will vary however must be a minimum of 1500mm wide. In some circumstances timber edging will not be required.



#### 9.2.2 Concrete Paths

Concrete paths must be constructed to Council specifications. The detail below is for a shared path of 2.5m in width, however some footpaths may be narrower but must be constructed as per the detail below and approved by the City of Ballarat.



**Notes:**

01. Concrete strength is 25MPa.
02. Council's pram crossing detail to be used at roadways
03. Concrete finish to be light broom finish with edges neatly tooled after the broom is applied ( no bullnoses ).
04. Shared path to have 30mm deep sawcut joints at 2.5 metre centres ( no tooled joints ) and expansion joints at 12metres max.
05. All surfaces must comply with AS4586 - slip resistance classification of new pedestrian surface materials.
06. Any exposed aggregate surface finish to be achieved by sandblasting after at least 48hours curing time.
07. N12mm dia. deformed Dowell bars at 450mm crs. to join old concrete to new when reinstating broken footpath or as directed by Council officer.
08. Expansion joints to be constructed at 12m max. ctrs. and one bay either side of vehicle crossings.
09. Remedial grass seeding to any areas of grass damaged as a result of construction works.
10. Where permission is granted to use coloured concrete strength to be 32MPa.

## **9.3 Infrastructure**

All hard landscape elements, including BBQ facilities, shade shelters, lighting, playground equipment, furniture and paving must be installed in accordance with the approved plan details prior to the issuing of the PC Certificate.

Compliance Certificates for all installations must be provided to the Council Representative at that time.

### **9.3.1 Paving**

The Site Representative is responsible to ensure that all paving and/or concrete works, including paths, basketball courts, granitic gravel paths or paving is constructed according to Australian Standards and have been inspected and signed off at all relevant HP stages during the construction process.

## **9.4 Estate Entrance Features**

All entrance features are discouraged however; if developed and approved must be located wholly within private property. Council will not be responsible for the maintenance of estate entrance features and must be removed prior to hand over.

# 10.0 Construction Documentation

## 10.1 Site Representative

All documents should be submitted electronically in Microsoft word or PDF format. Prior to the commencement of the landscaping works, a pre-commencement meeting must be arranged on site by the Site Representative to meet with the Council Representative. The Site Representative, as identified at this meeting, will then be responsible for all construction works, landscape establishment and maintenance of the site and will be the point of contact for Council officers.

Please note that 7-14 days notice must be given for site meetings unless otherwise agreed.

## 10.2 Construction Inspections and Hold Points

During Construction of all landscaping, both hard and soft, The Site Representative must attend the site and sign off on all construction Hold Points. This signed and dated document, including photo evidence, must then be presented to Council prior to Practical Completion.

i. Pre-commencement meeting with Council

ii. Site preparation

iii. Hard infrastructure preparation

- Retaining Walls
- Pavement areas
- Boardwalks
- Structures
- Rock beaching
- Irrigation systems
- Drainage systems

iv. Soil preparation

- Lawns areas
- Garden beds
- Nature strips

v. Construction

- Water bodies, Wetlands and waterways
- Feature mounding
- vi. Inspection of plant stock
- Trees
- Wetland plants
- Garden bed plants



vii. Planting –planting has been done to Council specifications

viii. Mulch – type and depth of mulch

ix. Watering in.

# 11.0 Practical Completion, Maintenance and Handover

No contractors are to be present on site during Council inspections. Site Representative must be present for all Pre-commencement, Practical Completion and Handover inspections.

## 11.1 Practical Completion Obligations

The Site Representative must contact the Council Representative when all works have been completed in accordance with the approved plans to arrange for an inspection by the Council Representative. A minimum of 7-14 working days notice must be allowed.

No partial Practical Completion Certificates will be issued except in special circumstances and as previously agreed by Council. No Practical Completions will be accepted during the period, between 15 December and 15 January. A signed checklist, Appendix 1, must be submitted to Council before the arranged inspection date.

Construction documentation must be provided to Council prior to Practical Completion. This documentation must include:

- The required Construction Inspection checklists signed off and dated by the Site Representative;
- Building Permits and Structural Engineering compliance where necessary;
- Playground Audit.

The Site Representative must also submit a maintenance plan to Council 7-14 days prior to the inspection date. This plan must then be approved by the relevant Council Representative.

The Council will notify the Site Representative in writing of any deficiencies and the works must be completed within two to four weeks of notification as specified by the Council Representative. Once defects have been completed to Councils satisfaction a maintenance schedule will be issued to the Site Representative for the 18 month maintenance period.

When the works have been completed, the Site Representative will make an appointment for the Council representative to revisit the site. A Certificate of Practical Completion (PC) will only be issued when all works have been completed to the satisfaction of Council.

The Maintenance Schedule will include the expected date of final Handover (HO) which will be at such time when the site has been maintained for a period of two years from the date of PC. All endorsed landscaping plans attract an 18 month maintenance period.

A maintenance diary outlining scheduled maintenance for the site must be available for inspection.

As built plans must be submitted in both PDF and AutoCad format (or a format required by Council) prior to the issue of the Practical Completion Certificate and the subsequent release of the outstanding works landscaping bonds.

## **11.2 Maintenance Obligations**

- The Site Representative must ensure that all works forming part of the endorsed plans are maintained in accordance with the City of Ballarat Landscape Maintenance Schedule and Maintenance Checklists for a minimum period of eighteen (18) months, unless otherwise stated in the Schedule.
- The Site Representative must provide a signed and dated Maintenance Checklist, Appendix 2, to Council every three (3) months during the maintenance period. Failure to provide this information or the provision of incorrect information may result in the extension of the maintenance period.
- Council Representatives will regularly inspect the site during the maintenance period and any defects will be communicated to the Site Representative in writing. Works must then be completed within two (2) weeks or as specified by the Council Representative. Failure to complete the works in the specified timeframe may lead to the extension of the maintenance period.
- The maintenance period will commence on the date of issue of the Statement of Compliance for all, or that particular stage, of a subdivision only where the landscape works have been completed to the satisfaction of the Site Representative. Where the landscape works are bonded the maintenance period shall commence from the time that the landscape works have been inspected and completed to the satisfaction of the Site Representative.

## **11.3 Handover Obligations**

- The Site Representative must provide a signed and dated Handover Checklist, Appendix 3, prior to the handover site meeting.
- No partial handover will be undertaken except in specific circumstances and as previously agreed by the Council Representative.
- Any trees or plantings that are not up to the required standards must be replaced and monitored until such time as the Council Representative deems that the trees or plants are of an acceptable standard for handover. Proof of planting date must be supplied. In these instances, the maintenance period of 2 years may need to be extended.
- No handovers will be accepted during the summer period, between 15 December and 15 January.

- Upon the acceptance of the site by Council, a Handover Certificate will be issued to all relevant stakeholders with a copy forwarded Parks and Gardens Department and to Finance for release of any Bonds being held on the site.
- It is also the obligation of the Site Representative to provide the Certificate of Handover to all relevant utility providers.

## **11.4 Bonds**

Where landscaping works forming part of the endorsed plans are not completed to the satisfaction of the Council Representative prior to the Site Representative seeking Statement of Compliance for all, or a particular stage of a subdivision, the Council Representative may issue a Statement of Compliance where the works are appropriately bonded.

Where the Site Representative seeks a bond, the estimate for the cost of incomplete landscaping works must be professionally costed by the Site Representative (or their Landscape Designers or Contractors) and then be submitted to the Council Representative for approval. The estimate must allow for; completion of all incomplete landscape works shown on the endorsed landscape plans, and the maintenance of all the works for a minimum period of eighteen (18) months (itemised separately) , and shall be to the value of 150% of the total cost of works and maintenance .

Bonding incomplete landscape works prior to a Statement of Compliance for the final stage of a subdivision is discouraged and will only be issued at the discretion of the Council Representative.

# APPENDIX 1 - Practical Completion Checklist

This checklist is to be completed and submitted to the Council Representative prior to Practical Completion.

## Information to be provided to council prior to Practical Completion.

- Maintenance Schedule
- Construction Inspection checklists signed off and dated by the Site Representative
- Building Permits and Structural Engineering compliance where necessary
- Playground Audit
- As-built plans in AutoCad format (or any other format required by Council)

## General

## Grass Areas General Grass Areas (E.g. Parks and Nature Strips and Reserves)

- Nature strips are leveled, free of rock, rubbish and weeds.
- Park and reserve area are seeded, turfed or sprigged. All seed is germinated and showing an even coverage with no bare patches and no areas of weed. The grass is at least second cut.
- Grassed area is free of pests, diseases and weeds.
- Reserves, where minimal landscaping is required (such as reserves which are to be developed by Council as District Open Space) are graded, free of weed, rock and debris. Top soil has been applied and the area seeded to Council satisfaction.

## Garden Beds

- Garden beds are in neat order and free of litter.
- Garden beds are free of weeds, or any small weeds have been sprayed.
- Garden bed edges are clearly defined.
- Any edging material between garden bed and path does not encroach onto path.
- Any dead, diseased or missing plants have been replaced.
- All shrubs and groundcovers are displaying healthy and vigorous growth.
- Mulch is to a minimum 75mm deep and covers whole garden bed.

## Trees

- Trees are securely staked with three stakes and flexible ties, refer Typical Detail GB4
- Trees are correctly planted with top of root ball even with surrounding ground.
- All trees have a mulched ring at least 1.2m in diameter and 150mm in depth. The mulch is clear of the trunk of the tree.
- All bowls at the base of the trees are well formed, free of weeds and allow for maximum water retention.
- Any dead, diseased or severely vandalised trees have been replaced.
- All weeds and suckering material have been removed.
- All trees have a single straight leader. Trees will not be accepted with multiple leaders.
- Trees are planted at correct offset distances, as specified.

- ( ) Trees are of sound structure and display good health and are free of disease and pests. Where die back, leaf burn, windburn, vandalism etc has occurred, trees are to be monitored for recovery or replaced where necessary.

**Irrigation System**

- ( ) All components of system are functional.
- ( ) Automatic controller stations have been set to seasonal settings.
- ( ) All irrigation systems have been flushed and are in good working order.

**Wetland Systems**

Refer to maintenance requirements contained in Melbourne Water documents listed in Technical Note MW1 Wetlands Establishment. Council requires that all Melbourne Water Maintenance standards are to be met.

- ( ) All wetland systems and surrounds are free of weeds and litter.
- ( ) No wetland system is to include Typha sp (Combungi) or Cyperus Involucratus (Umbrella Sedge).
- ( ) Inlets are adequately rocked to prevent erosion around pipes and infrastructure.

**Hard Landscape Features**

- ( ) All hard landscape equipment is installed in accordance with the approved plans and all paths and pavements are of sound construction and built to Council required standards.
- ( ) Adequate drainage treatment has been added to the subgrade during playground construction. Add more standards here

Site Representative

Name.....

Company.....

Contact details.....

Signature.....

Date.....

Comments:

## APPENDIX 2 - Maintenance Checklist

This checklist is to be completed and submitted to the Council Representative every three months during the maintenance period.

### General Grass Areas (eg. Parks and Nature Strips and Reserves)

- ( ) Nature strips prior to seeding are leveled, free of rock, rubbish and weed.
- ( ) Maintaining lawns in recreational reserves to function as a Local or Neighbourhood Park within a height range of 50mm to 150mm for (This will typically require a minimum of 13 cuts per year).
- ( ) Removing and controlling broadleaf weed growth within lawn areas and garden beds using registered herbicides and methods to the approval of the responsible authority.
- ( ) Maintaining lawns in drainage and linear reserves (ie not functioning as local or neighbourhood Reserves) within a height range of 75mm to 200mm (This will typically require a minimum of 4 cuts per year).
- ( ) Removing builders rubbish, builder's stockpiles, domestic litter, wind blown litter and litter dumped on site.

### Nature strips after completion

- ( ) Nature strips are mown, free of weed and rubbish.

### Parks and Reserves

- ( ) Park and reserve areas have been mown and showing an even coverage with no bare patches and are free of weed.
- ( ) Maintaining lawns in recreational reserves to function as a Local or Neighbourhood Park within a height range of 50mm to 150mm for (This will typically require a minimum of 13 cuts per year).
- ( ) Removing and controlling broadleaf weed growth within lawn areas and garden beds using registered herbicides and methods to the approval of the responsible authority.

### Garden Beds

- ( ) Garden beds are in neat order and free of weed and rubbish.
- ( ) Maintaining all planting support materials as installed (eg. replacing damaged or missing tree guards, tree stakes, weed control mat, erosion control matting etc).
- ( ) Garden bed edges are clearly defined with no material encroaching on surrounding path or lawn areas.
- ( ) Hedges are uniform and clearly defined (where applicable).
- ( ) Any dead, diseased or missing plants have been replaced.
- ( ) All shrubs and groundcovers are displaying healthy and vigorous growth.
- ( ) Mulch is to a minimum 75mm deep and covers whole garden bed.

### Trees

- ( ) Trees are securely staked with three or four stakes and flexible ties, refer Typical Detail GB4.

- ( ) Trees are of sound structure and display good health and are free of disease and pests. All trees have a single straight leader and have been formative pruned.
- ( ) All trees are mulched with a ring at least 1.2m in diameter and 150mm in depth and a watering bowl formed. All bowls are free of weeds.

**Irrigation System**

- ( ) All components of system are functional.
- ( ) Automatic controller stations have been set to seasonal settings.

**Wetland Systems**

Refer to maintenance requirements contained in Melbourne Water documents listed in Technical Note MW1 Wetlands Establishment. Council requires that all Melbourne Water Maintenance standards are to be met.

- ( ) All wetland systems and surrounds are free of litter and weed.
- ( ) Any dead or missing plants have been replaced.

**Hard Landscape Features**

- ( ) All hard landscape equipment, including garden furniture, BBQ, bins and playground equipment is undamaged and is being maintained with no missing or damaged items.
- ( ) All graffiti has been removed and BBQ is clean and rubbish removed.

Site Superintendent

Name.....

Company.....

Contact details.....

Signature.....

Date.....

Comments:



## **APPENDIX 3 - Landscape Handover Checklist**

This checklist is to be completed and submitted to the Council Representative prior to Handover.

### **Information Required by Council**

- ( ) All compliance certificates is to be provided to Council, including supplier details, a list of all nonstandard items, and a schedule of rates (excluding costs).

### **Grass Areas General Grass Areas (eg. Parks and Nature Strips and Reserves)**

- ( ) Grass is no longer than 100mm and no shorter than 40mm.
- ( ) Grass is free of pests, diseases and weeds.
- ( ) Grass is displaying even, healthy vigorous growth and must have coverage of minimum 90%
- ( ) No consistent dead patches evident.
- ( ) Reserves with minimal landscaping must be graded, free of weed, rock and debris. Top soil has been applied as level and the area seeded to Council specification.

### **Garden Beds**

- ( ) Garden beds are free of litter and weeds.
- ( ) Garden bed edges are clearly defined.
- ( ) Any dead, diseased or missing plants have been replaced a minimum of three months prior to handover. Proof of planting date is provided.
- ( ) All shrubs and groundcovers are displaying healthy and vigorous growth.
- ( ) Mulch is 75mm deep and covers whole of garden bed

### **Trees**

- ( ) Trees display structural integrity and display vigorous healthy growth. Tree stakes must be retained unless directed by the Council Representative.
- ( ) Formative pruning has been undertaken to ensure trunk and graft (if applicable) is free from offshoots and crown displays good character
- ( ) Berms and mulch rings of at least 1.2m in diameter and 150mm in depth allow for maximum water retention.
- ( ) All dead or diseased trees have been replaced as required and maintained for an extended maintenance period as determined by Council.
- ( ) All weeds and suckering material have been removed.
- ( ) All trees have a single straight leader. Minimum 1m from ground level is clear and straight.
- ( ) The root ball of all trees (planted more than 12 months previously) does not move. Any tree where movement occurs should be replaced.

### **Irrigation System**

- ( ) All parts and components of system are functional and the system has been flushed.

- ( ) Certificate of Currency for the back flow test has been provided to Council Representative.
- ( ) Stations have been set to seasonal settings.
- ( ) As built drawings indicating fitting types and pipe locations and depth etc, have been supplied to Council together with Irrigation Maintenance Manual and keys to controller box.

**Wetland Systems**

- ( ) All wetland systems and surrounds are free of litter.
- ( ) All wetland systems and surrounds are to have no more than 10% undesirable weed cover and have 0% noxious weed cover.
- ( ) All planting, including aquatic and indigenous plants are established and display good health.
- ( ) All sediment traps are removed as directed by the Council Representative.
- ( ) All protective netting has removed as directed by the Council Representative.
- ( ) Maintenance schedule has been provided for landscape works (including watering regimes, remulching requirements, mowing frequency, weed control and irrigation system maintenance).

**Hard Landscape Features**

- ( ) All equipment, including BBQ areas, shelters and lighting are cleaned and in good working order and the keys, where appropriate, handed to Council.
- ( ) All playground equipment is sound and in excellent conditions and a Certificate of Compliance supplied to the Council Representative.
- ( ) Soft fall mulch is a minimum depth of 300mm.
- ( ) A list of all non standard items has been provided along with the manufacturers details.
- ( ) Certificate of electrical compliance for any power connection e.g. BBQ, lighting, irrigation etc has been supplied to the Council Representative.
- ( ) Timber railings and furniture are cleaned and oiled.
- ( ) All graffiti has been removed.
- ( ) All necessary engineering certificates / forms or building permits for structures, playground equipment and walls greater than 1.5m in height must be supplied to the Council Representative.

**Utility Services**

Developer / contractor must submit a copy of the Handover Certificate to all utility service providers as proof of acceptance by Council for the land and request that all future accounts be altered to reflect Council's ownership and responsibility for the service.

Site Superintendent

Name.....  
 Company.....  
 Contact details.....  
 Signature.....  
 Date.....  
 Comments: