INTRODUCTION

FURNITURE

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U 000 Urban Design Manual Introduction

U 000 Urban Design Manual Introduction

The Urban Design Manual Introduction



THE GREATER SHEPPARTON CITY COUNCIL'S URBAN DESIGN VISION.

Background

In July 1997 the Greater Shepparton City Council appointed Urban Initiatives Pty Ltd as their Urban and Landscape Design Consultant for the Shepparton Central Area. This appointment was a continuation of a broader urban design project for the city initiated by council, which most recently includes

- 1996 Strategy Plan by Henshall Hansen
- Bruce Mackenzie's Report of 1997

The first issue of the Shepparton UDM was in 2000. This following manual was updated by Urban Initiatives in September 2007.

USING THE URBAN DESIGN MANUAL

Who uses the Urban Design Manual?

The Urban Design Manual is designed for use by the Greater Shepparton City Council's employees in various departments, or future consultants requiring guidance for the detailing, supply and layout of standard urban design components.

The Urban Design Manual is available as a loose leaf manual to be used by engineers and contractors working on projects within central Shepparton. It is also designed to be provided to property owners who wish to contribute to, develop or use the public space outside their property. Development of outdoor cafe spaces is a current example of such development.

HOW TO USE THE MANUAL:

This manual is designed to guide present and future decision making on urban elements placed in Greater Shepparton's C.B.D. and parks and open space areas. It provides a range of urban elements and guidelines for typical applications in the Greater Shepparton area.

The manual includes standard detailing and specification notes for approved standard products and design elements as well as supplier and maintenance recommendations. These sheets provide information on custom design detailing for approved products / elements which can be sent to the manufacturer or various contractors when ordering the items.

The manual is to be used as an integral part of all urban design proposals for the Greater Shepparton City Council. Urban Initiatives has developed CAD drawings for the central city which are intended to guide the layout of road works and new pavements and to coordinate the placement of furniture, street trees and other landscape works.

New furniture, street design decisions or other works in the public realm should be guided by this drawing and

the relevant sections of this manual. This mechanism, together with a consistent approach to design decisions by Council and consultants is important to ensure that the public environment of central Shepparton and surrounds is developed in a cohesive and consistently high standard over future years.

THE CONTENT OF THE MANUAL:

The Furniture, Hard Landscaping and Soft Landscaping sections are the core content of the manual. These sections outline the individual urban design components for the City of Greater Shepparton. For each of the individual urban design components is a design philosophy for the form and finish of the element, its general placement and layout within Greater Shepparton's urban environments.

Furniture
The manual details a new range of street furniture and public light fittings, which are carefully selected and/or specially designed to establish a consistent new contemporary image while being durable and cost effective.

Hard Landscaping
The manual details the range of standard paving, kerbs and channel and in the future will provide standard carpark layouts and pits. It also provides the standard paving and concrete specification.

Soft Landscaping
In the manual this includes standard specifications and details for planting of grass and advanced trees.

DISCLAIMER-DETAILS, MANUFACTURERS & SUPPLIERS:

At the date of printing all information was correct to the best of the consultant's ability. It is the responsibility of persons using this document, whether it be manufacturer, supplier, council member or any other consultant or member of the public to ensure that the information is correct. Any discrepancies found in the drawings and notes should immediately be brought to the attention of the responsible Council officer.

The manual nominates suppliers of furniture, hard landscape and soft landscape elements. These are to be seen as suggested suppliers only. Similar elements manufactured by alternative suppliers can be submitted to Council for approval.

Any design that require design royalties must be paid to the association or company as nominated in the Urban Design Manual Notes.

FURNITURE

F 000	**Seats & Picnic Benches**
F 010	Metal Seat with Back
F 020	Metal Bench
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F 100	**Bins**
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F 310	Drinking Fountain for Disabled Access
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F 820	Bus Timetable Frame
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Furniture

F000 Seats & Picnic Benches

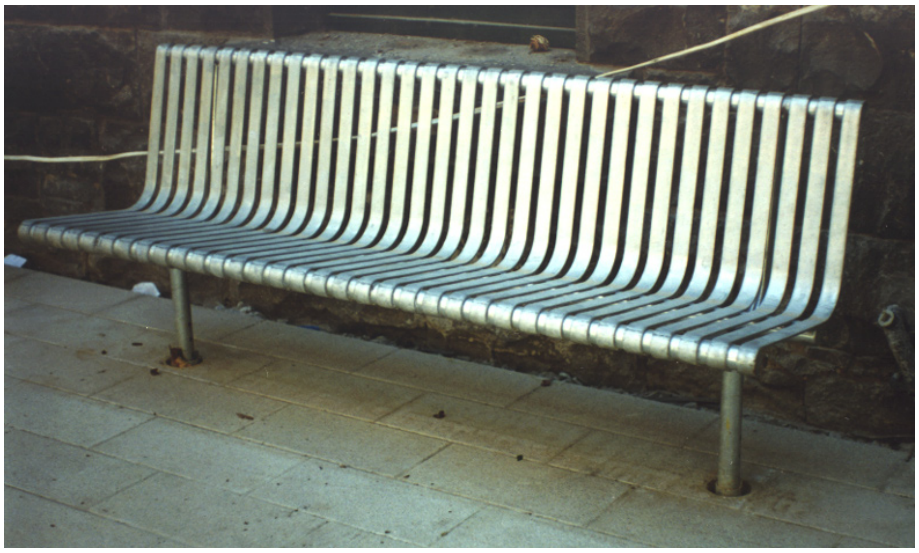
Seats & Picnic Benches

A variety of seats have been selected for Greater Shepparton to accommodate a range of public space types. These seats include: timber seats with backs and armrests, benches with picnic tables and metal seats. The selected range has been selected so that they can be used in a variety of locations.
Greater Shepparton City Council aims to provide seating at minimum intervals of 60 metres throughout the central area in Shepparton. In principle the metal seats have been selected for central areas in Shepparton and the timber seats for park and recreational areas.

F 000 Seats & Picnic Benches

Metal Seat with Back

Ecobuy



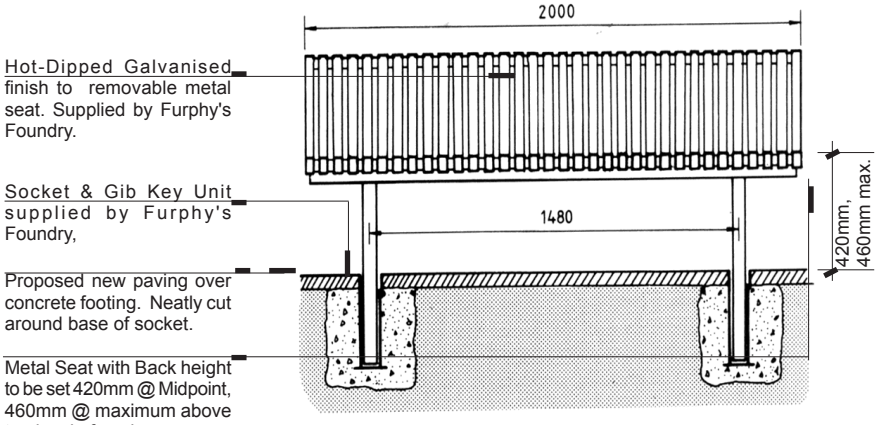
DESIGN PHILOSOPHY

The Metal Seat with Back provides a cost effective yet durable, comfortable and contemporary seat that suits the Greater Shepparton centre improvements.

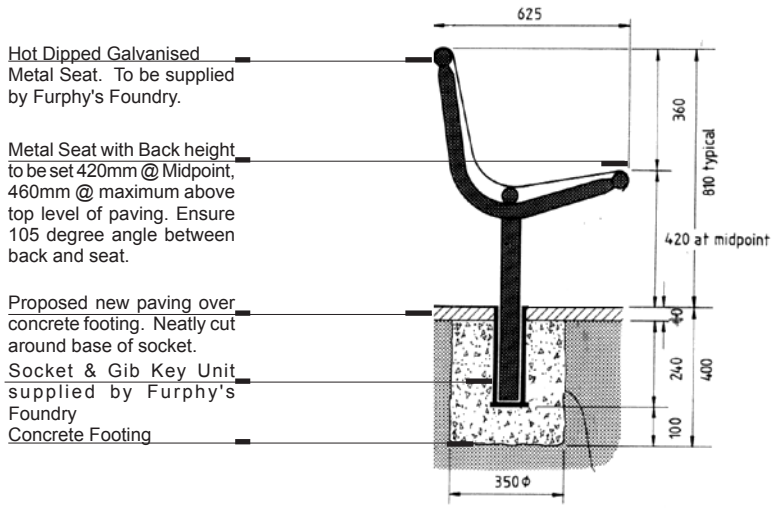
This seat for Greater Shepparton is adapted from Melbourne City Council's furniture range. It is simple and elegant in design with a galvanised finish, which compliments the suite of new furniture designed for the City of Greater Shepparton.

The Metal Seat with Back is intended to be located in new pedestrian paved in Shepparton's CBD and surrounding urban centres. The recommended location of this seat is on corners or locations where a space requires further vertical definition. This seat may also be used within smaller township urban areas within the Greater Shepparton area. Painted finishes may be considered to match the townships furniture colour scheme, in some towns.

These seats are to be interdispersed with Seats with Backs and Armrests at a minimum of 60 metre intervals.



Front Elevation Not to Scale



Section Not to Scale

MODEL
Steel Slatted Seat GOV 26

SUPPLIER
Metal Seat:
Licence Fee payable to Melbourne City Council
Locally manufactured by
The Furphy's Foundry
ph. 03 5831 2777
fax: 03 5831 2681

Socket for Removable Seat:
The Furphy's Foundry
ph. 03 5831 2777
fax: 03 5831 2681

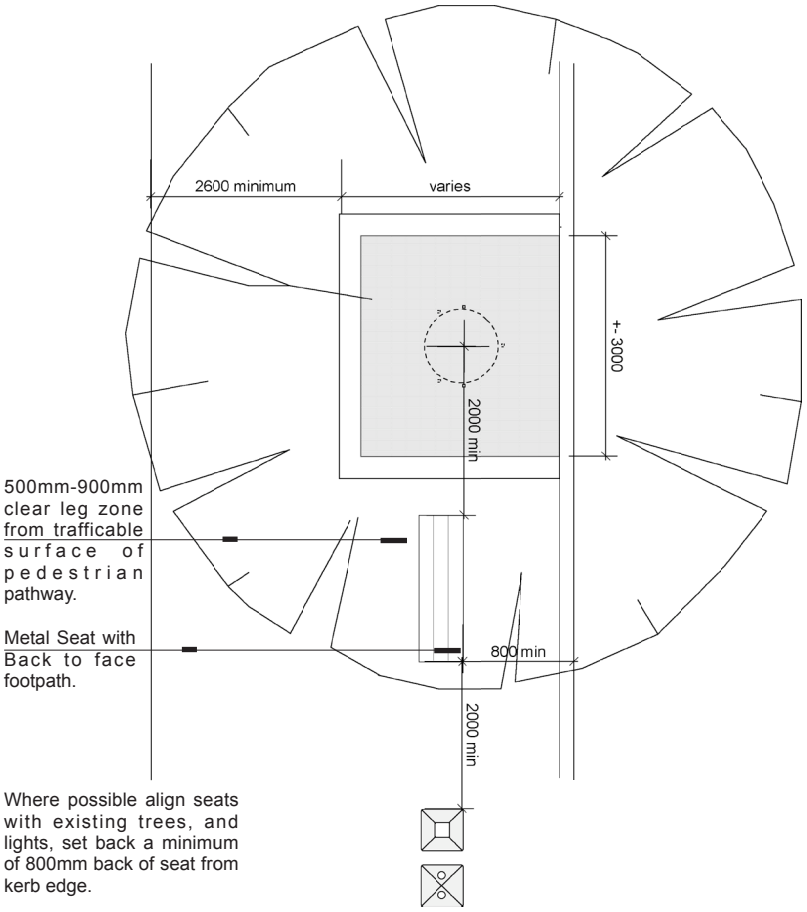
RECOMMENDED USE
Greaters Shepparton's City Centres

FINISH
Hot Dipped Galvanised.

MAINTENANCE
Monthly cleaning and maintenance.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Typical Layout Plan Not to Scale

Metal Bench

Ecobuy

DESIGN PHILOSOPHY

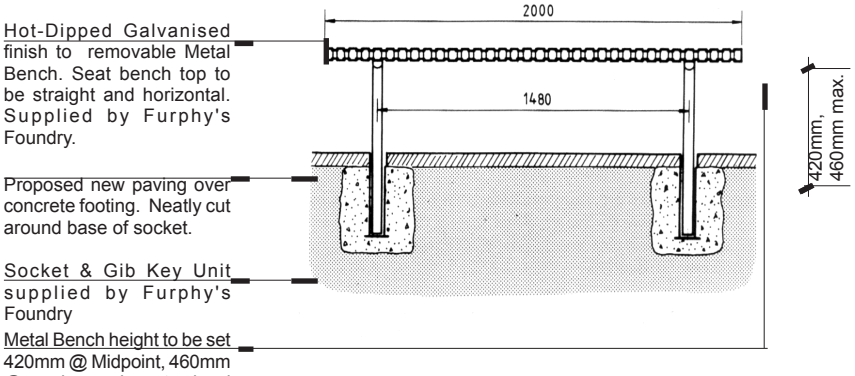
The Metal Bench provides a cost effective yet durable, comfortable and contemporary seat to suit the specifically designed furniture range for Shepparton City Centre improvements.

This seat has been adapted from the Melbourne City Council's furniture design suite, and its design is simple and elegant. The galvanised finish will compliment the designed Shepparton theme colour .

This bench may also be used in Municipal township centres and given a paint finish to match the townships colour scheme.

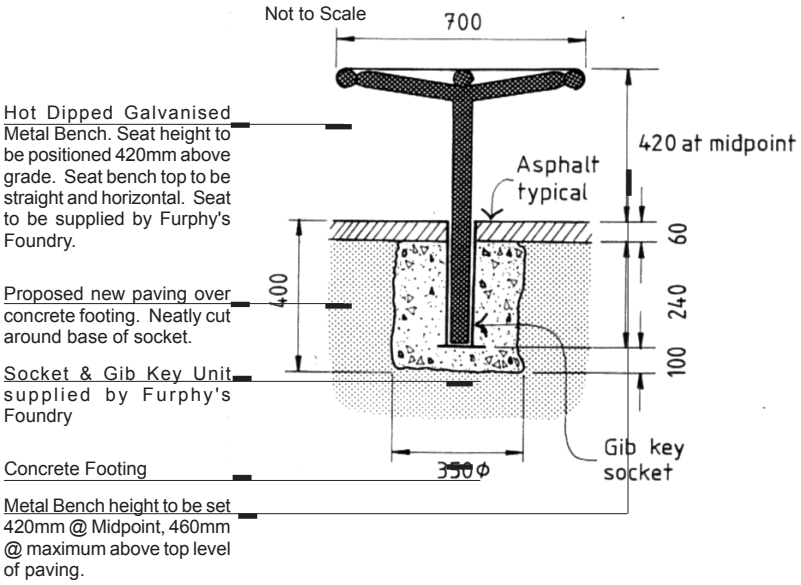
The metal bench seats are located in new pedestrian paved areas within high use locations, throughout the urban areas. In comparison to the Metal Seat with Back the Bench Seats are to be used where the space does not require the seat to create a sense of enclosure, such as along the linear street lengths.

These seats are to be inter-dispersed with Seats with Backs and Armrests at a minimum of 60 metre intervals.



Metal Bench Front Elevation

Not to Scale



Metal Bench Section Not to Scale

MODEL
Steel Slatted Bench GOV27

SUPPLIER
Metal Seat:
Licence Fee payable to Melbourne City Council.
Locally manufactured by
The Furphy's Foundry
ph. 03 5831 2777
fax: 03 5831 2681

Socket for Removable Seat:
The Furphy's Foundry
ph. 03 5831 2777
fax: 03 5831 2681

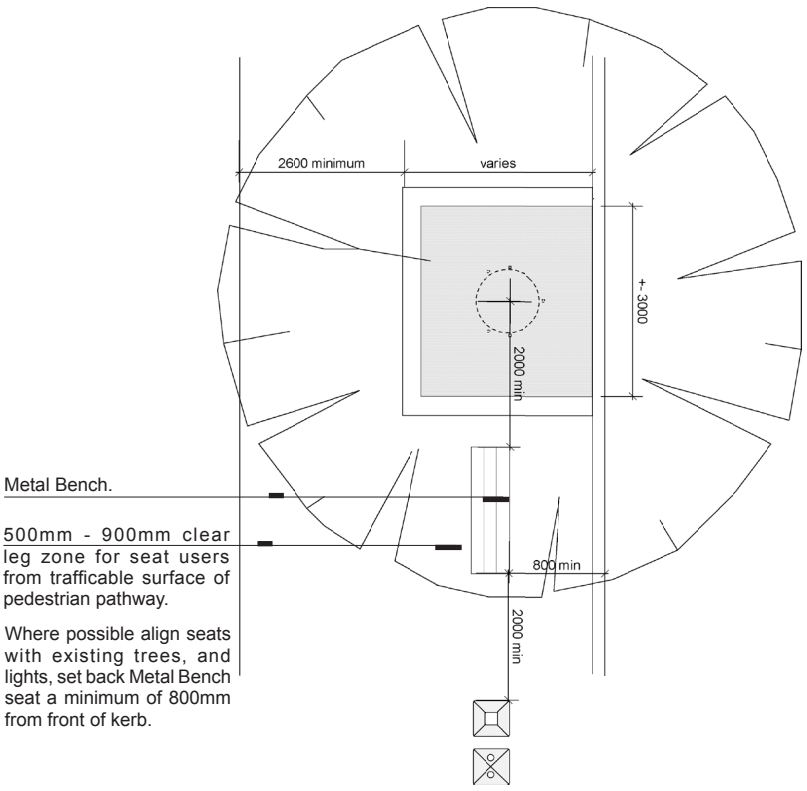
RECOMMENDED USE
Greater Shepparton's City Centres.

FINISH
Hot Dipped Galvanised.

MAINTENANCE
Monthly cleaning
and maintenance.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Typical Layout Not to Scale

Timber Seat

Ecobuy

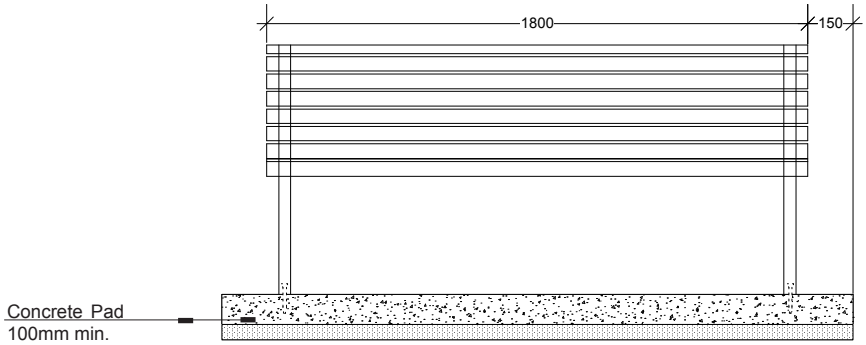
DESIGN PHILOSOPHY

The Timber Seat with Back and Armrests has been specifically designed for use within Greater Shepparton's parklands, recreational areas and inner urban areas.

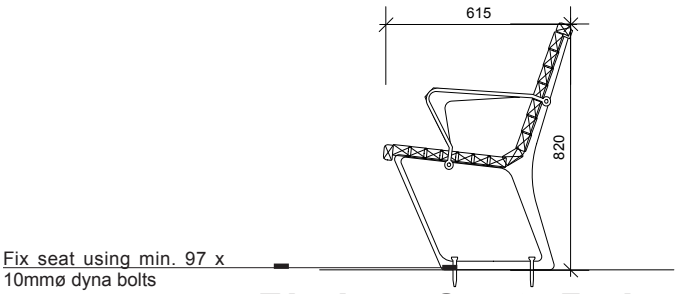
The seat features a mild steel frame which complements the finish of other furniture selected and designed for the City of Greater Shepparton.

The timber slats provide a comfortable sitting surface and will weather into a natural grey colour over time.

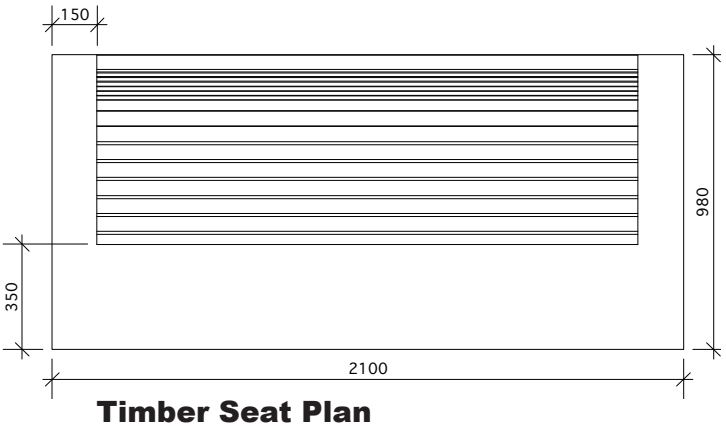
The sturdy construction of the seat will minimise maintenance.



Timber Seat Front Elevation
Not to Scale



Timber Seat End
Not to Scale



Timber Seat Plan
Not to Scale

MODEL
Metro Seat GOV 115

SUPPLIER
The Furphy Foundry
Metro Seat GOV 115
ph. 03 5831 2777
fax. 03 5831 2681

RECOMMENDED USE
Metro seat for use in urban areas and parks.

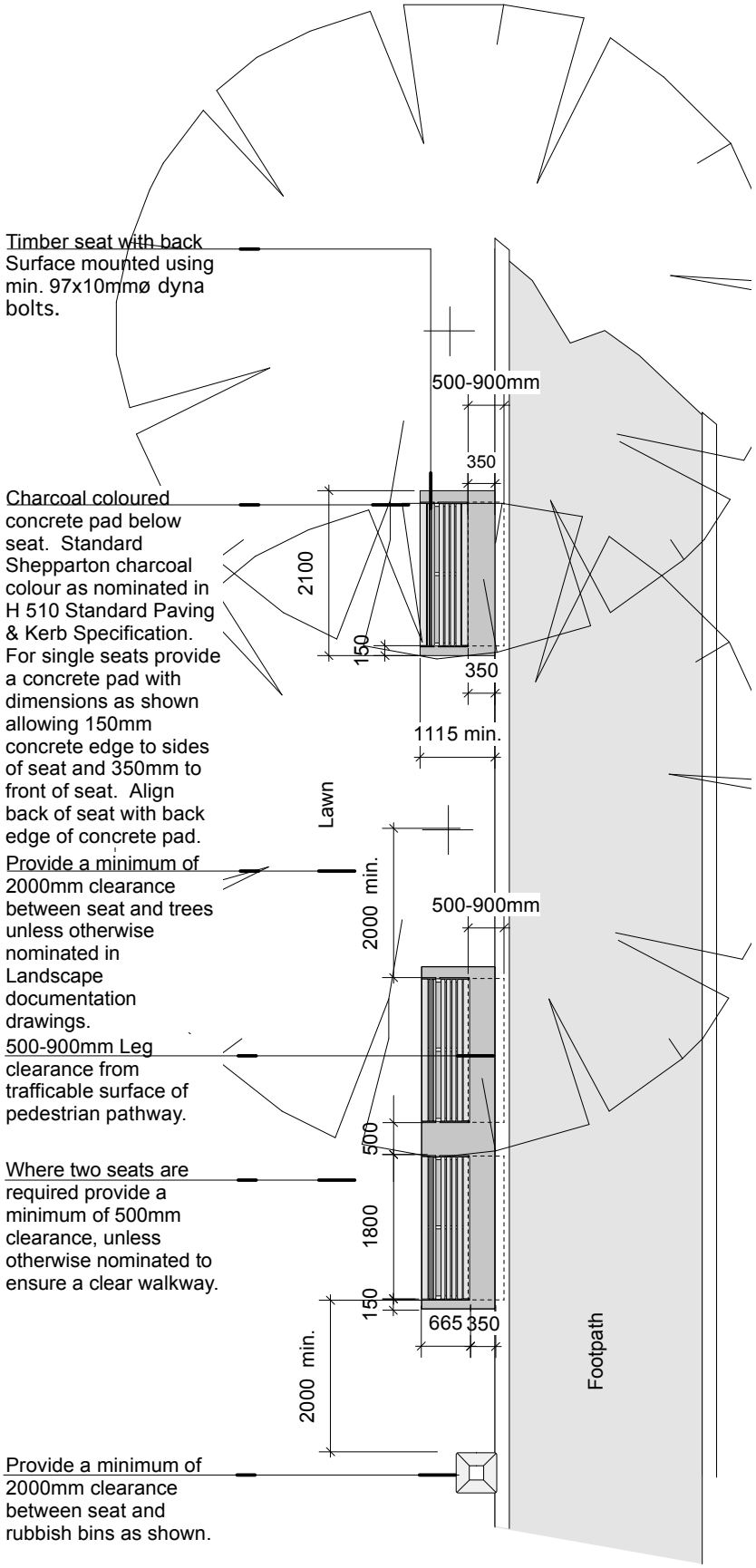
MATERIALS
Aliminum
Jarrah timber planking.

FINISH
Powder coat or galvanised.
Oiled timber.

MAINTENANCE
Maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700.



Typical Layout of Timber Seats
Not to Scale

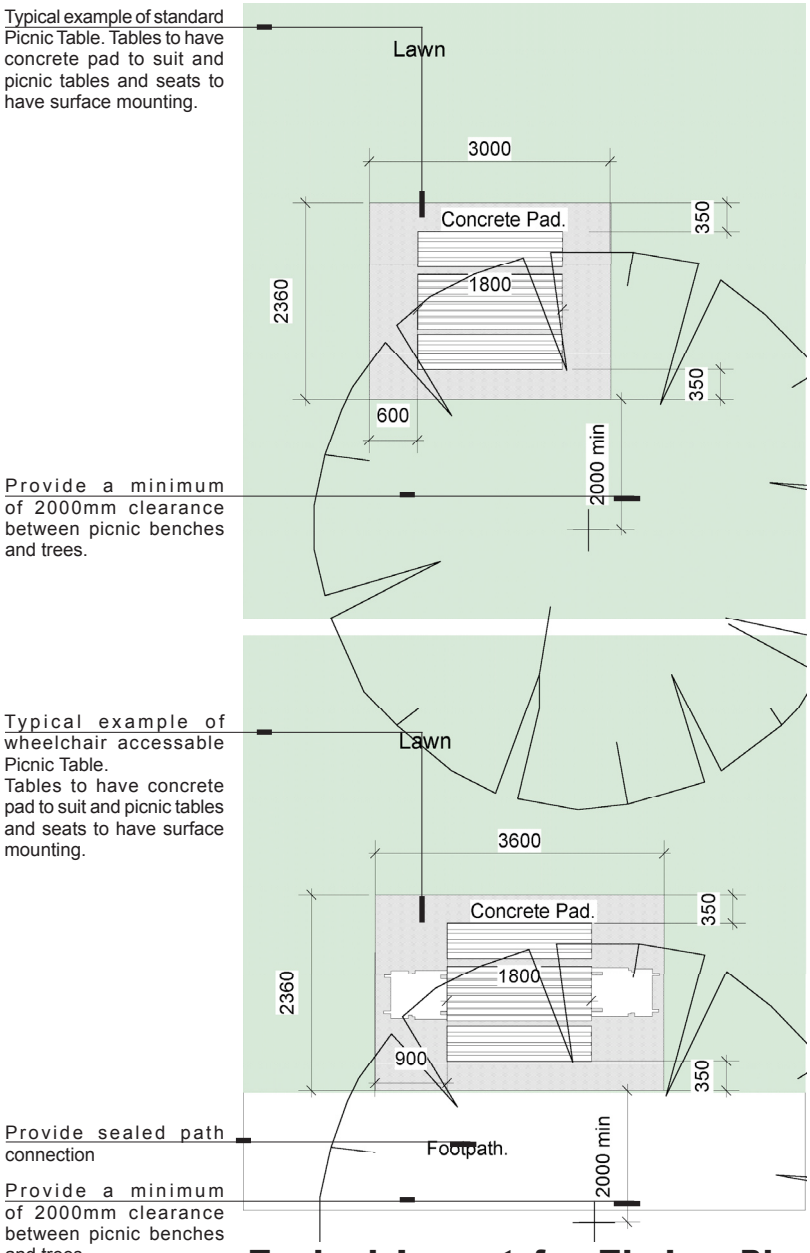
Picnic Tables &

Ecobuy

DESIGN PHILOSOPHY

A wheelchair accessible and standard picnic table setting has been selected for use in park and open space areas in the Greater Shepparton municipality.

All picnic tables are constructed out of durable hardwood with a cast aluminium frame. The timber slats will weather to a soft natural grey complementing the natural finish of the cast aluminium frame. These materials have been selected to harmonise with the more informal spaces of parks and recreational areas whilst also fitting into the metallic finish of furniture designed for the Greater Shepparton.



Typical Layout for Timber Picnic Tables
Not to scale

MODELS
Metro Picnicsetting GOV 118WC1 (disabled access one end)
Metro Bench GOV 116
Metro Table GOV 117WC1 (disabled access one end)

SUPPLIER
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

RECOMMENDED USE
In parkland and recreational areas.

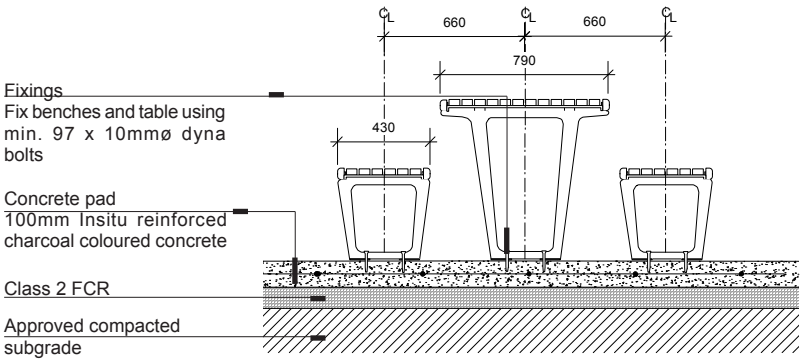
MATERIALS
Aluminium frame.
Jarrah timber planking.

FINISH
Natural aluminium frames.Oiled timber.

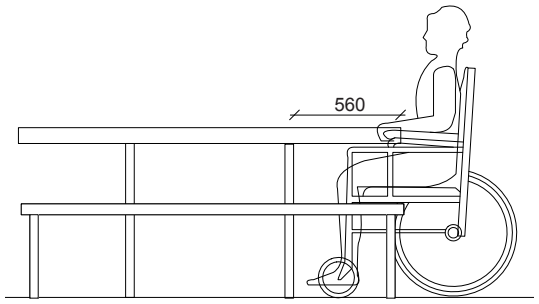
MAINTENANCE
Maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Picnic Setting End Not to scale



Wheelchair Accessible Picnic

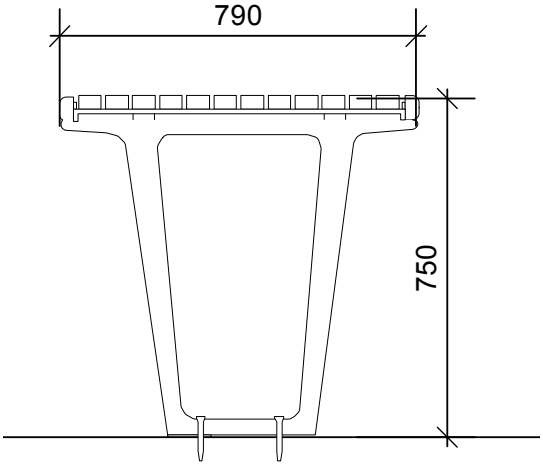
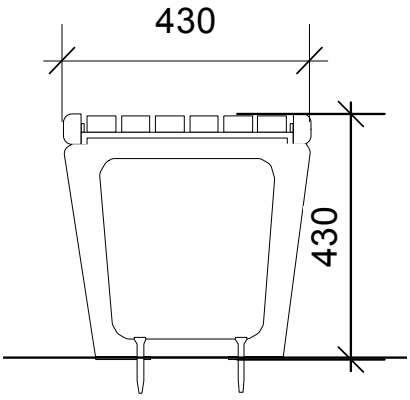


Table End Not to scale



Bench End Not to scale

F 100 Bins

Bins

There are three different bin types available for use in Greater Shepparton. The 80 Litre Standard and Recycle Bin, Dog Waste Bin and the 120 Litre Bin.

F 100 Bins

City Centre 80 Litre Standard & Recycle Bin

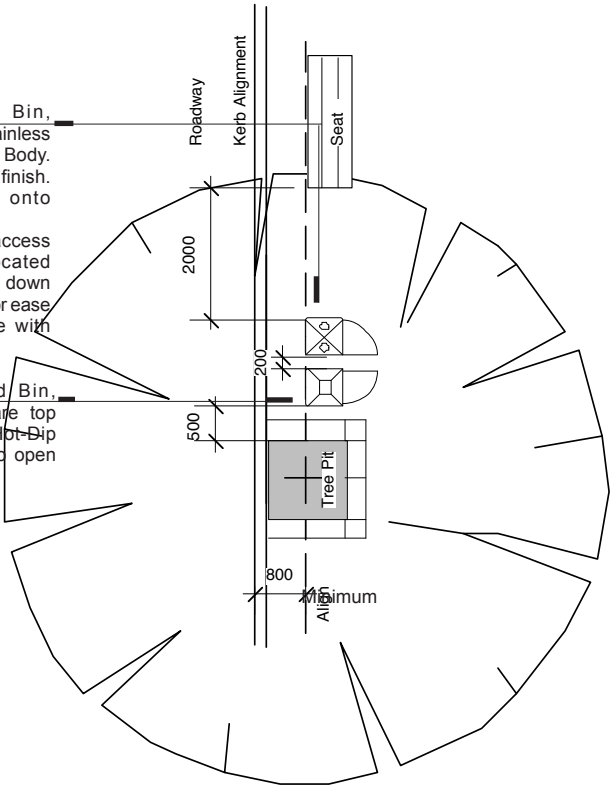
DESIGN PHILOSOPHY

The Recycle and Standard 80 Litre Bins, are the standard bins recommended for Greater Shepparton's urban areas. The slotted body design has been custom designed for the Greater Shepparton City Council. This slotted design carries through Shepparton's furniture range. The spun stainless steel surround to the top of the bin creates a clean and easily maintained surface to the bin.

The Recycled and Standard Bins are designed to be grouped together or independently according to the demand for recycling.

80 Litre Recycle Bin, Pyramid Shaped Stainless Steel top with Slotted Body. Hot-Dip Galvanised finish. Door to open out onto footpath as shown.
Note: Ensure that access holes to bin are located longitudinally up and down the street as shown for ease of access for those with physical impairment.

80 Litre Standard Bin, Stainless Steel Square top with slotted Body Hot-Dip Galvanised. Door to open out as shown.



80 Litre Bin Layout Plan Not to Scale

MODEL
80 litre Recycle Bin GOV 071R
80 Litre Standard Bin GOV 071

SUPPLIER
Bin Surround
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681
Mobile Garbage Bins
by Nylex or similar approved
ph. 03 541 9709

MATERIALS
Bin Top
Stainless Steel Pressed Pyramid Shaped Top for Recycle Bin.
Stainless Steel Pressed Top with Cigarette Butt Corners.
Licence Fee Payable to Melbourne City Council.
Bin Surround
2.5mm Zinc Anneal Sheet Slotted Laser Cut as shown.
Powder coating for Tatura brunswick green
Bin Door Lock:
Provide a Spiral Loaded latch with standard access key for each bin.

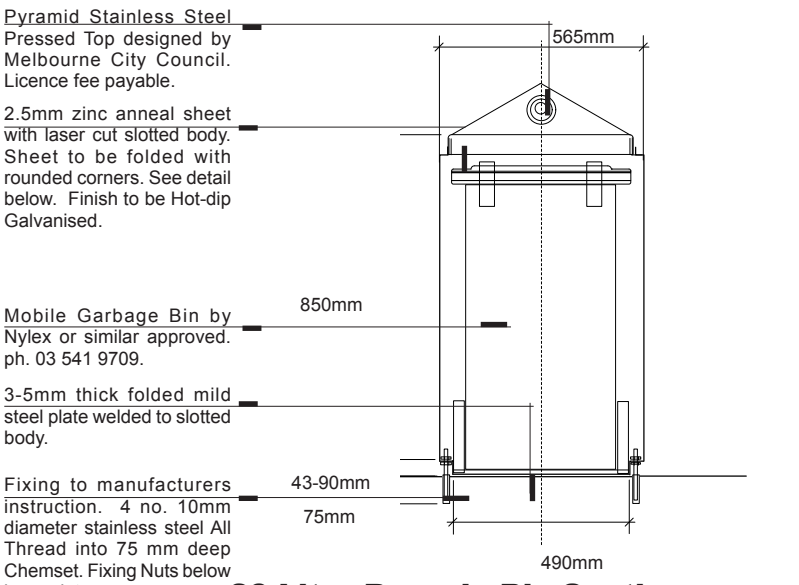
RECOMMENDED USE
Greater Shepparton urban areas where recycling bins required.

FINISH
Hot Dipped Galvanised.

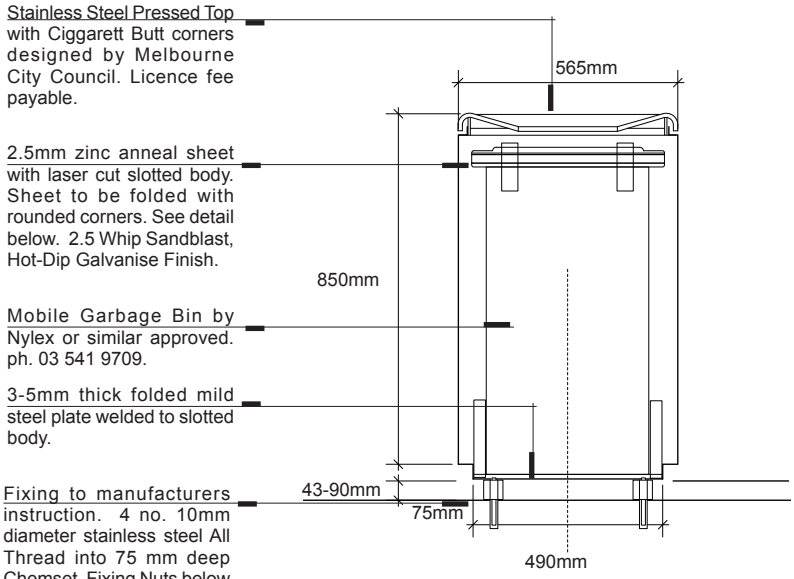
MAINTENANCE
Daily cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

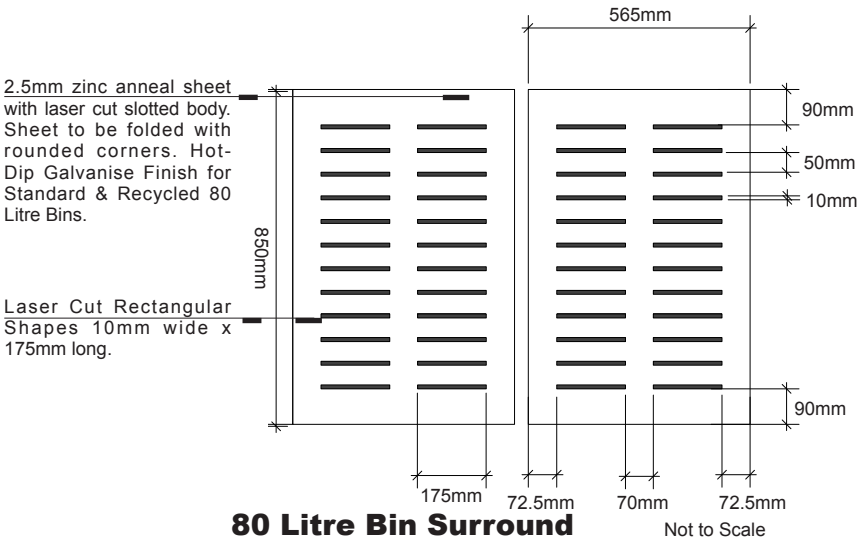
RESPONSIBLE COUNCIL OFFICER
Manager - Waste & Open Space.
ph. 03 5832 9700



80 Litre Recycle Bin Section Not to Scale



80 Litre Standard Bin Section Not to Scale



80 Litre Bin Surround Not to Scale

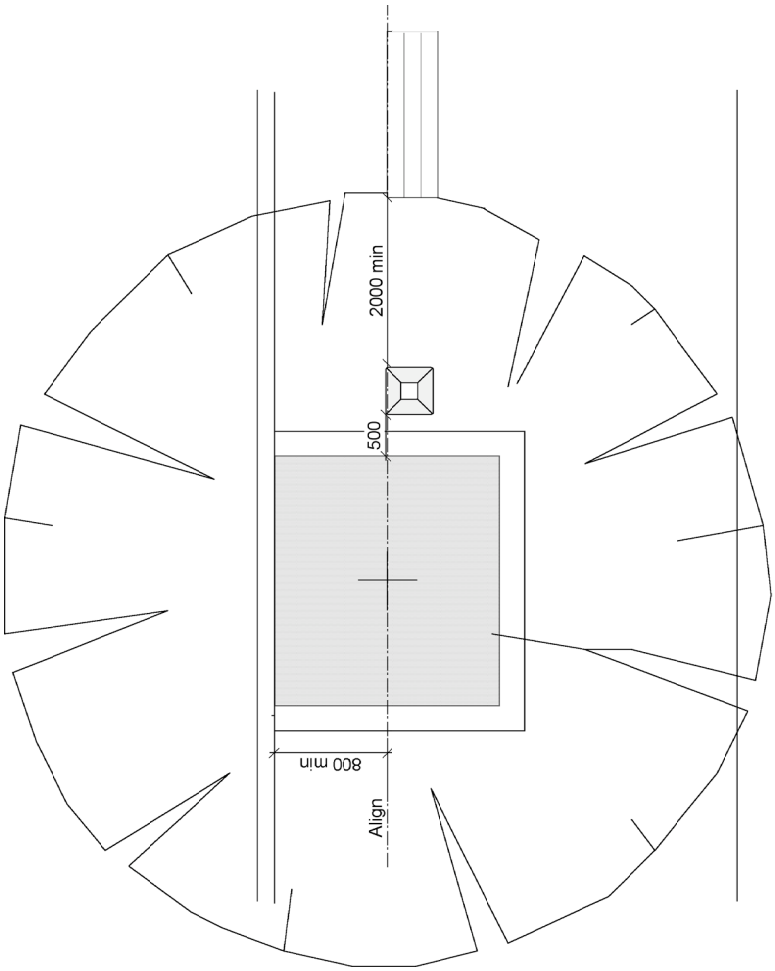
City Centre 80 Litre Dog Waste Bin

DESIGN PHILOSOPHY

The dog waste bin is an adaption of the standard 80 litre litter bin, and is intended for limited park and open space use in areas where need persists.

The slotted bin surround design matches the standard 80 litre bin and has been custom designed for Greater Shepparton.The spun stainless steel surround to the top of the bin creates a clean and easily maintained surface to the bin.

The dog waste bin is designed to address the issue of a rising level of dog waste being left in our parks and open space areas. It provides an easy to operate side-vending bag dispenser, which should encourage people to pick up after their own dog.



Dog Waste Bin Layout Plan to Scale

MODEL
Dog waste bin GOV 071
Supply with Dog bags
model no DW BAGS

SUPPLIER
The Furphy Foundry
Metro Bin GOV 119
ph. 03 5831 2777
fax. 03 5831 2681

DESIGN CONTACT
The Furpy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

MATERIALS
Bin Top
Stainless Steel Pressed Pyramid Shaped
Licence Fee Payable to Melbourne City Council.

Bin Surround
2.5mm Zinc Anneal Sheet Slotted Laser Cut as shown.
Powder coating for Tatura brunswick green

Bin Door Lock:
Provide a Spiral Loaded latch with standard access key for each bin.

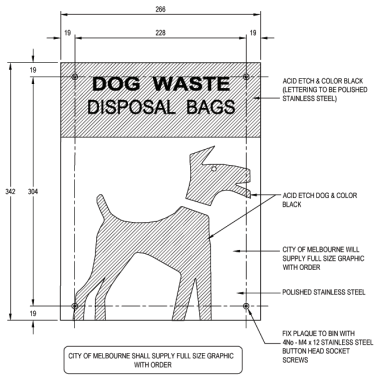
RECOMMENDED USE
Greater Shepparton area where dog waste bins are required. i.e parks

FINISH
Hot Dipped Galvanised.

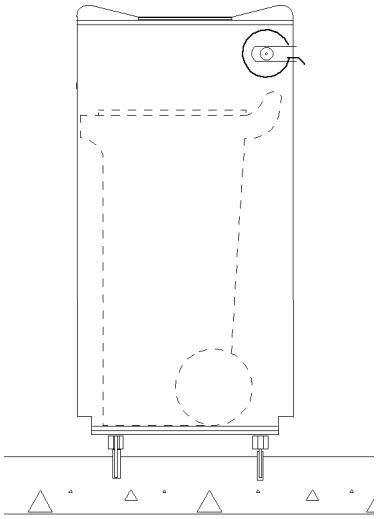
MAINTENANCE
Daily cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Waste & Open Space
ph. 03 5832 9700

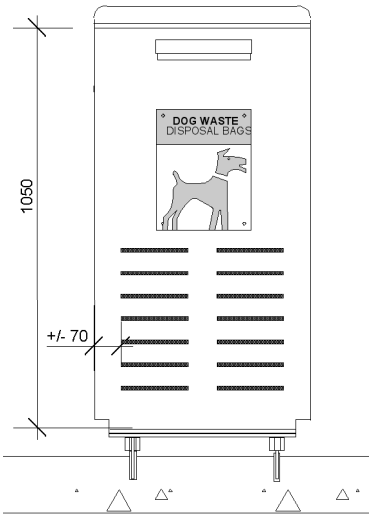


Dog Waste Bag



Dog Waste Bin Section

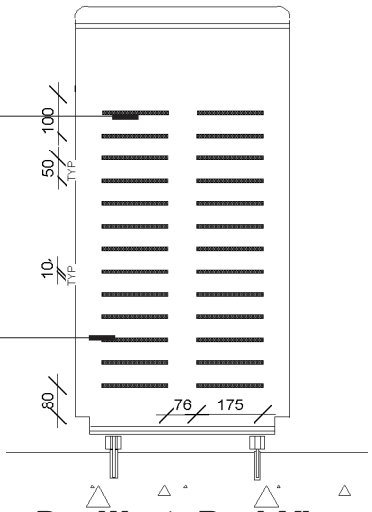
Stainless Steel Pressed Top, same as standard 80 liter bin.Dog waste bag dispenser located on the side.



Dog Waste Side View
Not to scale

2.5mm zinc anneal sheet with laser cut slotted body. Sheet to be folded with rounded corners. Hot-Dip Galvanise Finish for Standard & Recycled 80 Litre Bins.

Laser Cut Rectangular Shapes 10mm wide x 175mm long.



Dog Waste Back View
Not to scale

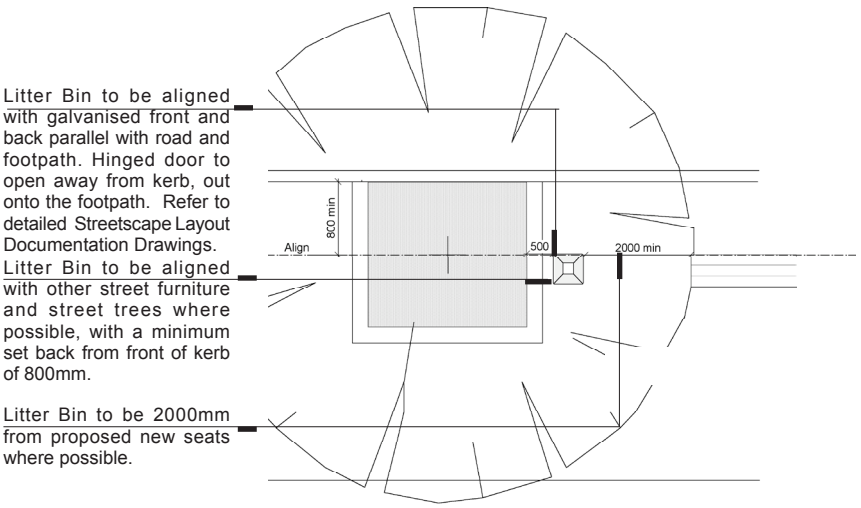
120 Litre Bin with lid

DESIGN PHILOSOPHY

The 120 litre bin is the Metro Litter receptable and matching recycle receptable designed and manufactured by The Furphy Foundry.

This bin has a greater litter collection capacity in areas that require additional rubbish collection (beyond the standard 80 litre variety).

This bin has a domed roof which is intended to limit wind blown rubbish in exposed areas.



Bin Layout Plan Not to Scale

MODEL
Metro Litter Receptable & Recycle Unit GOV 119 & 119R

SUPPLIER
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

DESIGN CONTACT
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

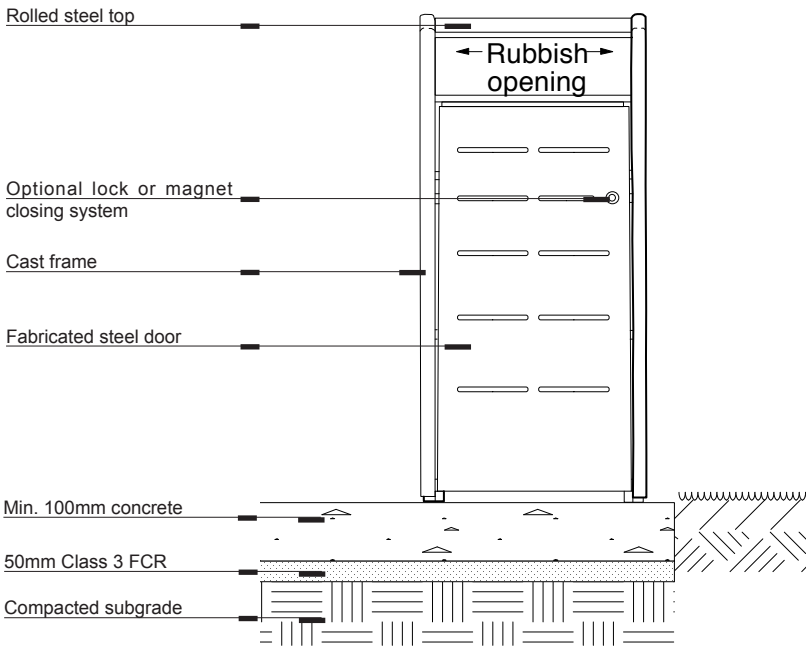
RECOMMENDED USE
Shepparton City Centre.

FINISH
Slotted Body of Bin:
Hot Dipped Galvanised
Sides & Top of Bin:
Blue Painted Trim using:
DULUX Acrathane IF
Regatta Bay 13BB 17/399.
(See Dulux Duspec - Product Data Sheet No. PC 218)
with DULUX Luxepoxy 4 White Primer over Hot-Dipped Galvanised Steel
(See Duspec No. 124)
Metal Lid of Bin:
Powder Coated Finish
DULUX Bright Silver Satin 51491.

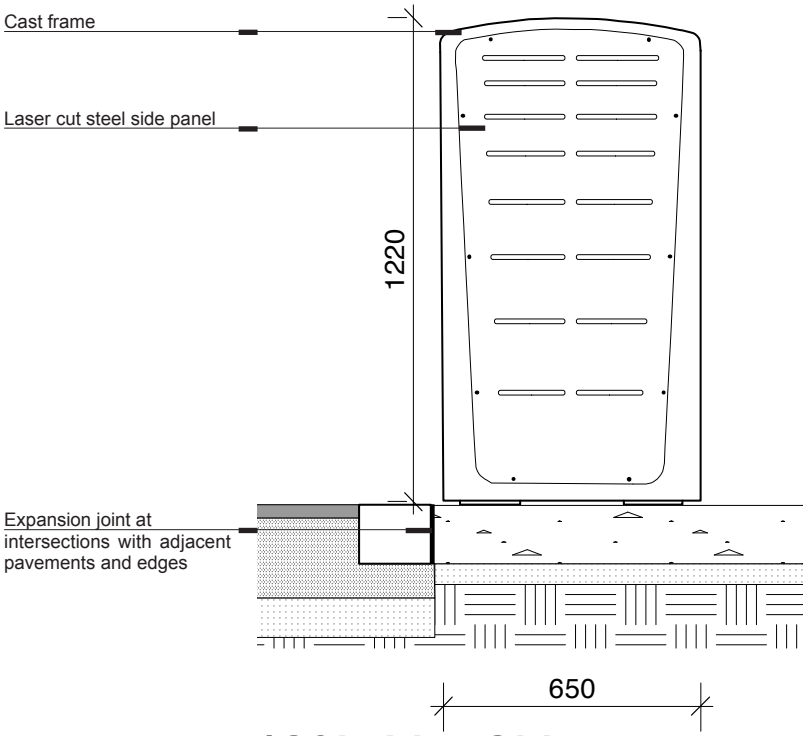
MAINTENANCE
Daily cleaning and maintenance as required.
Dulux Acrathane IF:
Sand back flaky or damaged surface, clean then recoat using same product. See Dulux Duspec Acrathane IF Data Sheet No. PC 218.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Waste & Open Space
ph. 03 5832 9700



120l bin Front Elevation



120l bin Side Elevation

Lighting

This section of the manual outlines the Greater Shepparton City Council's standard pedestrian, carpark and feature lighting.

The pedestrian lights should be located as a part of a broader lighting strategy by a Council approved lighting consultant . The board strategy would also include other lighting types, such as street and secuity lighing.

Location of lighting is of utmost importance for people, particularly for the visually impaired. Lights should be located so that the visually impaired are not placed at risk or at a disadvantage.

Lighting should be in locations that include:

- A change of plane, e.g. ramps or steps or stairs.
- At crossings.
- Information sources, e.g. maps or directories
- Other obstacles that form potential safety hazards to the visually impaired.

F 200 Lighting

Pedestrian Light - Urban & Open

DESIGN PHILOSOPHY

The urban and open space pedestrian light standard, features a stylish contemporary light fitting on a durable yet elegant tapered steel pole.

This pedestrian light is designed to complement the Greater Shepparton City Council's furniture suite and is suitable for a wide range of applications. The urban and open space lighting standard is designed to have a high mounting height to decrease vandalism risk and may be fitted with an energy saving lamp.

MODEL
Louis Poulsen 'Kipp '

SUPPLIER
Fitting
Illuminating
ph. 02 9516 4844
fax. 02 9516 4144
Steel Pole:
Vicpole
ph. 03 9738 5853

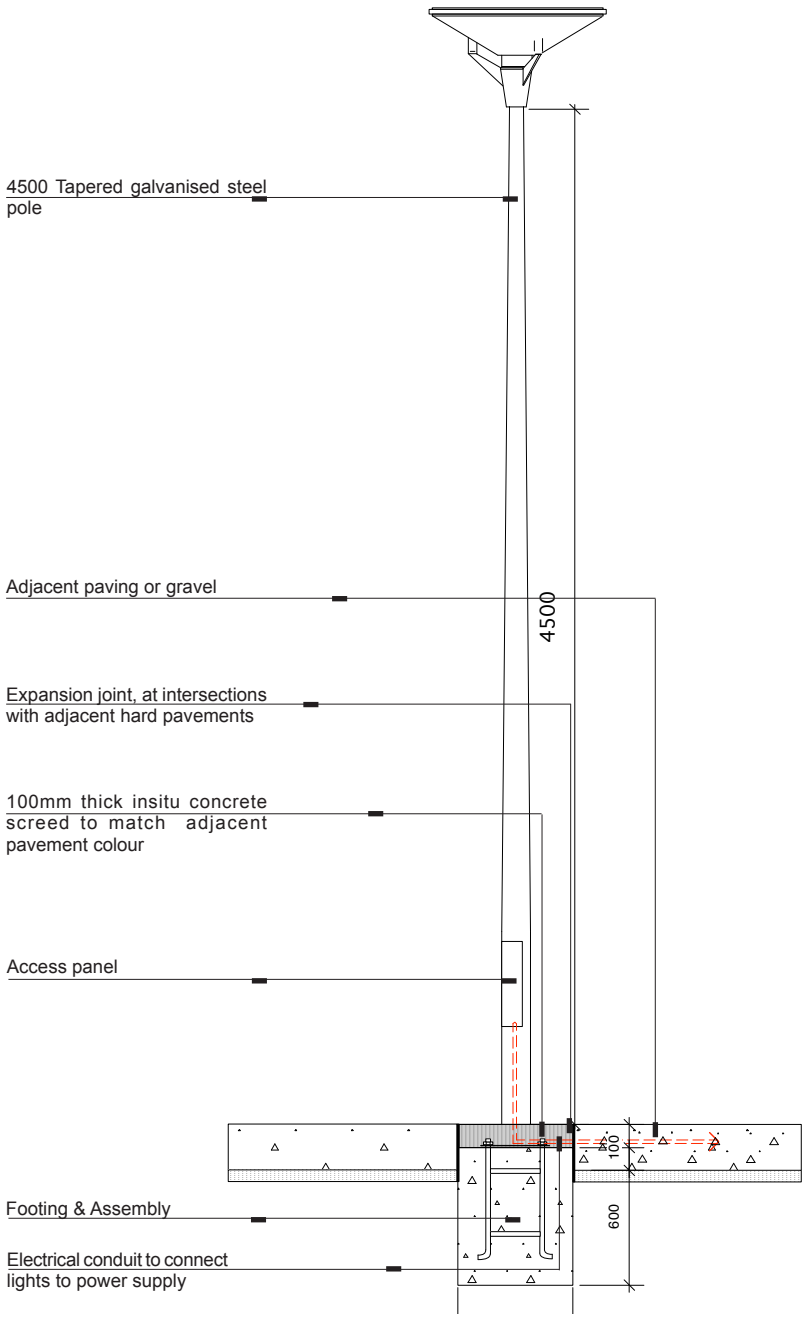
RECOMMENDED USE
In Greater Shepparton's parks and open space areas.

MATERIALS & FINISH
Diffuser
Injection moulded white opal acrylic or white, spun aluminium.
Top shade
Black pigmented or white, injection moulded ASA.
Enclosure
Injection moulded clear polycarbonate.
Frame
Die cast aluminium. Aluminium coloured with textured surface or greay, powder coated.

MAINTENANCE
Monthly cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout documentation.

RESPONCIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Pedestrian Light
Not to scale

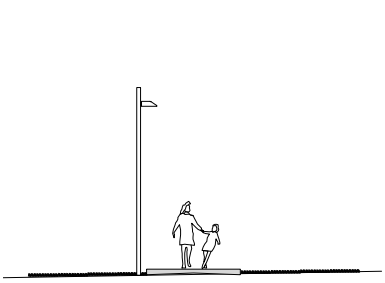
Carpark & Pedestrian Light

DESIGN PHILOSOPHY

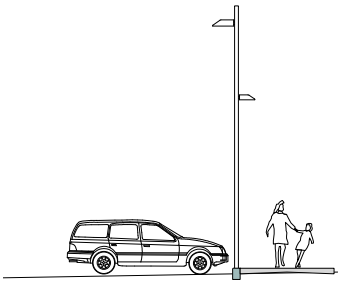
The carpark and pedestrian lighting standard offers a flexible and contemporary design solution to open space and carpark lighting.

The carpark and pedestrian lighting standard can be mounted at various heights. This fitting is suitable for double or single sided lighting applications, and can accommodate both low and high fitting mounts on the one pole.

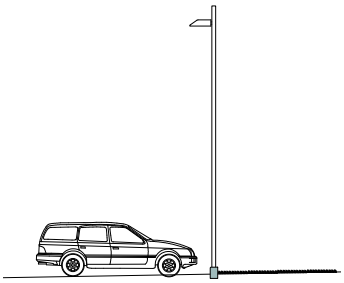
The design includes a simple square section steel pole and a wedge shaped light fitting, designed to minimise light pollution and glare within our urban environment.



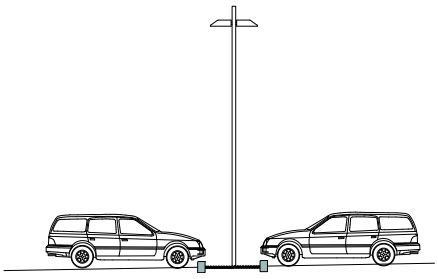
Wedge light -



Wedge light - footpath and carpark



Wedge light - carpark



Wedge light - double carpark

Not to scale

MODEL
Ruud Lighting Wedge Light
(WPR 1415)

SUPPLIER
Fitting
Advanced Lighting
ph. 03 9800 5600

Square Section Pole
VicPole Pty Ltd.
ph. 03 9738 0808
fax. 03 9738 0707
or approved alternative

RECOMMENDED USE
City of Greater Shapparton open space and carparks

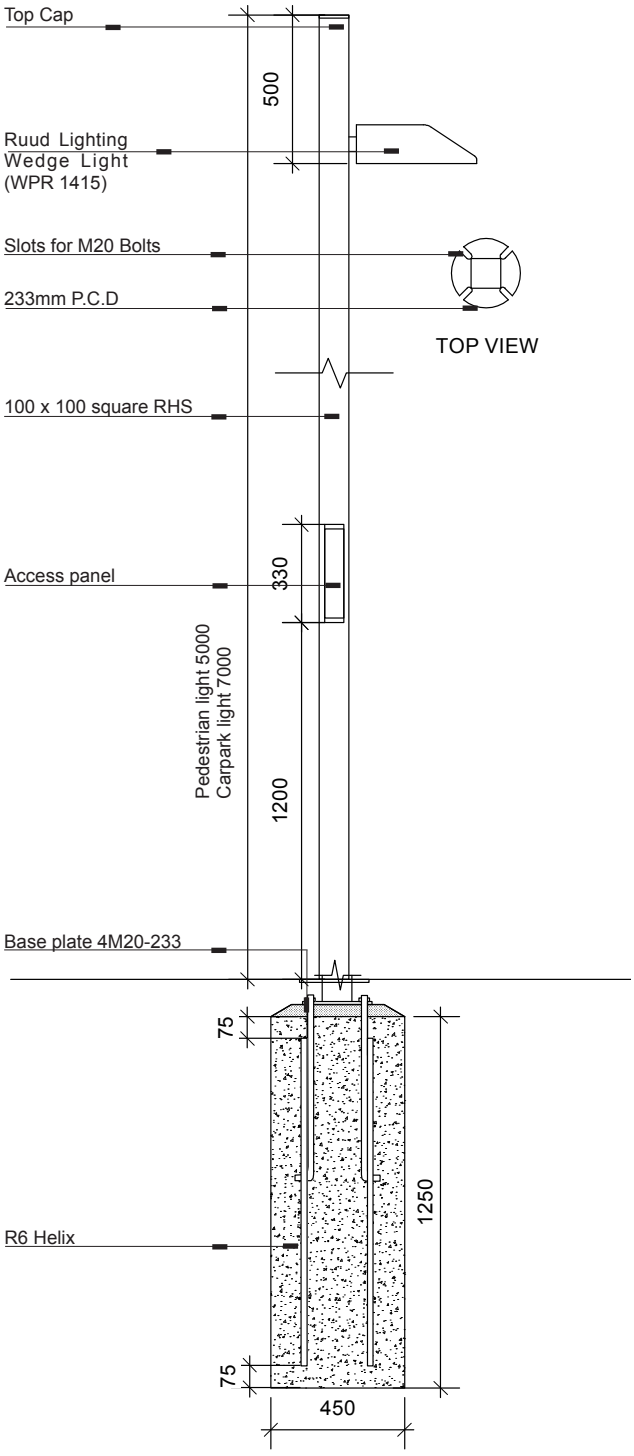
MATERIALS & FINISH
Housing
Die cast aluminium. Powdercoated black.

Lens assembly
Aluminium frame & high impact, clear-tempered glass.

MAINTENANCE
Regular operational checks and general maintenance.

DOCUMENTATION
Cross reference light pole locations with layout plans.

RESPONCIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Carpark & Pedestrian Light Elevation

Inground Uplight

DESIGN PHILOSOPHY

The inground uplight is included in the Greater Shepparton City Council's urban design suite to offer the ability to light special landscape features, signage, banners or architectual assetts.

The fitting is of simple contemporary design and has proven to be one of the more durable, install and maintenance friendly fittings on the market.

Should be provided complete with blockout for easy installation and should be mounted in a concrete suround. Lights should be located in locations which will not cause significant pedestrian glare problems and without loose surrounding surface material.

Use of inground uplights is not the recommended solution for lighting within the Greater Shepparton area. Use only where no alternative above ground solution is available.

MODEL
WE-EF Inground uplight ETC 140

SUPPLIER
Eagle Lighting
ph. 03 9387 5133
fax. 03 9387 5853

RECOMMENDED USE
Signage or feature uplighting and tree lighting.

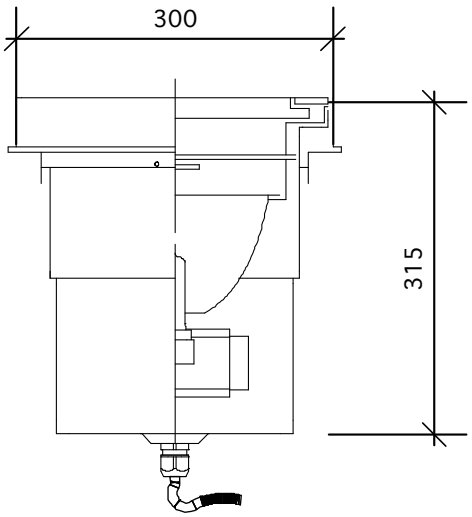
MATERIALS & FINISH
Body and frame constructed in 304 grade stainless teel. PCS hardware. Toughened safety glass lens: max load 5 tonnes. Luminaire can be driven over at low speed. Moulded silicon rubber gasket. Factory sealed termination chamber with cable gland and 1.5m flexible cable.

SPECIFICATION FITTING
WE-EF inground uplight model no. ETC 140. Supply complete with BET installation blockout with model number to match specified wattage.

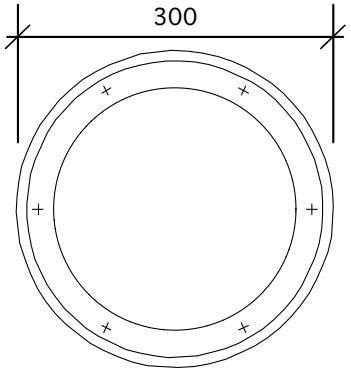
MAINTENANCE
Inground uplights shall be maintained in accordance with manufactures instructions. Instruction and technical data sheets are available from the supplier.

DOCUMENTATION
Cross reference with
site layout drawings.

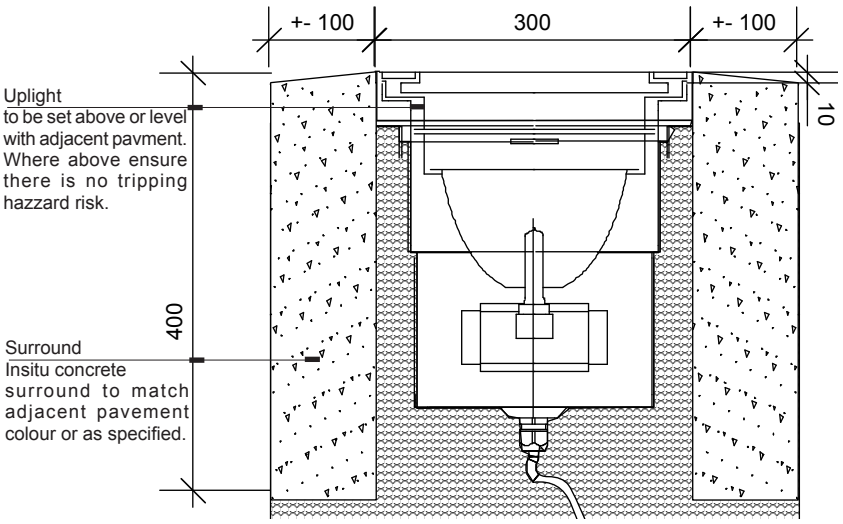
RESPONCIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Uplight Section
Not to scale



Uplight Plan
Not to scale



Standard Installation detail
Not to scale

F 300 Drinking Fountain

Drinking Fountain

There is one drinking fountain selected for use in Greater Shepparton. This drinking fountain complies with the Australian Standards for Disabled Access.

F 300 Drinking Fountain

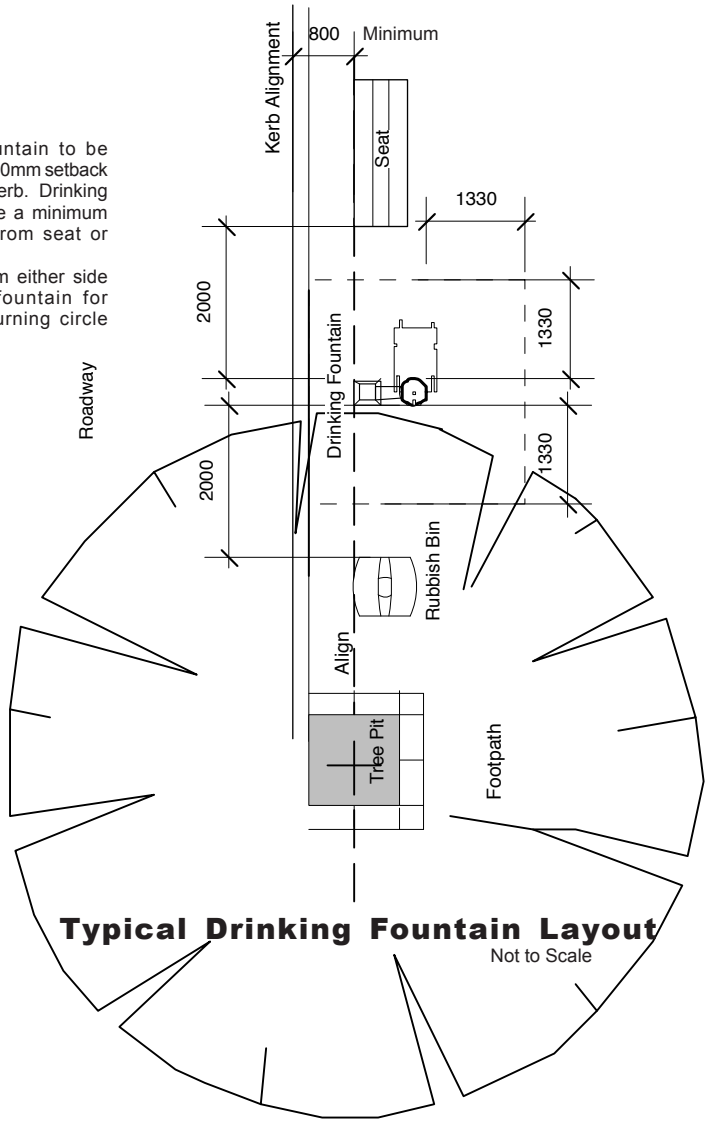
Drinking Fountain for Disabled Access

DESIGN PHILOSOPHY

The Drinking Fountain selected for use in Greater Shepparton allows for Disabled Access, compliant with Australian Standards. The drinking fountain complements Greater Shepparton furniture range.

It is simply and elegantly designed with a durable hot dipped galvanised finish and stainless steel drinking bowl.

Drinking Fountain to be aligned with 800mm setback from front of kerb. Drinking Fountain to be a minimum of 2000mm from seat or rubbish bin.
Allow 1330mm either side of drinking fountain for wheelchair turning circle as shown.



Typical Drinking Fountain Layout
Not to Scale

SUPPLIER
Commercial Systems Australia
ph. 03 9887 4177

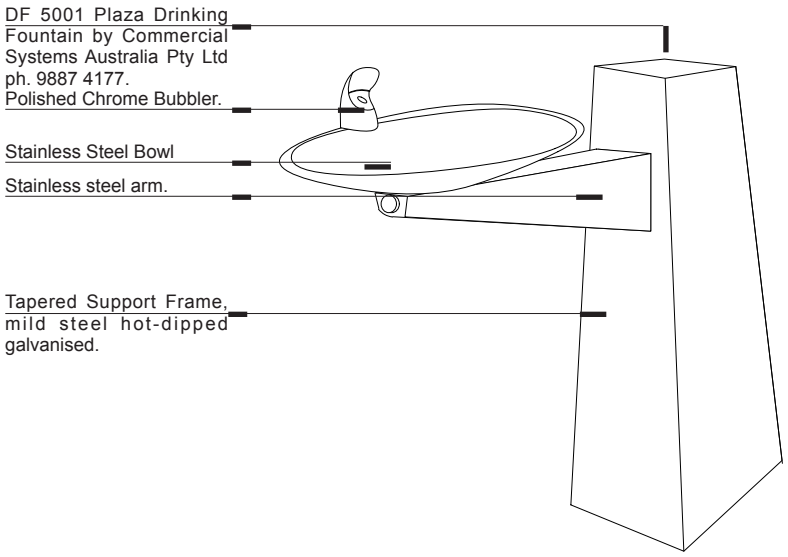
MATERIALS & FINISH
Tapered Support Frame:
Hot dipped galvanised mild steel sheet.
Arm: Stainless steel
Bowl: Satin finish stainless steel
Bubbler: Chrome polished bubbler

RECOMMENDED USE
Greater Shepparton parks and open space.

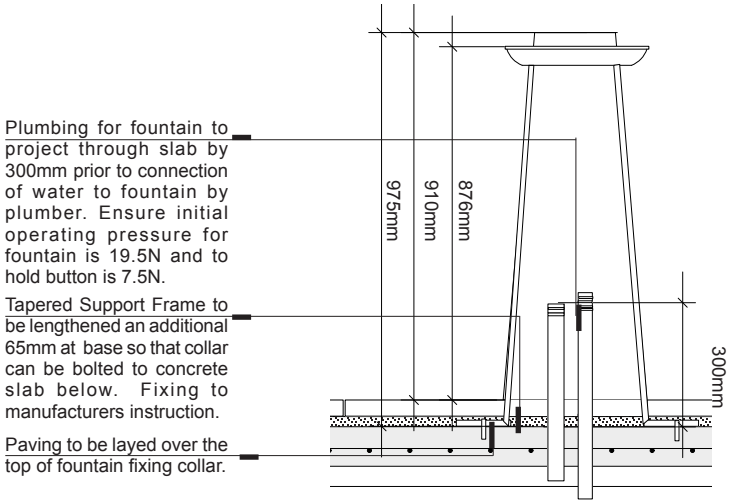
MAINTENANCE
Weekly maintenance and cleaning of stainless steel fountain bowl. particular care in autumn with deciduous leaves falling. Other maintenance as required.

DOCUMENTATION
Cross reference with site layout Documentation Plan.

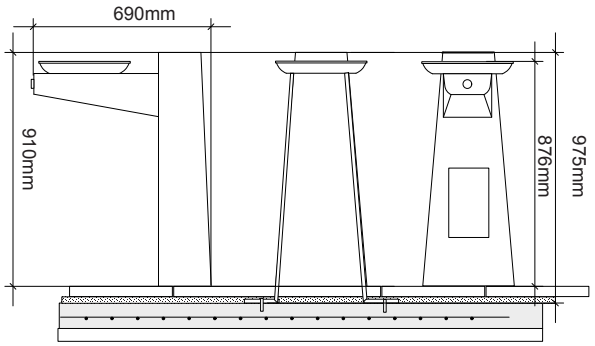
RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Drinking Fountain Axonometric
Not to Scale



Drinking Fountain Fixing
Not to Scale



Drinking Fountain Section and
Not to Scale

F 400 Bicycle Rails

Bicycle Rails

There is one type of bicycle rail selected for Greater Shepparton. A standard single rail with sculptural qualities.

F 400 Bicycle Rails

Bicycle Rail

Ecobuy

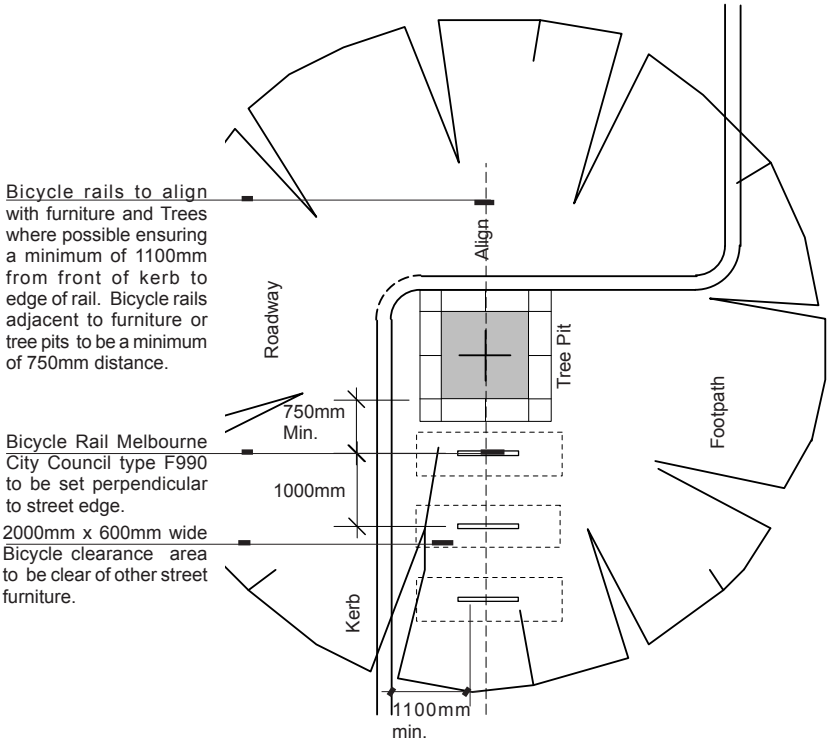
DESIGN PHILOSOPHY

The stainless steel single bicycle rail is a safe and convenient place to lock up bicycles. Its stainless steel finish is durable and smart looking, and is consistent with the contemporary furniture range designed for Greater Shepparton.

The simplicity of the design ensures the bicycle rail is not an obstruction for pedestrians when not in use.

Bicycle rails are intended for use throughout the central business district, munipal buildings and as reqired in other open space environments.

The bike rail is suitable for location adjacent to pedestrian walkways in high use areas.



Typical Bicycle Rail Layout Plan

Not to Scale

SUPPLIER
J S & H Phelan Industries Pty. Ltd.
Ph. 0417 519 312

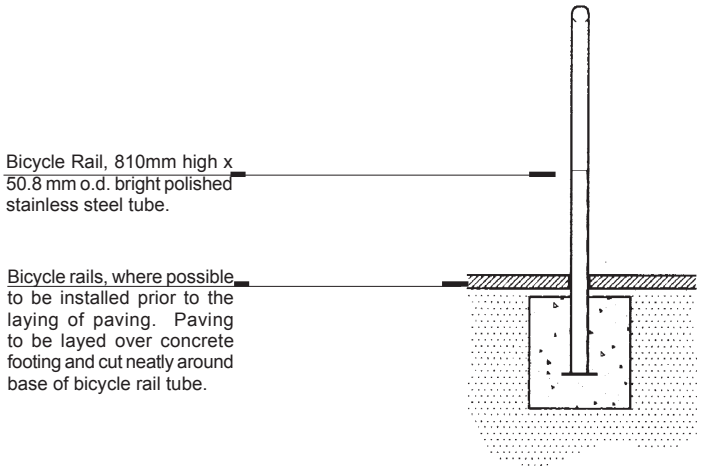
MATERIALS & FINISH
Marine Grade Stainless
Steel Finish.

RECOMMENDED USE
In Greater Sheppartons CBD and park areas.

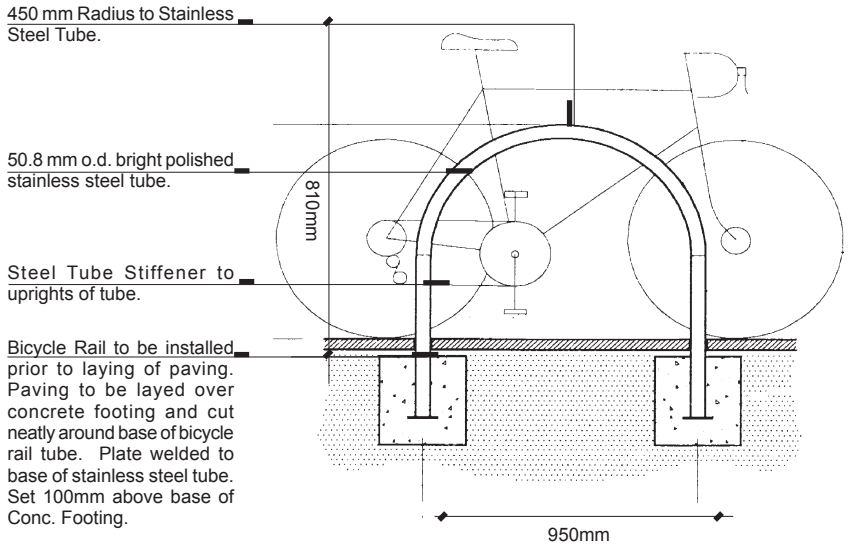
MAINTENANCE
Monthly cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Bicycle Rail End Elevation Not to Scale



Bicycle Rail Elevation Not to Scale

Bollards

A suite of bollards for various situations have been selected for Greater Shepparton. This range includes :

- Tree Protective Bollard
- Impact Absorbing Bollard
- Timber Bollard
- Timber Bollard with Steel Rail
- Recycled plastic Bollard
- Fixed Bollards-140mm & 168mm
- Removable Bollards-140mm & 168mm diameter
- Bollard Light fittings.

The Fixed, Removable and Tree Protective Bollards are generally hot-dipped galvanised with a blue reflector strip. The Illuminated Light Bollard varies slightly having a metallic finish.

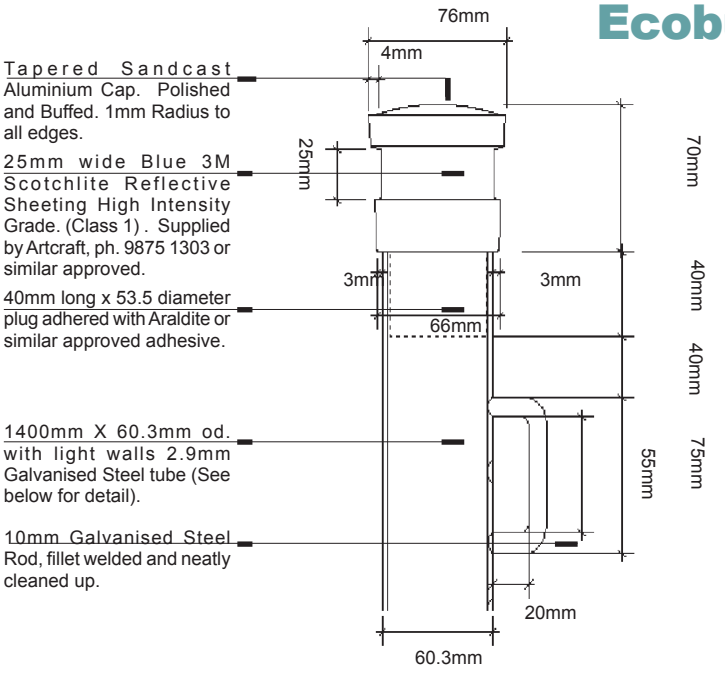
The material and colour selection is intended to continue the metallic and blue theme within the new range of Shepparton's streetscape furniture.

Guidelines for appropriate placements can be found in the following Urban Design Manual Notes for each item.

F 500 Bollards

Tree Protective

Ecobuy



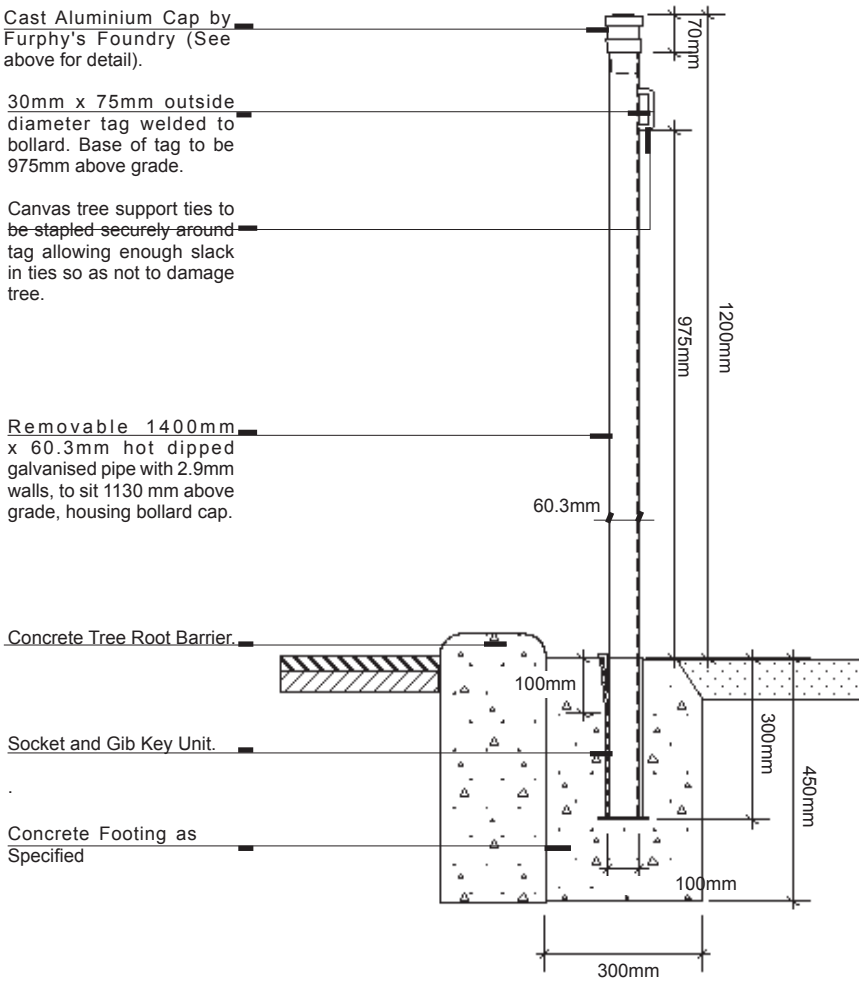
Cast Aluminium Bollard Cap
Not to Scale

DESIGN PHILOSOPHY

The Tree Protective Bollard provides an urban solution to the protection of advanced trees planted within the road reserve in Sheppartons CBD.

The bollard is designed as a part of the new range of streetscape furniture with a polished cast aluminium cap with a blue reflector strip which continues the city's blue theme colour, whilst improving their visibility for vehicles.

The bollard itself is removable for ease of maintenance and replacement if damaged and is hot-dipped galvanised. These bollards are designed to bend if hit by a vehicle, rather than damaging the vehicle itself.



Tree Protective Bollard Detail
Not to Scale

SUPPLIER

Bollard & Socket and Gib Key:
The Furphy's Foundry
ph. 03 5831 2777
fax: 03 5831 2681

RECOMMENDED USE

Street Tree Planting Pits in the Shepparton City Centre.

MATERIALS & FINISH

Bollard Cap to be Polished Sand Cast Aluminium. Bollard to be Hot Dipped Galvanised.

MAINTENANCE

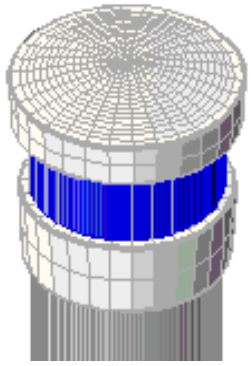
Monthly cleaning and maintenance as required.

DOCUMENTATION

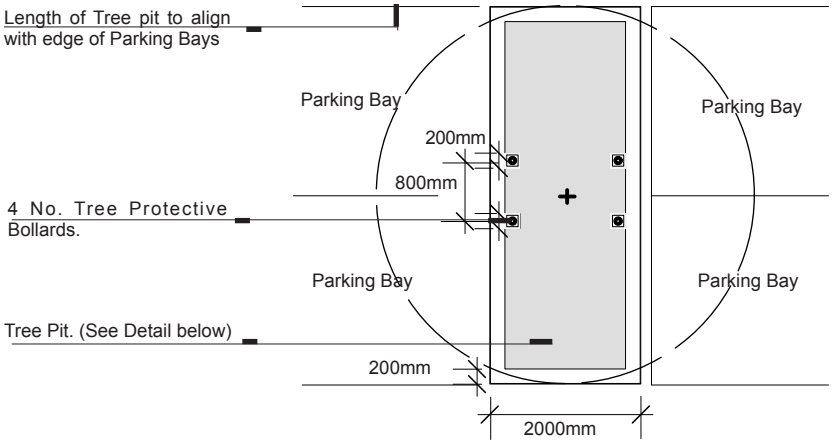
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

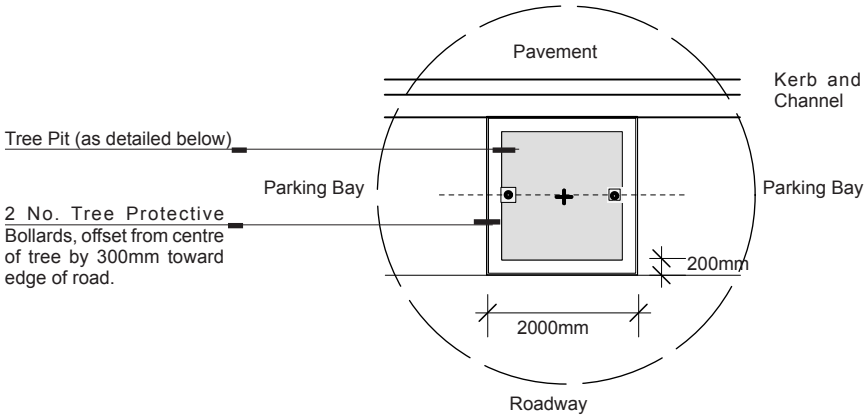
Manager - Engineering Projects
ph. 03 5832 9700



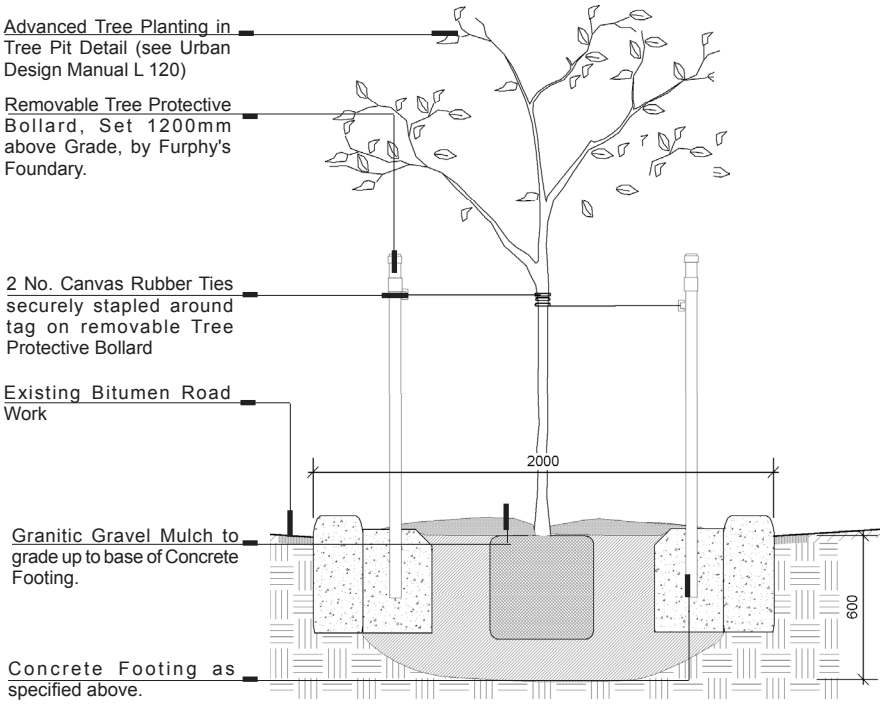
Tree Protective Bollard Render
Not to Scale



Centre of Road Tree Pit - Removable Bollard Layout Plan
Not to Scale



Edge of Road Tree Pit - Removable Bollard Layout Plan
Not to Scale



Tree Pit & Protective Bollard
Not to Scale

Fixed Bollards

Ecobuy

DESIGN PHILOSOPHY

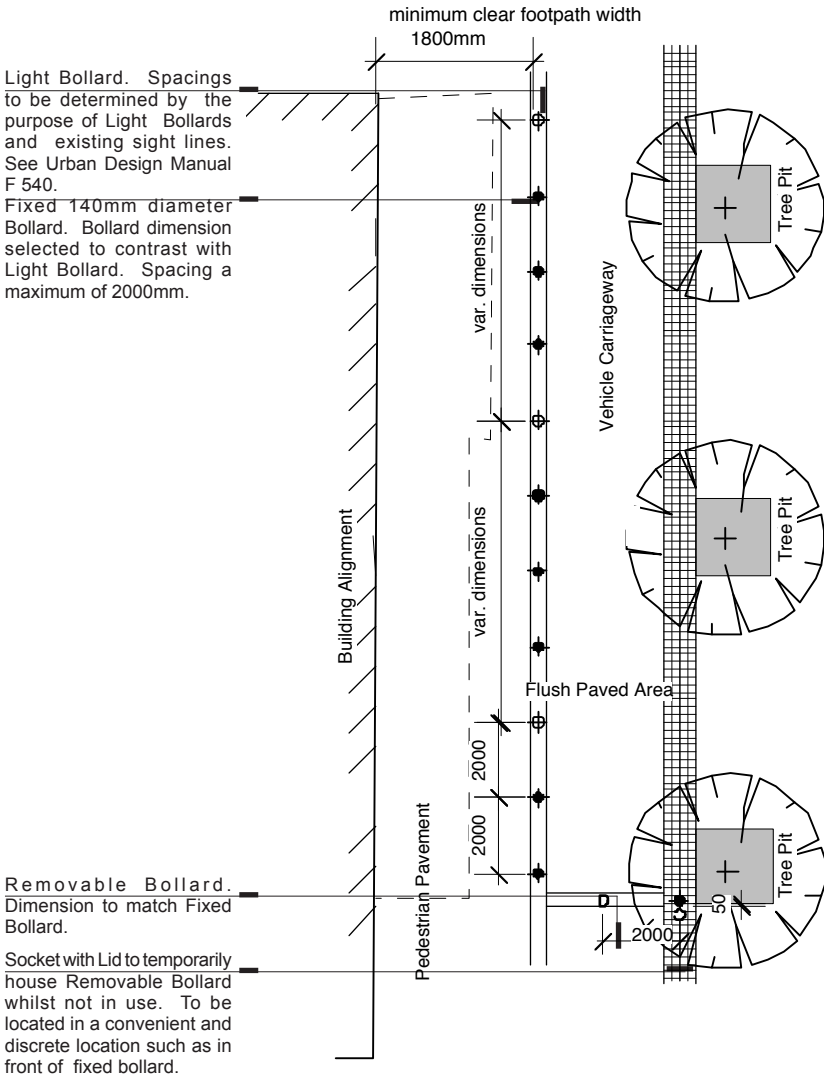
The fixed bollards selected for Greater Shepparton have a hot-dipped galvanised finish with a blue reflective strip. The galvanised finish ensures a 30% or greater luminance contrast to provide maximum visibility for the visually impaired.

There are two fixed bollard sizes, the 140mm and 168mm diameter that are permanently installed in-ground. These bollards can be used in conjunction with the removable type bollard and bollard lights.

The fixed bollard provides a vertical and linear element in the streetscape. They are not to be used as a major feature, and should be installed in an efficient manner in situations where pedestrian safety or vehicular restriction can not be achieved by standard kerb use.

Fixed bollards should be used in areas where there is no access requirement for service vehicles on a regular basis. The 140mm diameter bollard is to be used for most areas, and the 168mm for areas that are deemed to require additional security.

Where more than one fixed bollard is required they should be of the same diameter and aligned in a linear fashion.



Typical Bollard Layout Not to Scale

SUPPLIER
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

MATERIALS & FINISH
Hot Dipped Galvanised.
Class 1 Reflective Tape (Blue)

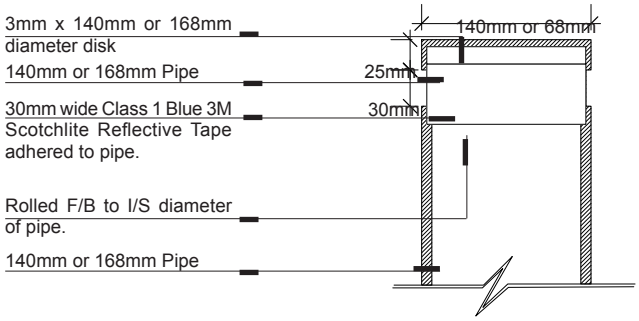
RECOMMENDED USE
Special use applications within the Greater Shepparton area. Such as areas requiring security for pedestrians from vehicular traffic where the usual barriers such as kerbs do not exist.

The 140mm diameter bollard is to be predominantly used in the city, installing the 168mm diameter bollard in areas requiring extra security.

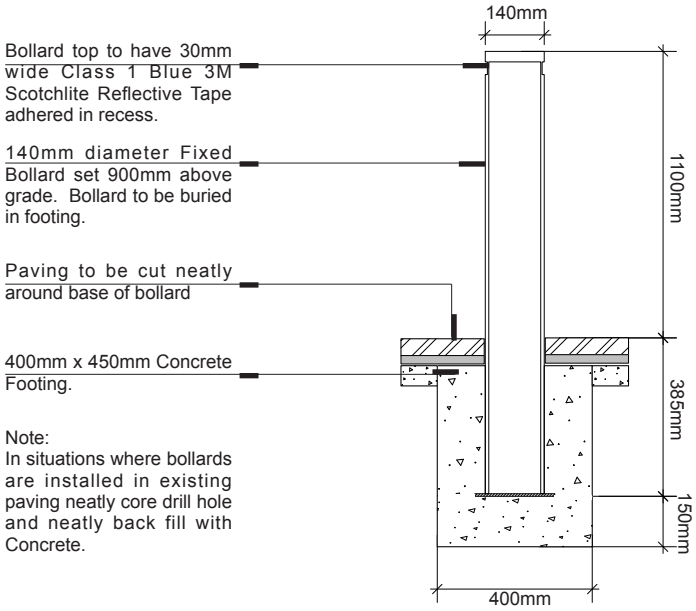
MAINTENANCE
Monthly cleaning and maintenance as required. Maintain bollard colour and finish to have 30% luminance contrast with surrounding pavements.

DOCUMENTATION
Cross reference with site layout drawings.

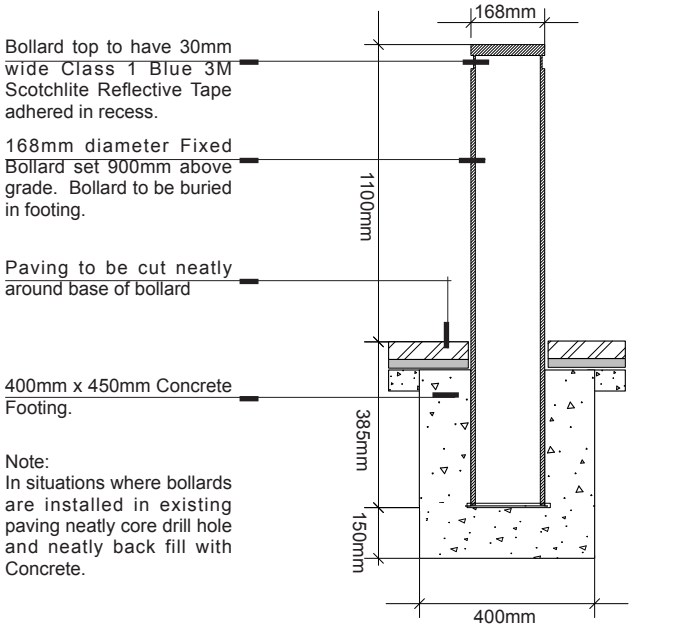
RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Standard Bollard Top
Not to Scale



Fixed 140mm diameter Bollard
Not to Scale



Fixed 168mm diameter Bollard
Not to Scale

Removable Bollards

Ecobuy

DESIGN PHILOSOPHY

The removable bollards selected for Greater Shepparton have a hot-dipped galvanised finish with a blue reflector strip.

The galvanised finish ensures a 30% or greater luminance contrast to provide maximum visibility for the visually impaired.

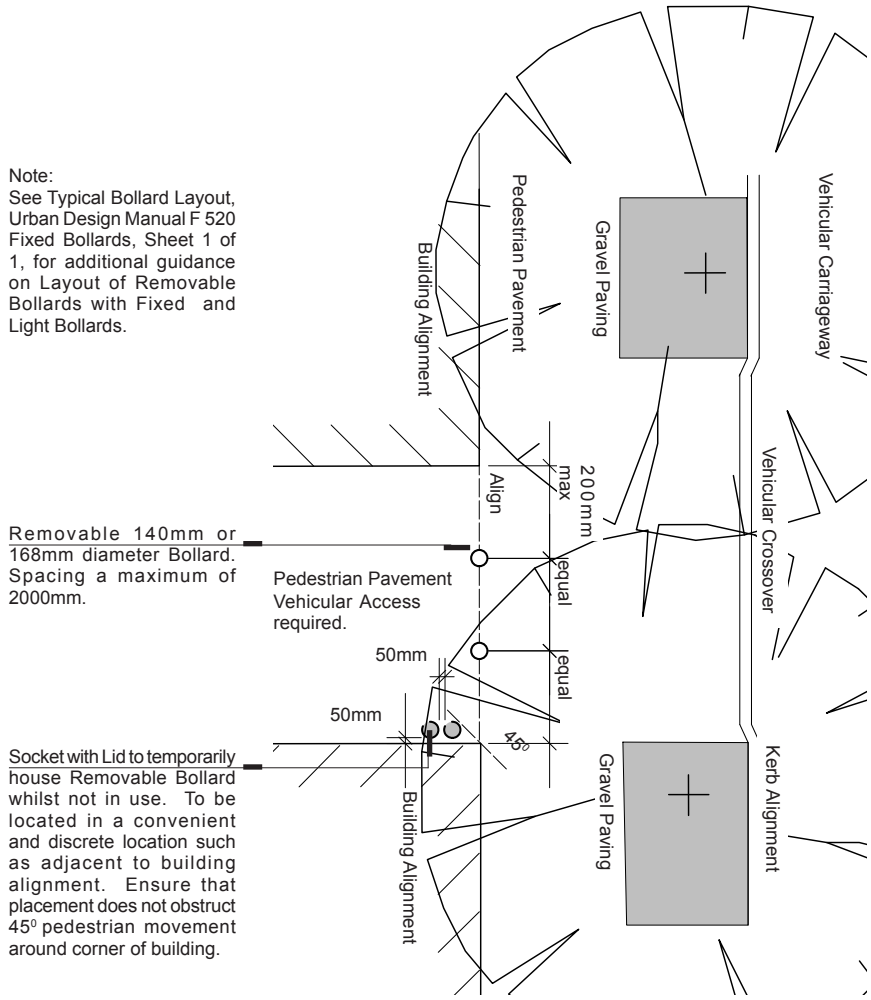
There are two removable bollard sizes, the 140mm and 168mm diameter, and both can be used in conjunction with the fixed bollards and bollard lights.

The 140mm diameter bollard is to be used for most applications unless additional security is required, as the 168mm bollard is very heavy.

Removable bollards are to be used in areas where service vehicles do require regular access. A removable bollard should be provided with an additional sleeve to allow the bollard to be temporarily housed in a suitable location, and to prevent the bollard being left laying on the ground.

Where multiple removable bollards are required they should be of the same diameter and aligned in a linear fashion.

Note:
See Typical Bollard Layout, Urban Design Manual F 520 Fixed Bollards, Sheet 1 of 1, for additional guidance on Layout of Removable Bollards with Fixed and Light Bollards.



Typical Removable Bollard Layout

Not to Scale

SUPPLIER

The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681

MATERIALS & FINISH

Bollard to be Hot Dipped Galvanised.
Class 1 Reflective Tape (Blue)

RECOMMENDED USE

In special areas in the Shepparton City Centre that are predominantly pedestrian that require vehicular or service access at certain times, such as lane ways.

MAINTENANCE

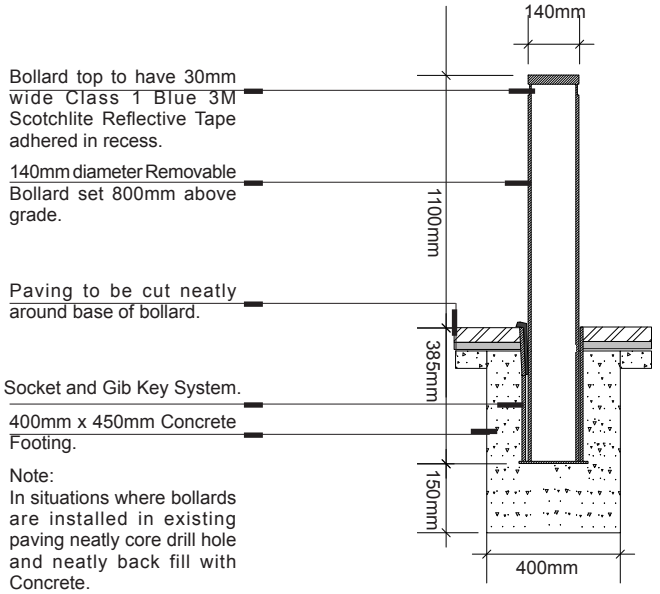
Same as F520.

DOCUMENTATION

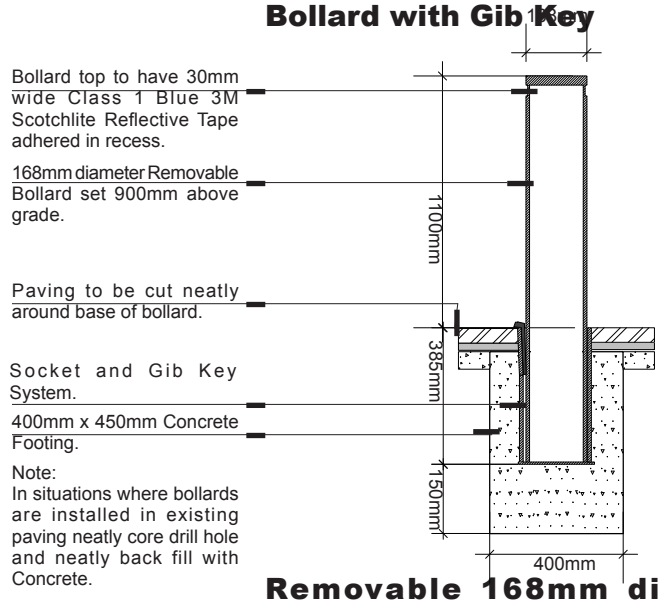
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

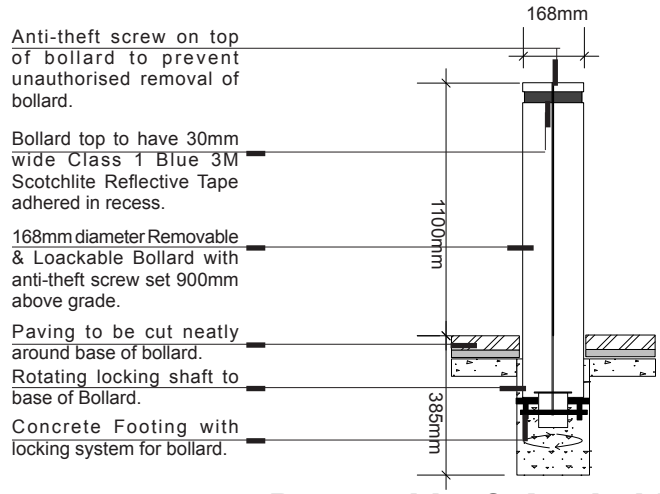
Manager - Engineering Projects
ph. 03 5832 9700



Removable 140mm diameter Bollard with Gib Key Not to Scale



Removable 168mm diameter Bollard with Gib Key Not to Scale



Removable & Lockable 168mm diameter Bollard Not to Scale

Bollard Lighting

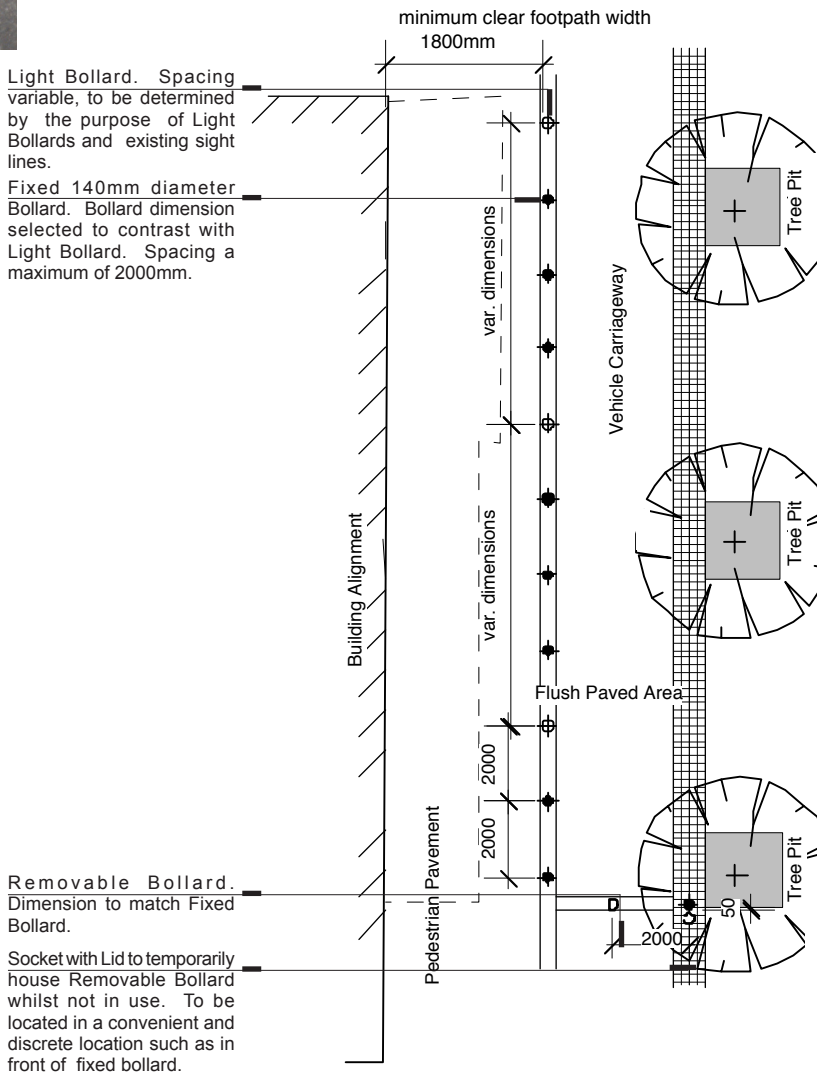
DESIGN PHILOSOPHY

The bollard light selected for Greater Shepparton has a metallic finish and can be used in conjunction with the removable and fixed bollards.

The silver colour finish ensures a 30% or greater luminance contrast to provide maximum visibility for the visually impaired.

The use of bollard lights is to be considered within a framework of an overall lighting strategy. Bollard lights must be selected carefully for very specific areas as they are prone to being vandalised. Bollard lights primarily function as a visual cue, indicating such things such as directional movement of pedestrian or vehicular traffic, subtle changes in ground elevation, and highlights to edges.

In this way they increase the safety of a given area, and whilst they can be seen from long distances, they alone they do not provide sufficient levels of light in an immediate vicinity to comply with safety codes.



Typical Bollard Layout Not to Scale

SUPPLIER
Eagle Lighting Group
ph. 03 9387 5133
fax. 03 9387 5853
Bega 8740 Bollard 1 HME 80W
1200mm high 190mm Diameter

FINISH
Silver Finish

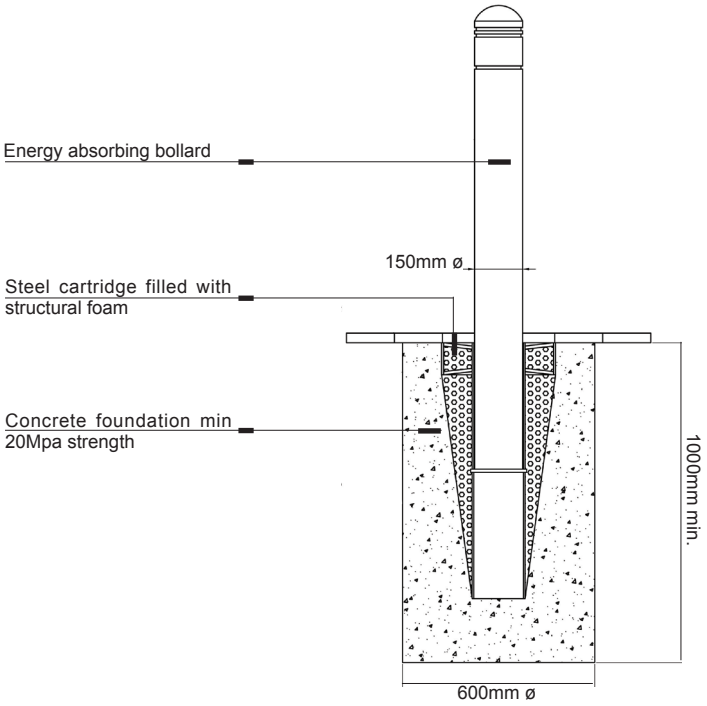
RECOMMENDED USE
Shepparton City Centre to high-light pedestrian and vehicular edges and to provide additional ground lighting security at night.

MAINTENANCE
Monthly cleaning and maintenance as required. Maintain bollard colour and finish to have 30% luminance contrast with surrounding pavements.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700

Impact Absorbing Bollard



DESIGN PHILOSOPHY

The Impact Absorbing Bollard selected for Greater Shepparton has a metallic finish and can be used in conjunction with the removable and fixed bollards. The bollards are to have the hot-dip galvanised finish maintained, ensuring a 30% or greater luminance contrast in order to avoid a potential safety hazard for the visually impaired.

The use of Impact Absorbing Bollards is to be considered within a framework of an overall safety strategy. Impact absorbing bollards primarily function as a safety barrier for pedestrians or vehicular traffic that runs off the road.

Vehicular bollards help prevent pedestrian injury or death caused by vehicular accidents.

SUPPLIER

Saferoads
ph. 1800 060 672
fax. 1800 060 673
PO Box 340, Drouin, Vic, 3818

FINISH

Silver Finish
Green Finish in Tatura

RECOMMENDED USE

In areas in the Shepparton City Centre to where high pedestrian and vehicular acitivity occur, especially around outdoor cafe seating and meeting points.

MAINTENANCE

Monthly cleaning and maintenance as required. Maintain bollard colour and finish to have 30% luminance contrast with surrounding pavements.

DOCUMENTATION

Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700

Timber Bollard with Steel Rail

Ecobuy

DESIGN PHILOSOPHY

The Timber Bollard with Steel Rail provides a solution to fencing parks and sporting fields throughout Greater Shepparton.

This fencing arrangement restricts vehicular entry but remains permiable for pedestrians.

SUPPLIER
Various
Fabricated to suit.

DESIGN CONTACT
City of Greater Shepparton
ph. 03 5832 9700

MATERIALS
Bollard
150mm Square Cypress Pine Bollard with Pyramid Top and 20mm detail band.
Steel Rail
50mm Ø Galvanised Steel Tube Rail.

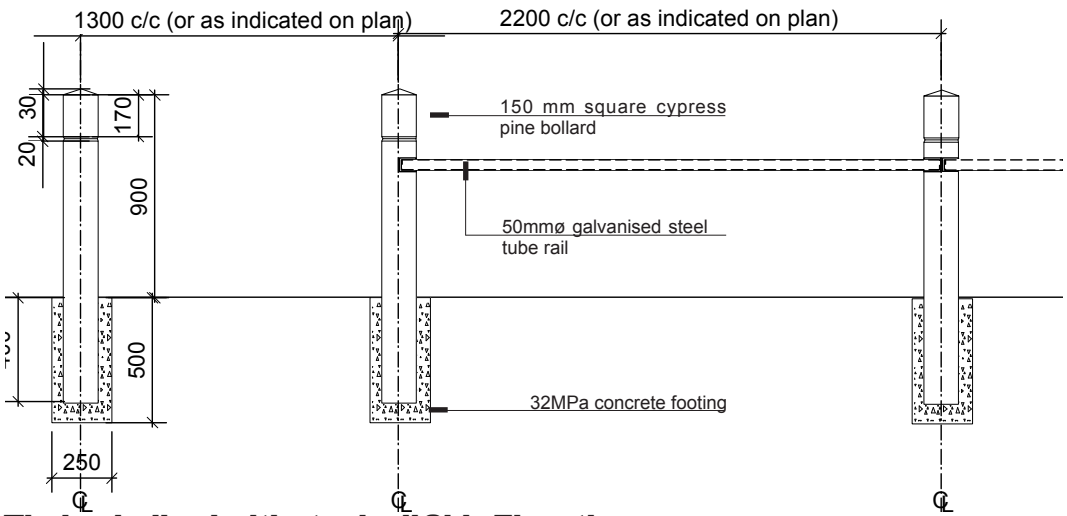
RECOMMNDED USE
Park and Sporting field boundary

FINISH
Bollard - Natural Timber
Rail - Galvanised

MAINTENANCE
Monthly cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Timber bollard with steel rail Side Elevation
Not to scale

Recycled Plastic Bollard

Ecobuy

DESIGN PHILOSOPHY

The recycled plastic bollard offers an environmental alternative to timber bollards in park areas.

SUPPLIER
Repeat Products
ph. 03 9770 8390
fax. 03 9770 8490

DESIGN CONTACT
Repeat products
ph. 03 9770 8390

MATERIALS
Bollard
100% Recycled Plastic

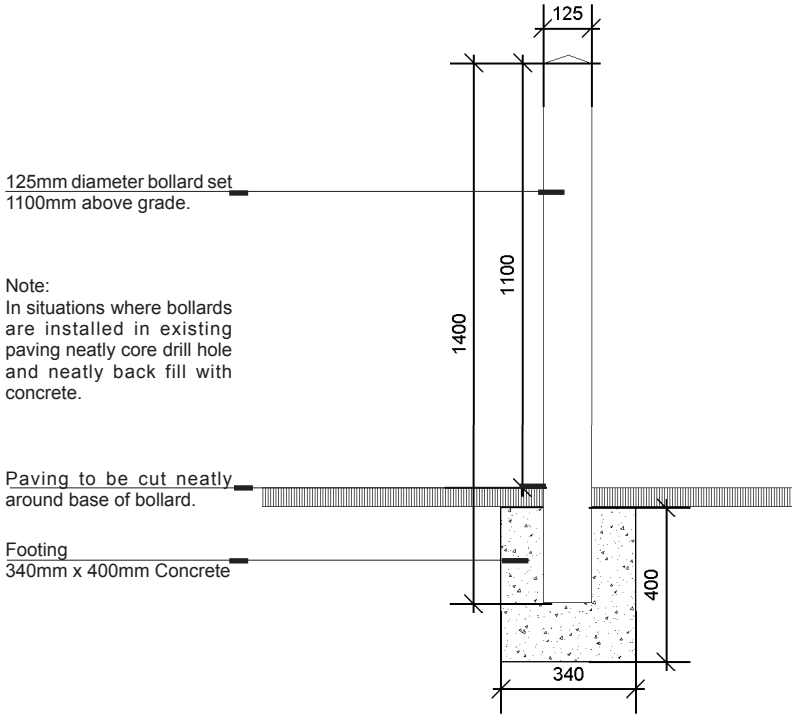
RECOMMENDED USE
Park and Sporting field boundary

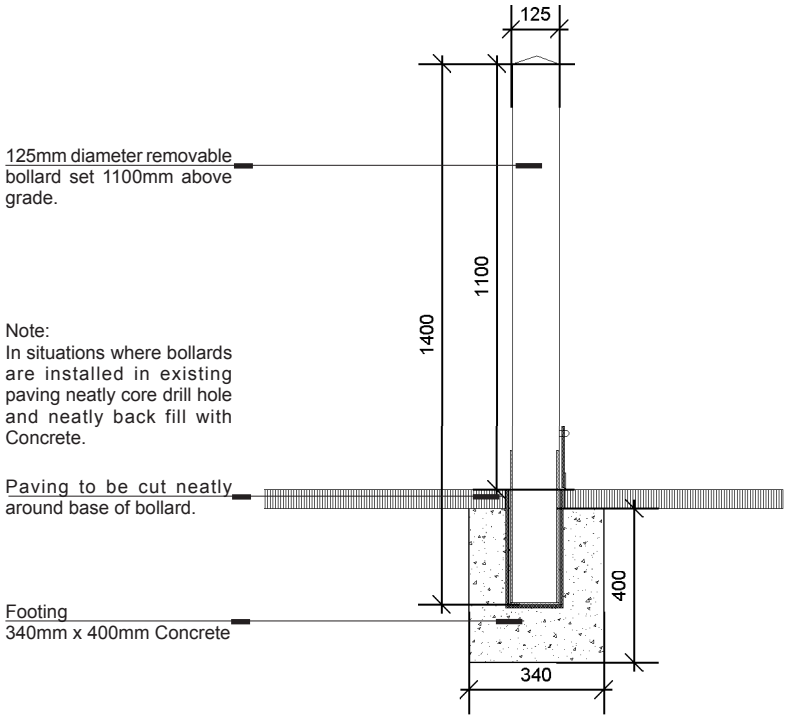
FINISH
Bollard
Coloured Plastic

MAINTENANCE
Maintenance as required

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700





F 600

F 600

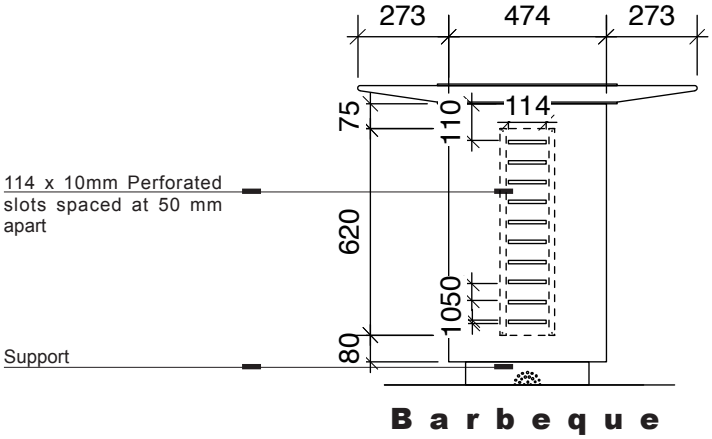
Barbeque

DESIGN PHILOSOPHY

The barbeque selected for use within Greater Shepparton is of durable contemporary design and complements the Shepparton's urban design suite.

The BBQ hotplate is an off the shelf product, available and the surround is custom designed and fabricated locally.

The barbeque is suitable for a wide range of park, open space and sports precinct applications.



B a r b e q u e

SUPPLIER

Barbeque
All Park Products
ph. 03 5981 0144
fax. 03 5981 0381

Surrounds
Trevaskis Engineering
ph. 03 5824 1466
fax. 03 5824 2219

DESIGN CONTACT

Barbeque
All Park Products
ph. 03 5981 0144

Surrounds
Trevaskis Engineering
ph. 03 5824 1466

RECOMMENDED USE

Parks and sporting field within Greater Shepparton area.

MATERIALS & FINISH

Hotplate
"Chrisite" stainless teel electric hot-plate. 440x440mm.

Benchtop
3mm thick stainless steel. Grade 304, 28 finish. Provide 1 degree lope to benchtop from hot plate all around.

Base
3mm thick perforated metal sheet.
Support
75x50x5mm thick steel angle.

Pavement
100mm charcoal coloured reinforced insitu concrete pavement to picnic pad.

Tap
Enware Cam Action Tap (or similar approved). Attach tap and pipe to BBQ with anti vandal fitting. Ensure connection is made by qualified plumber and that fittings suit site water pressure.

MAINTENANCE

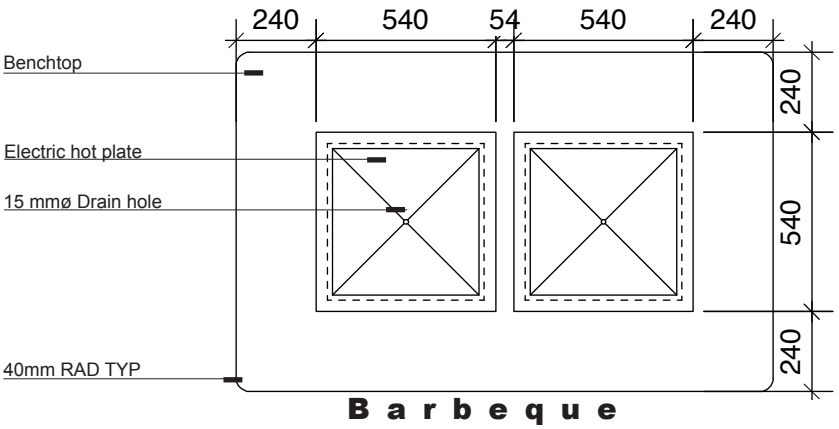
Daily cleaning and regular maintenance required.

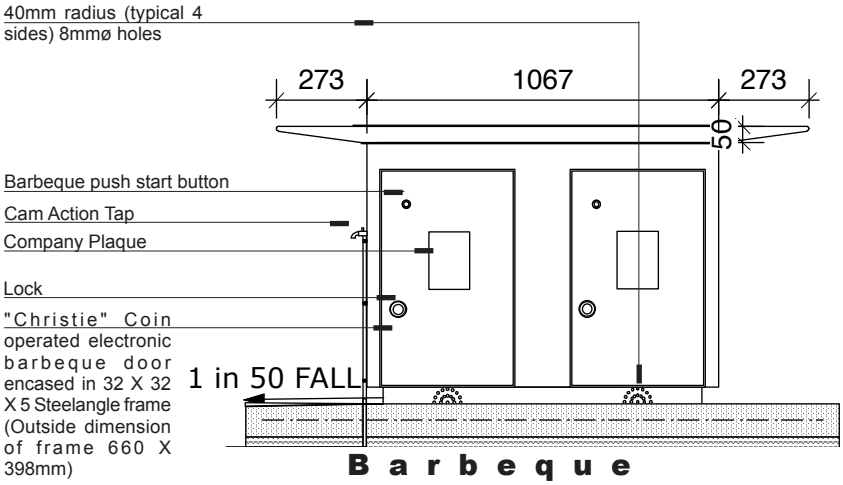
DOCUMENTATION

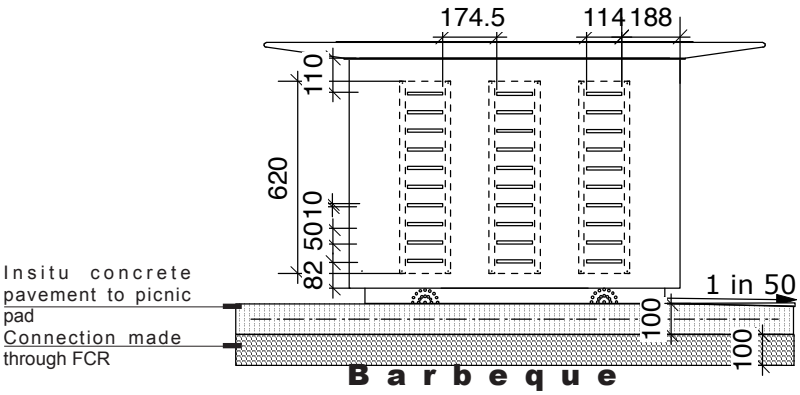
Refer to layout plans.

RESPONCIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700







Signs

The Signs illustrated in the urban design manual include parking directory, park and township boundary signage. These signs belong to a range of custom designed signs prepared for Shepparton - known as the Shepparton Family of Signs. A banner pole has also been included in this section of the Urban Design Manual.

The parking signs consist of three different types of signs. These are:

- Parking Introductory Signs
- Directional Parking Signs
- Carpark Signs.

Other inclusions:

- Park Sign
- Service Club Sign
- Banner pole

F 700 Signs

Parking Introduction

Parking Introduction Sign in footpath refer to drawings 99/10/IS/01 and 99/10/IS/02 for details. Available from council.

DESIGN PHILOSOPHY

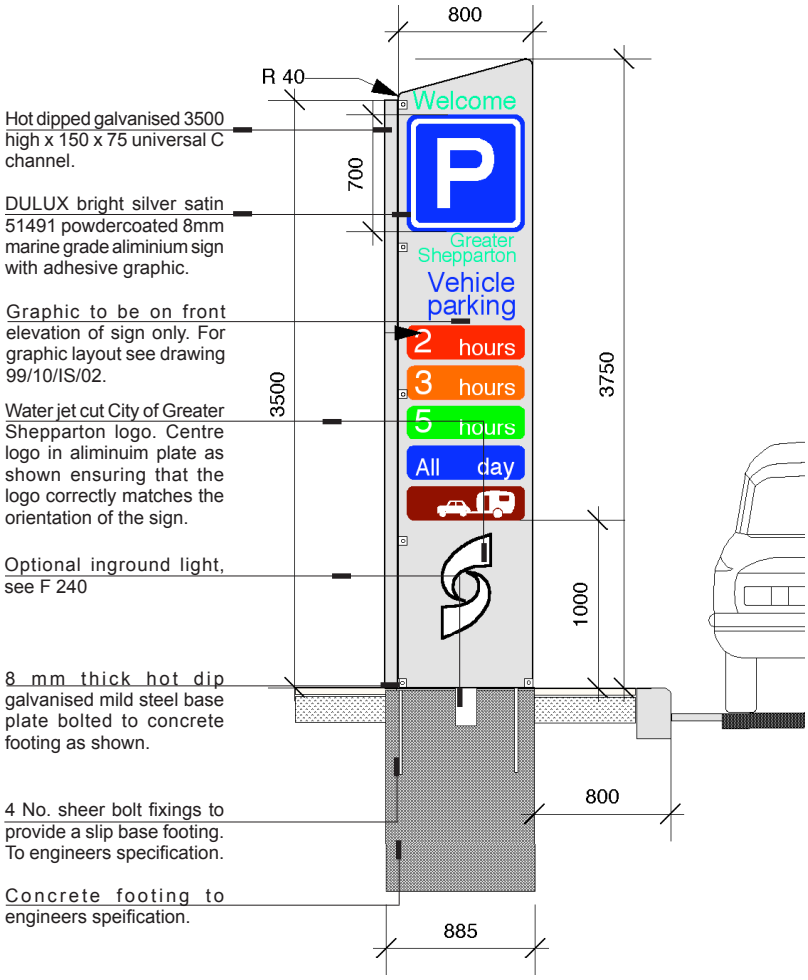
The Parking Introduction Signs belong to a range of new signs, both parking and town and boundary signs designed for the City of Shepparton.

The Parking Introduction Signs are designed to introduce drivers to the vehicle parking options available (2 hour, 3 hour, 5 hour, all day and caravan carparking areas). A colour coded system has been developed to identify key parking duration areas:

- red - 2 hours
- orange - 3 hours
- green - 5 hours
- blue - all day.
- caravans -brown

These signs work in conjunction with the Directional Parking Signs which direct drivers to off-street carparks and the Carpark Sign which name the carpark and inform the driver of the number of parking spaces available and the duration. Refer to Urban Design Manual Notes F 720 and F 730.

The Parking Introduction Signs are located on key entry roads into the C.B.D. area within the City of Shepparton.



Parking Introduction Sign
Not to Scale

SUPPLIER

Introduction Sign to be built in accordance with drawings 99/10/IS/01 and 99/10/IS/02 by Urban Initiatives. Available from Council.
Council Approved Manufacturer, such as:
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681
or similar approved.

RECOMMENDED USE

On the Shepparton City Centre boundary edges. Location to be approved by council.

MATERIALS

Materials to conform with drawing 99/10/IS/01 and 99/10/IS/02 available from Council.
6mm thick Aluminium Plate Sign
Mild Steel framework

FINISH

Materials to conform with drawing 99/10/IS/01 and 99/10/IS/02 available from Council.
Powdercoat Dulux Bright Silver Satin 51491 finish to Aluminium Sign.
Hot-dipped Galvanised finish to Mild Steel.
Sign Writers Adhesive Vinyl with 7 year life and UV protection:
such as Oracal Series 751 Premium from Artmart ph. 9877 7477, or similar approved. Colours to be:

- 2 hours - 027 Tomato Red
- 3 hours - 035 Pastel Orange
- 5 hours - 064 Yellow Green
- All Day - 065 Cobalt Blue
- Caravan - 079 Red Brown Marron

Parking Symbol Design and Materials to conform with AS 1743 G7-6-1A. Colours nominated in AS 1906.1 (Clause 8.2) and AS 1743 - 1992 Appendix C3.

MAINTENANCE

Regular cleaning and maintenance as required.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700

For full documentatioin of graphics to introduction sign refer to drawings 99/10/IS/01 and 99/10/IS/02. Available from council.
Note: Graphic on introduction sign in footpath to be reversed, see layout on drawing 99/10/IS/01.
Note: No graphics to back of sign

"Welcome" to be in "Shepparton green".

AS 1743 G7-6-1A, 700 x 700 Parking Sign.

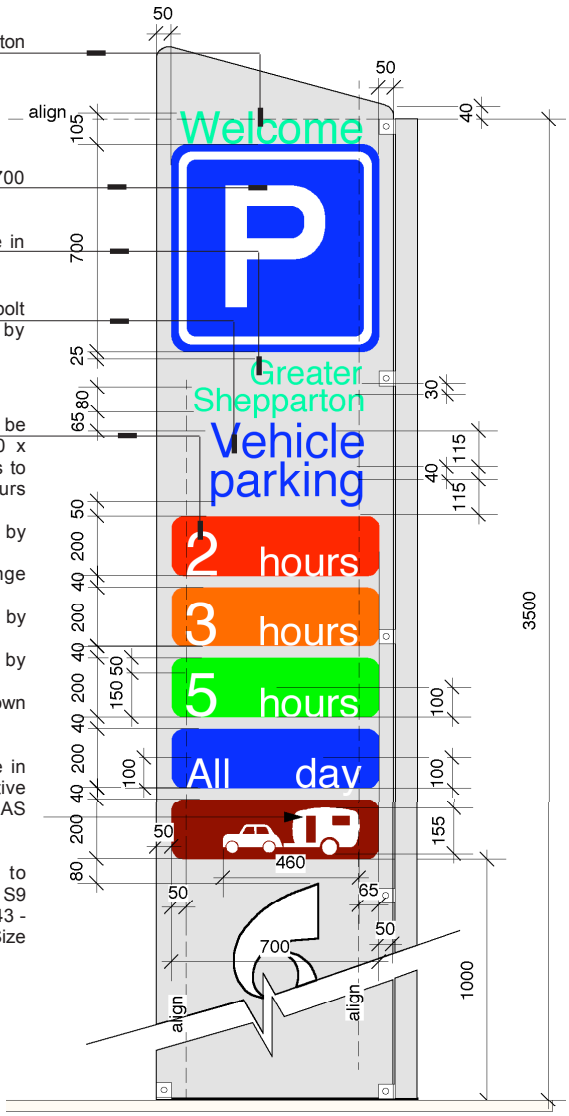
"Greater Shepparton" to be in "Shepparton Green" colour.

"Vehicle Parking" to be in cobolt blue by Oracal, supplied by ArtMart ph. 03 9236 1111.

Carpark duration signs to be coloured as shown, 200 x 700 wide with 40mm radius to corners. Background colours to be:
2 hours - 027 tomato red by Oracal
3 hours - 035 pastel orange by Oracal
5 hours - 064 yellow green by Oracal
All day - 065 cobolt blue by Oracal
Caravan colour - 079 red brown maroon by Oracal.

Letters and numbers to be in class 2 or 2a white reflective adhesive as nominated in AS 1743 to match "P" sign.

Caravan and car symbol to conform with AS 1743 - 1992 S9 caravan symbol and AS 1743 - 1992 W5 - 13 car symbol. Size as shown.



Parking Introduction Sign Graphics in Median Strip - Front Elevation.

Not to scale

Directional Parking Sign

DESIGN PHILOSOPHY

The Directional Parking Signs belong to a range of new signs, both parking and town and boundary signs designed for the City of Shepparton.

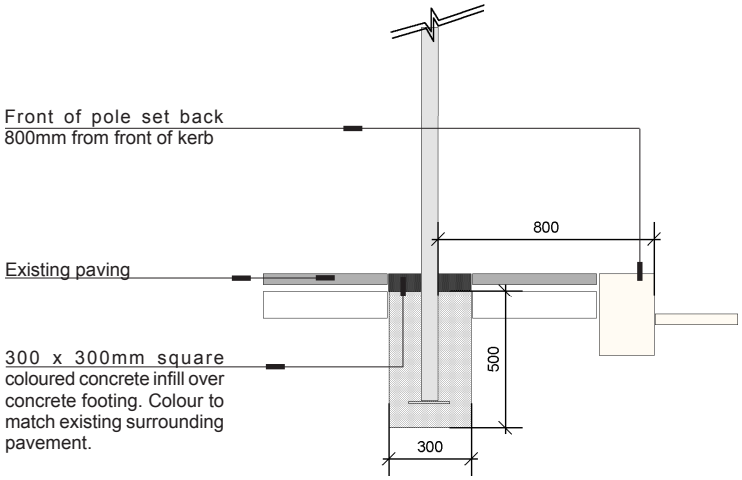
The Directional Parking Signs are designed to orient drivers to 2 hour, 3 hour, 5 hour and all day duration carparking areas. A colour coded system has been developed to identify key parking duration areas;

- red - 2 hours
- orange - 3 hours
- green - 5 hours
- blue - all day.

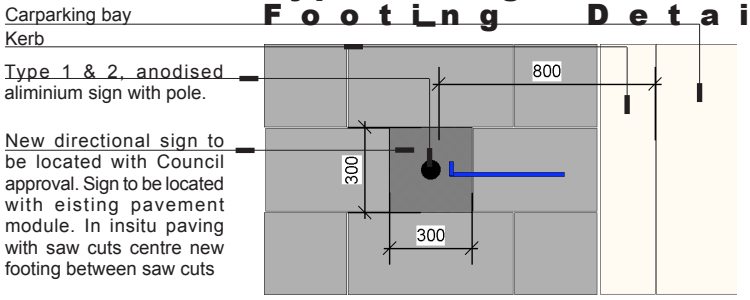
These signs are designed to work with the Parking Introduction Signs and the Carparking Signs. Refer to the Urban Design Manual Notes F 710 and F 730.

The metallic finish of the signs are designed to compliment the new furniture and existing furniture of the City.

The Directional Parking Signs are located in the City of Shepparton 's Central Business Area.

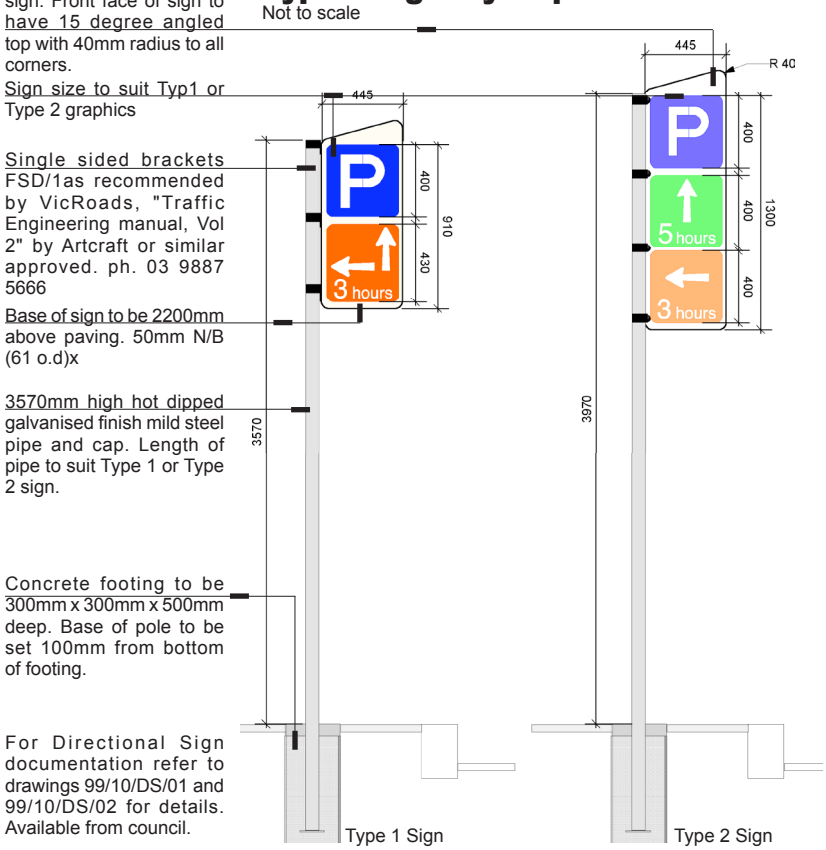


Typical Sign Concrete Footing Detail



Typical Sign Layout plan

Not to scale



Parking Directional Sign Elevation

SUPPLIER

Parking Directional Sign to be built in accordance with drawings 99/10/DS/01 and 99/10/02. Available from Council.

Council Approved Manufacturer, such as:

The Furphy Foundry
ph. 03 5831 2777, fax. 03 5831 2681
or similar approved.

RECOMMENDED USE

In Shepparton's city centre. Locations to be approved by council.

MATERIALS

Materials to conform with drawing 99/10/DS/01 and 99/10/DS/02 available from Council.

1.6mm thick Aluminium Sign.

61 o.d. Mild Steel Poles & Cap.

FINISH

Materials to conform with drawing 99/10/DS/01 and 99/10/DS/02 available from Council.

Anodised 1.6mm Aluminium Sign finish.

Hot-dip Galvanised Mild Steel Pole and Cap.

Sign Writers Adhesive Vinyl with 7 year life and UV protection:

such as Oracal Series 751 Premium from Artmart ph. 9877 7477, or similar approved. Colours to be:

- 2 hours - 027 Tomato Red
- 3 hours - 035 Pastel Orange
- 5 hours - 064 Yellow Green
- All Day - 065 Cobalt Blue
- Caravan - 079 Red Brown Marron

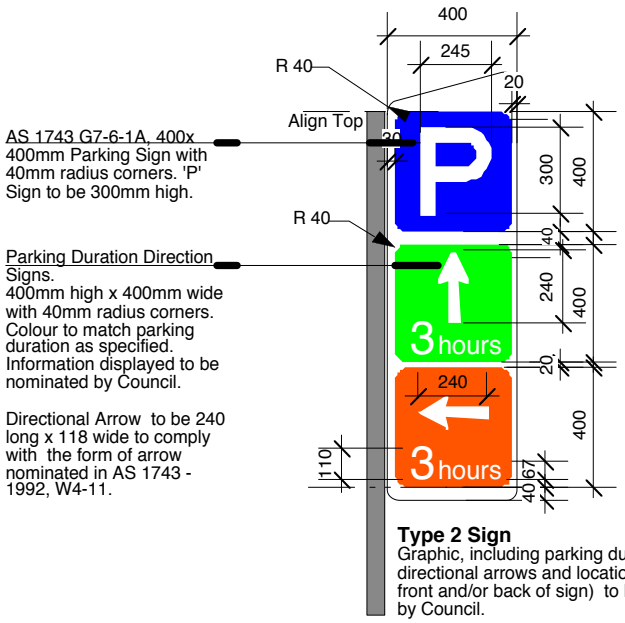
Parking Symbol Design and Materials to conform with AS 1743 G7-6-1A. Colours nominated in AS 1906.1 (Clause 8.2) and AS 1743 - 1992 Appendix C3.

MAINTENANCE

Regular cleaning and maintenance as required.

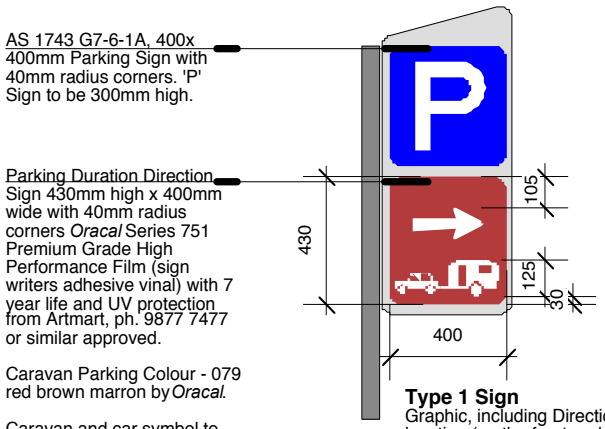
RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700



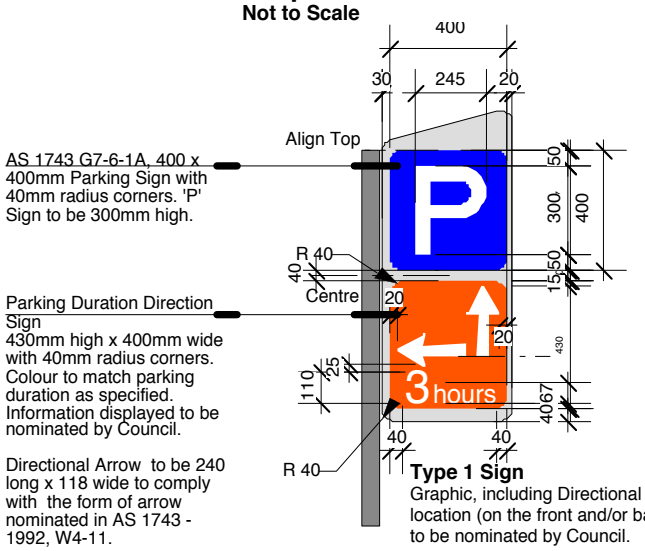
Type 2 Sign
Graphic, including parking duration, directional arrows and location (on the front and/or back of sign) to be nominated by Council.

Typical Type 2 Sign Graphic. **Not to Scale**



Type 1 Sign
Graphic, including Directional arrows and location (on the front and/or back of sign) to be nominated by Council.

Typical Type 1 Sign with Caravan Graphic.
Not to Scale



Type 1 Sign
Graphic, including Directional arrows and location (on the front and/or back of sign) to be nominated by Council.

Typical Type 1 Sign Graphic.
Not to Scale

Carpark Sign

DESIGN PHILOSOPHY

The Carpark Signs belong to a range of new signs, both parking and town and boundary signs designed for the City of Shepparton.

The Carpark Signs are designed to highlight off-street carparking areas. The sign names the carpark, provides information on the number of parks available and the parking duration. A colour coded system has been developed to identify key parking duration areas;

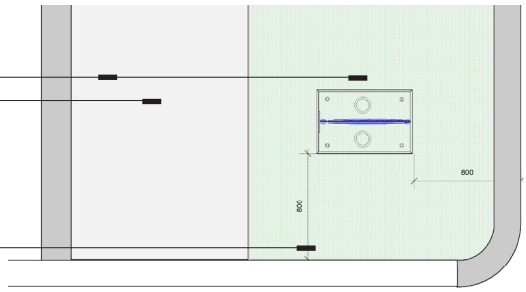
- red - 2 hours
- orange - 3 hours
- green - 5 hours
- blue - all day.

These signs are designed to work with the Parking Introduction Signs and the Directional Parking Signs. Refer to the Urban Design Manual Notes F 710 and F 720.

The metallic finish of the signs are designed to compliment the new furniture and existing furniture of the City.

The Directional Parking Signs are located in the City of Shepparton 's Central Business Area.

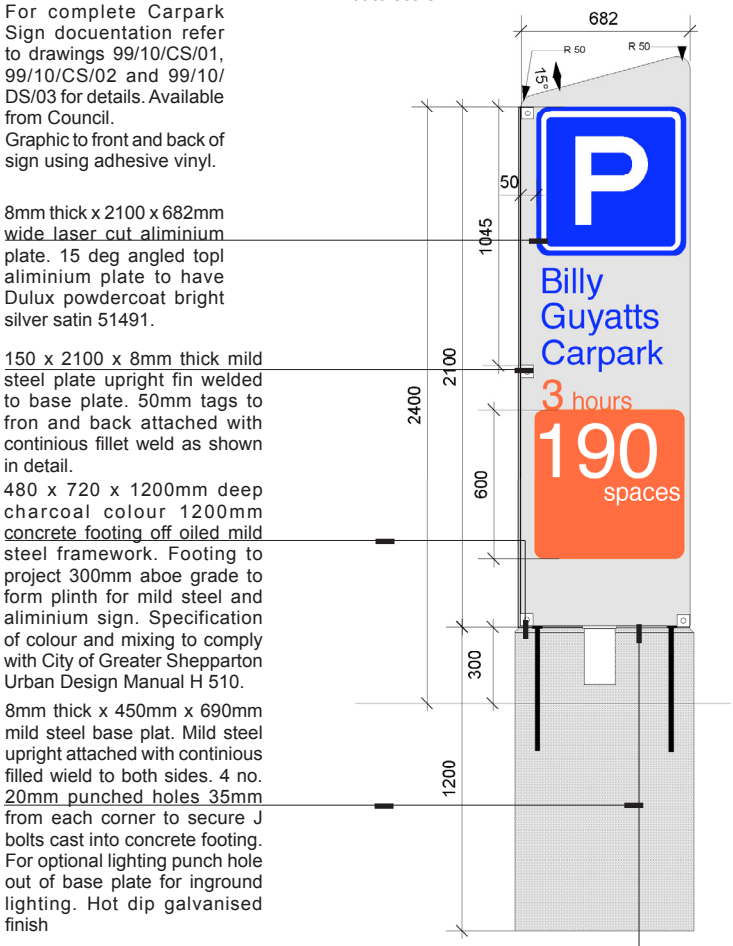
Note: Each carparking sign to be located by council and sited according to existing requirements.



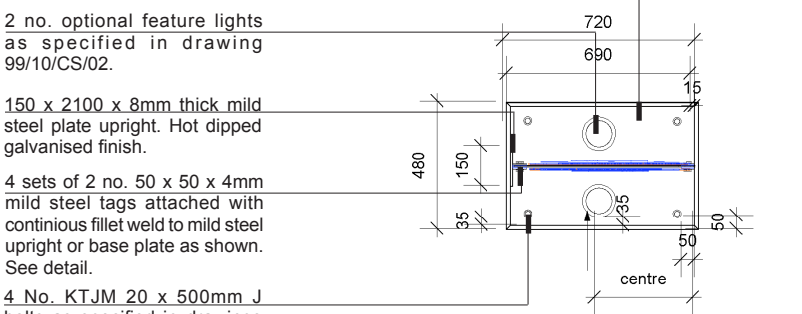
Typical layout of Carpark sign

Not to scale

For complete Carpark Sign docuentation refer to drawings 99/10/CS/01, 99/10/CS/02 and 99/10/DS/03 for details. Available from Council.
Graphic to front and back of sign using adhesive vinyl.



Carpark Sign



Typical Carpark

SUPPLIER

Council Approved Manufacturer, such as:
The Furphy Foundry
ph. 03 5831 2777
fax. 03 5831 2681
or similar approved.

RECOMMENDED USE

In Shepparton's city centre carparks. Locations to be approved by council.

MATERIALS

Materials to conform with drawing 99/10/CS/01, 99/10/CS/02 and 99/10/CS/03 available from Council.
8mm thick Aluminium Sign.
8mm Mild Steel upright fin and base plate.
Charcoal Coloured Concrete base. Charcoal colour to conform with Urban Design Manual Notes H 510 Standard Paving and Kerb Specification.

FINISH

Materials to conform with drawing 99/10/DS/01 and 99/10/DS/02 available from Council.
Powdercoat Dulux Bright Silver Satin 51491 Aluminium Sign finish.
Hot-dip Galvanised Mild Steel upright fin and base plate.
Concrete base off-form oiled mild steel formwork.
Sign Writers Adhesive Vinyl with 7 year life and UV protection:
such as Oracal Series 751 Premium from Artmart ph. 9236 1111, or similar approved. Colours to be:

- 2 hours - 027 Tomato Red
- 3 hours - 035 Pastel Orange
- 5 hours - 064 Yellow Green
- All Day - 065 Cobalt Blue

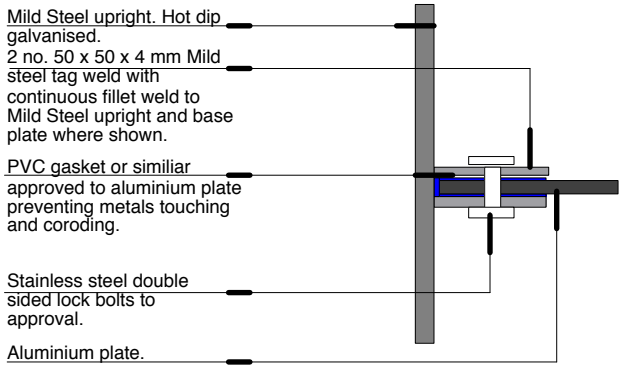
Parking Symbol Design and Materials to conform with AS 1743 G7-6-1A. Colours nominated in AS 1906.1 (Clause 8.2) and AS 1743 - 1992 Appendix C3.

MAINTENANCE

Regular cleaning and maintenance as required.

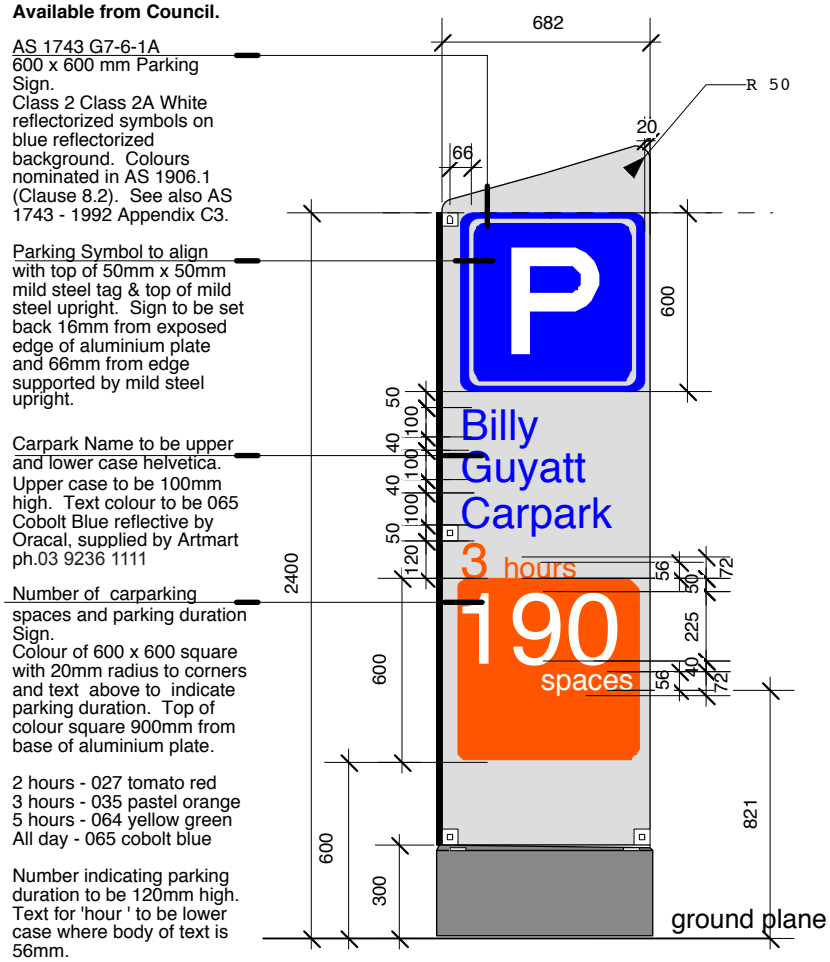
RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700



Detail of Fixing, Not to Scale

For complete Carpark Sign documentation refer to Drawings 99/10/CS/01, 99/10/CS/02 and 99/10/DS/03 for details. Available from Council.



Carpark Sign Graphic Layout
Not to Scale

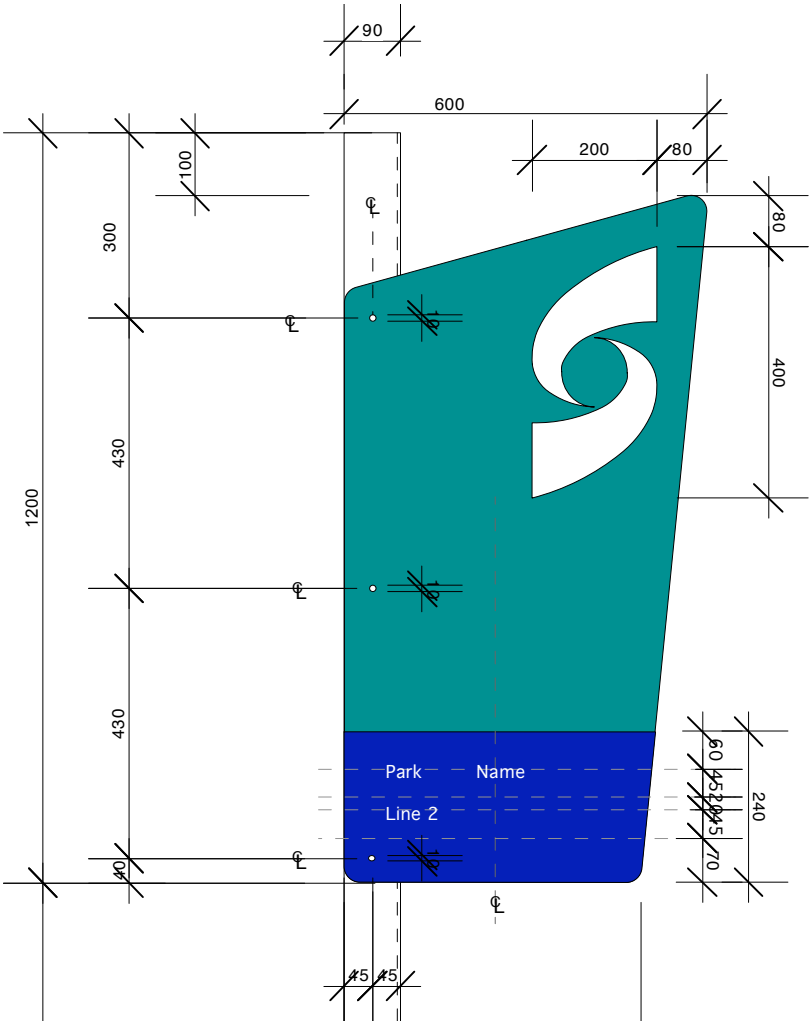
Park

DESIGN PHILOSPHY

The Park Sign belongs to the Greater Shepparton's family of signage suite.

This sign is designed to be used for park identification of small neighborhood through to regional parks within Greater Shepparton.

This custom designed sign features an angled top blade sign panel to complement the Shepparton's signage suite. It offers an affordable solution to park signage



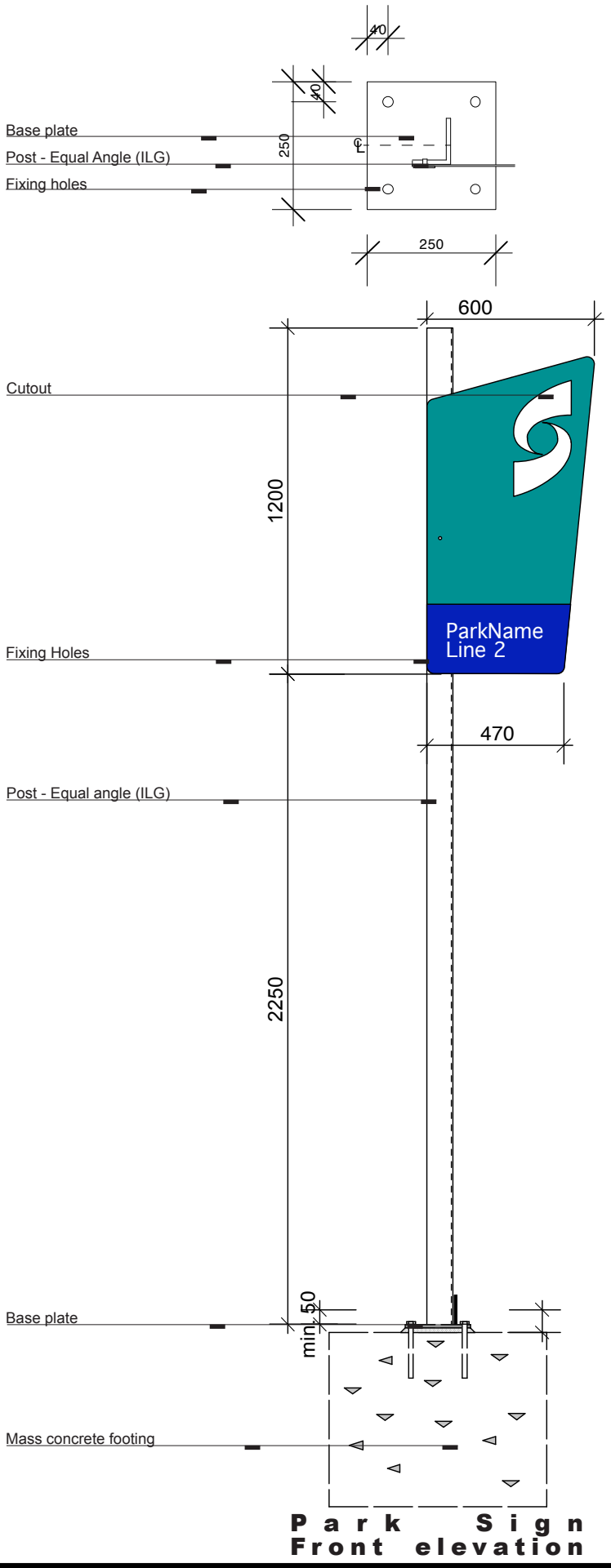
SUPPLIER
Park sign to be built in accordance with drawings by Urban Initiatives. Available from Council Approved Manufacturer, such as:
Michel Signs
ph. 03 5831 2635
fax. 5831 7756

RECOMMENDED USE
Neighborhood and regional parks.

MATERIALS & FINISH
Sign Panel
3mm mild steel. Powdercoat finish Dulux Deep Pool 78902 and Space Blue 19990.
Sign Post
90x90x8mm thick Equal Angle. Provide 250x250x12mm thick plate fillet welded to bottom of post.
Adhesive Lettering
Apply adhesive vinyl park name text to front of sign panel. Dulux matt white 150-30, 3470. Font: Geneva, size: Title case 45mm high.
Footing
25mpa insitu concrete. Approximate 750x750x500mm deep. Top 150mm of footing to be exposed above ground level. Neatly finish surface of all exposed concrete and colour charcoal.

MAINTENANCE
General maintenance and leaning of sign.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Park Sign
Front elevation

Service Club

Sample installation - Merrigum Township

DESIGN PHILOSOPHY

This service club sign has been custom designed for use within Greater Shepparton. The sign complements the Greater Shepparton's family of signage suite and is simple and clean in design.

The service club sign is designed to be tailored to each of the municipal townships and can comfortably accomodate several service club logos.

The service club sign is intended to be located at township boundaries or town edge parks, and should provide a safe environment for vehicles to pull over and walk up to the sign. The signs should be set within a gravel surround or garden bed area where possible for easy maintenance, and should assume viewing distance of approximately metre.

SUPPLIER

Service Club Sign to be built in accordance with drawings by Urban Initiatives. Available from Council Approve Manufacturer, such as:
Michel Signs
ph. 03 5831 2635, fax. 03 5831 7756

RECOMMENDED USE

Greater Shepparton township boundaries

MATERIALS & FINISH

Sign Panel - Laser cut 6mm marine grade aluminium. All exposed edges to be pencil rounded or filed to remove sharp corners. 2 Pac paint finish Dulux Deep Pool 78902. Laser cut “Club Information” as shown.

Sign Post - 75x75x4mm thick SHS. Provide 280x280x16mm thick plate fillet welded to bottom of post, 75x75x6mm thick cap on top. 2 Pac paint finish Dulux Notre Dame 36672 Ensure signs true and vertical.

Facia Panel - 210x2200x6mm thick marine grade aluminium. 2 Pac epoxy paint finish “Silver”. Provide washer separation and fix panel to post using 4 no. tap M10 vandal proof screws with “lock type” glue to post at equal cts with 50mm clearance from top and base of sign and 25mm from edge. Laser cut Shepparton logo.

Adhesive Lettering - Apply adhesive vinyl town name text to front of facia panel. Avery 943 Petrol. Font: Tahoma, size: Upper case 90mm high.

Footing - 25mpa insitu concrete. Approximate 800x800x800mm deep. Top 150mm of footing to be exposed above ground level. Neatly finish surface of all exposed concrete and colour charcoal.

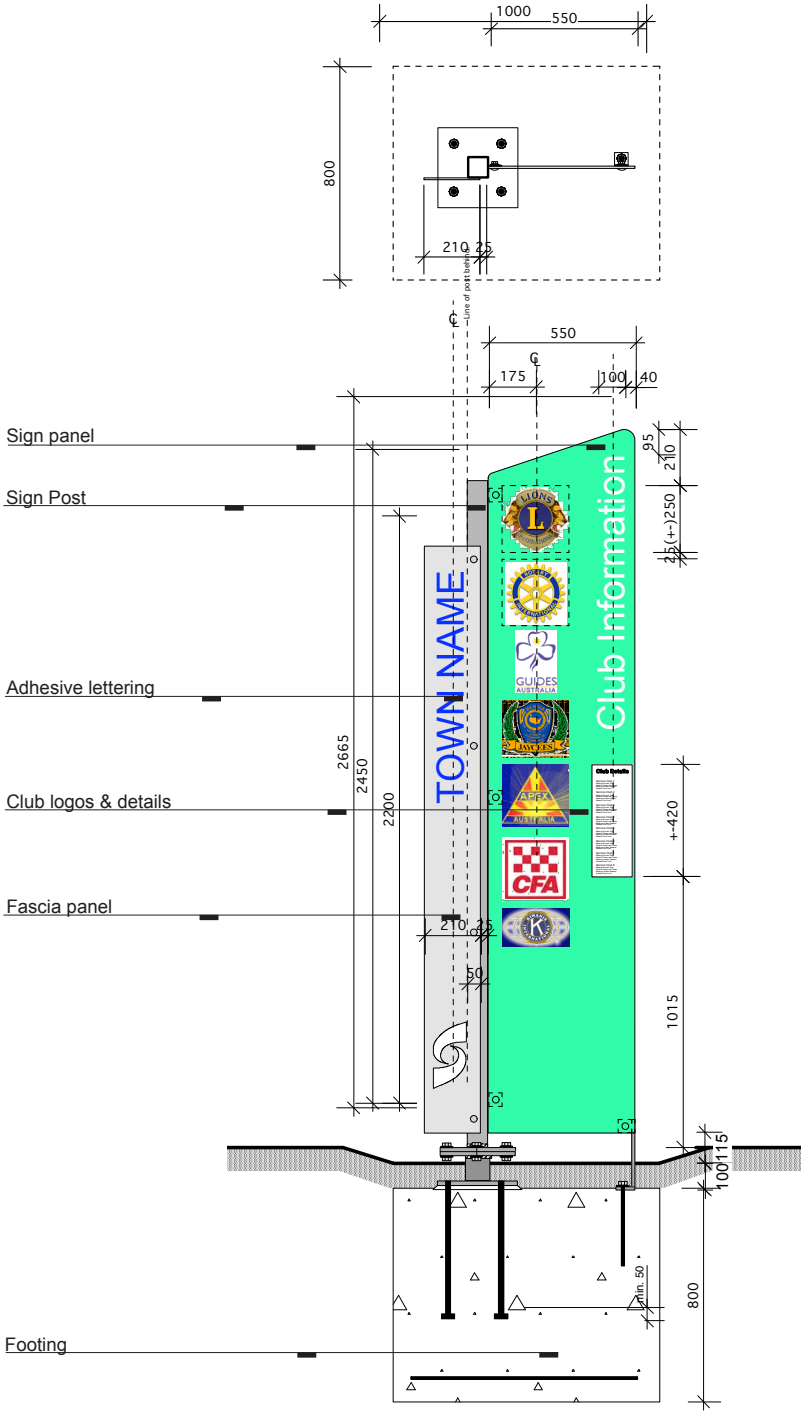
Club Logos & Details - Printed on adhesive vinyl

MAINTENANCE

Regular maintenance and cleaning required.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700



Service Club Sign - Front Elevation
Not to scale

Banner Pole

DESIGN PHILOSOPHY

The banner pole selected for use within Greater Shepparton, has been sucessfully installed already within the City of Shepparton.

Banner poles are designed to allow promotion of coming events or seasonal festivities. The banner provides a changeable signage opportunity.

Banner poles are designed to be read in groups and used in limited locations where event promotion or a gateway statement is required.

Installation must comply with Vic Roads and other authoritive body regulations.

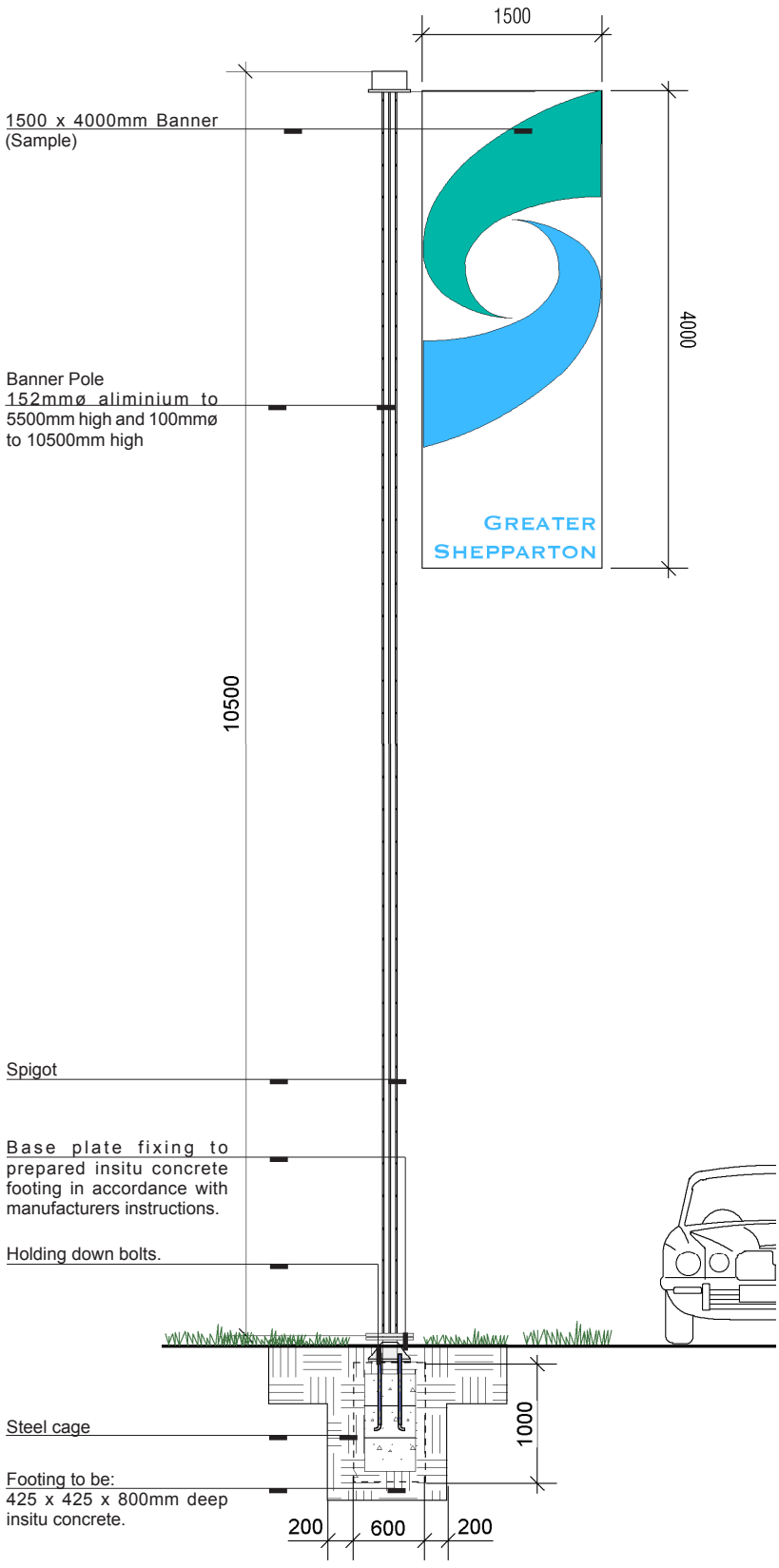
SUPPLIER
Vicpole
Ph 03 9738 0808

DESIGN CONTACT
Vicpole
Ph 03 9738 0808

RECOMMENDED USE
Feature locations - to specific designs.

MATERIALS
152mmø aliminium to 5500mm high and 100mmø to 10500mm high

Responsible Council Officer
Manager – Engineering Projects



Banner Pole - Front Elevation

F 800 Shelters

Shelters

The range of shelters recommended for Greater Shepparton City Council includes bus, taxi and picnic shelters.

- Bus & Taxi Shelter
- Aluminium bus timetable frame.
- Bus shelter
- Picnic Shelter

F 800 Shelters

Bus & Taxi Shelters - CBD use

DESIGN PHILOSOPHY

The Bus and Taxi Shelter is designed specifically for the Shepparton City. It draws on the theme of metallic furniture with blue colour trim of the Greater Shepparton furniture range. The signage on the end elevation metallic fins uses the Greater Shepparton logo and identifies the shelter as a taxi rank or bus shelter.

The shelter has a laminated glass surround that is housed in a metallic coloured frame, providing shelter whilst maintaining visibility of oncoming buses or taxis. A double shelter can provided for major Bus Stops.

This double Bus shelter has a blue seat matching the blue trim of the roof whilst the standard Single Shelter for Taxi's and Bus's has the standard Bright Silver Satin coloured seat. The shelter roof extends over the frame providing maximum shade from summer sun for pedestrians. A light weight aluminium frame is designed to be attached to the glass walls to provide bus information from both sides of the shelter.

Profile of Front Nose of fin to match front bull-nosed fascia.

Front Elevation bull nosed fascia to be Powdercoated DULUX Blaze Blue Gloss 19941

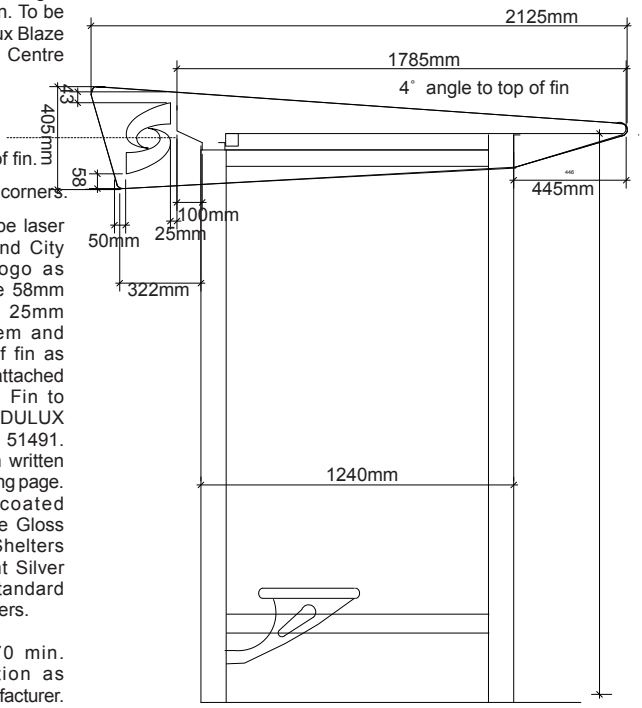
Zinc plated gutter system to be 100mm in length from rear of column. To be powdercoated Dulux Blaze Blue gloss 19941. Centre line of logo.

-74˚ angle to rear of fin.

25mm radius to all corners.

Side Fasci Fin to be laser cut with profile and City of Shepparton logo as shown. Logo to be 58mm from base of fin, 25mm from gutter system and 48mm from top of fin as shown. Fin to be attached to roof structure. Fin to be powdercoated DULUX Bright Silver Satin 51491. Graphic to be sign written as shown on following page. Seat to powdercoated DULUX Blaze Blue Gloss for Double Bus Shelters and DULUX Bright Silver Satin 5149 for Standard Bus and Tazi Shelters.

RHS Frame 2270 min. height. Fabrication as nominated by manufacturer. Frame to be powdercoated DULUX Bright Silver Satin 51491.



SUPPLIER

Bus & Taxi Shelter

Polite Enterprises Pty Ltd.
ph. 03 9436 9922
fax. 03 9436 9944

Aluminium Frame for Bus Information

20mm Snap & Grip Foolscap size Clear anodised aluminium frame. See Urban Design Manual F 820.

DESIGN CONTACT

Urban Initiatives
ph. 03 9329 6844

SHELTER FINISHES

Side Fins

8mm thick Laser Cut ends.
Powdercoat DULUX Bright Silver Stain 51491.
Graphic Sigh to be written using:
Green Colour - DULUX Thai Teal 53 GG 50/360.
Gloss to match powdercoat colours.
Blue Colour - DULUX Blaze Blue Gloss 19941.
Blue Text - DULUX Space Blue Gloss 19990.

Front Bull Nosed Fascia & Rear Gutter

Blue Colour - DULUX Blaze Blue Gloss 19941.

Bus Shelter Frame

Powdercoat DULUX Bright Silver Stain 51491.

Seat for Double Bus Shelter

Blue Colour - DULUX Blaze Blue Gloss 19941.

Seat for Standard Bus & Taxi Shelter

Silver Colour - DULUX Bright Silver Stain 51491.

RECOMMENDED USE

In Shepparton City Centre.

MAINTENANCE

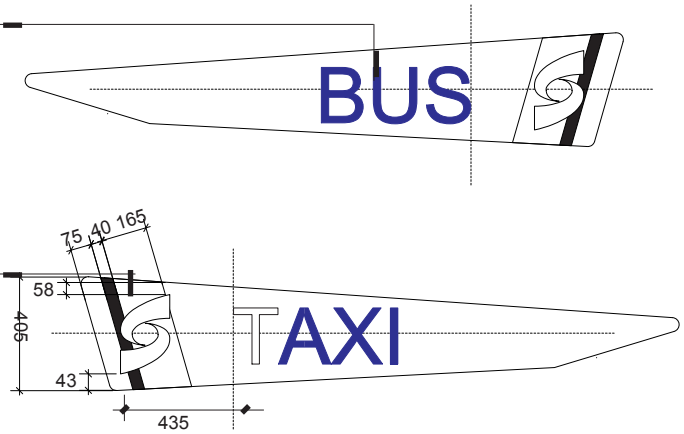
Cleaning and maintenance as required.

DOCUMENTATION

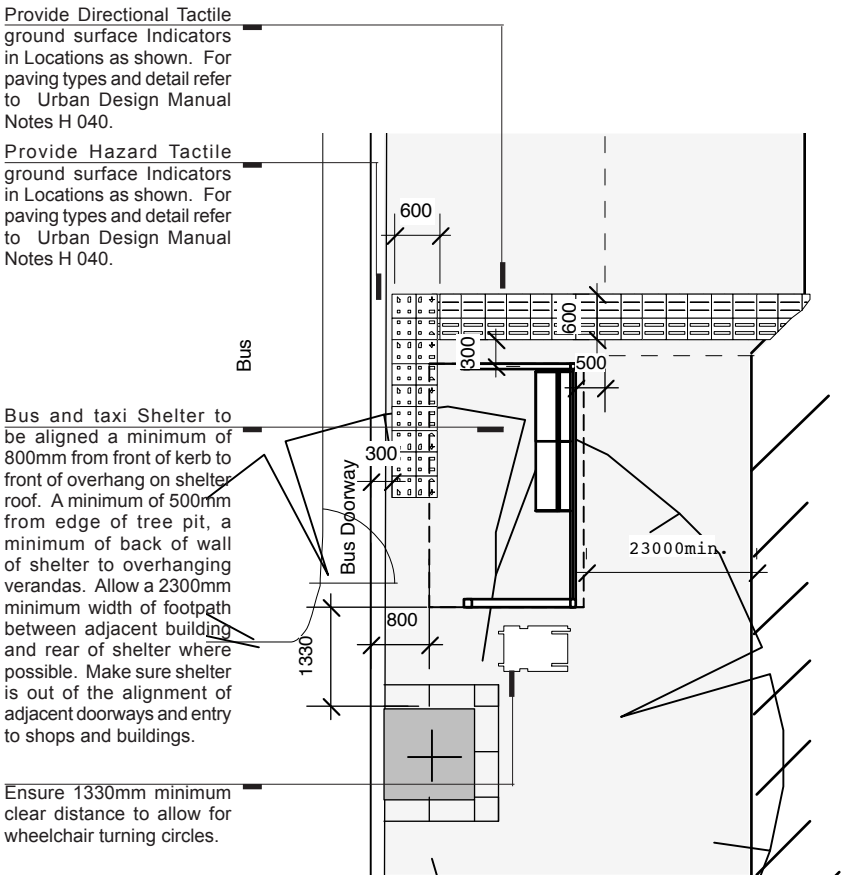
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700



Graphic to Shelter Fins Not to Scale



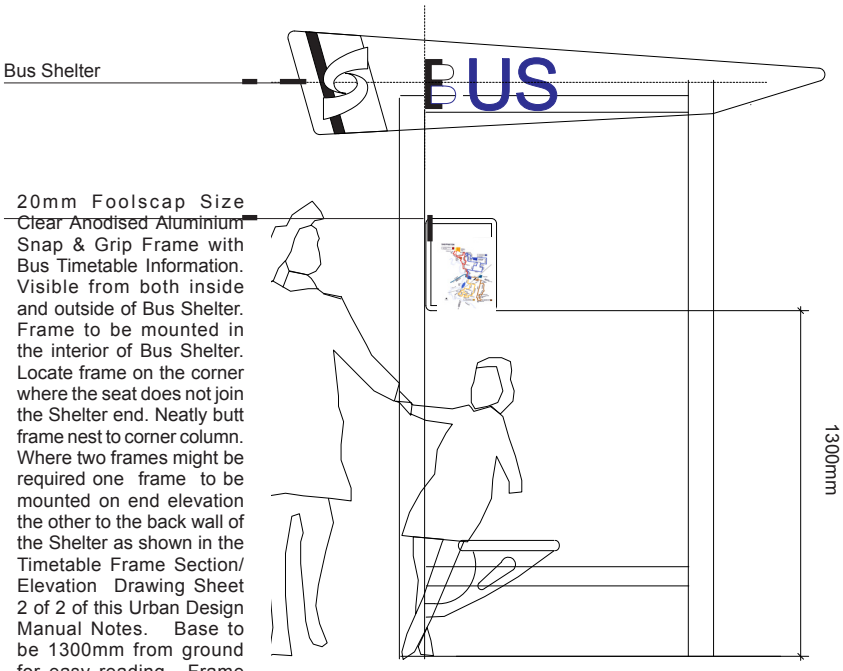
Typical Layout Plan Not to Scale

Aluminium Frame for Bus Timetable

DESIGN PHILOSOPHY

The 20mm snap and grip clear anodised aluminium frame used to house bus timetable information has been selected for its ability to be mounted on a glass wall so that bus timetable information can be seen from both the interior and exterior of the shelter. Its form is unobtrusive and its finish has been selected to compliment the bus shelter metallic finish.

The snap and grip unit provides a frame that is fixed in appearance but its sides and tops flip out allowing timetable information to be easily placed by Shepparton Transit. When Council orders bus shelters two frames per shelter should also be ordered and installed when bus shelters are placed in Shepparton City Centre.



20mm Foolscap Size Clear Anodised Aluminium Snap & Grip Frame with Bus Timetable Information. Visible from both inside and outside of Bus Shelter. Frame to be mounted in the interior of Bus Shelter. Locate frame on the corner where the seat does not join the Shelter end. Neatly butt frame nest to corner column. Where two frames might be required one frame to be mounted on end elevation the other to the back wall of the Shelter as shown in the Timetable Frame Section/ Elevation Drawing Sheet 2 of 2 of this Urban Design Manual Notes. Base to be 1300mm from ground for easy reading. Frame supplied an mounted by Polite Enterprises ph. 9436 9922

End Elevation Not to Scale

SUPPLIER
Polite Enterprises Pty Ltd.
ph. 03 9436 9922

DESIGN CONTACT
Polite Enterprises Pty Ltd.
ph. 03 9436 9922

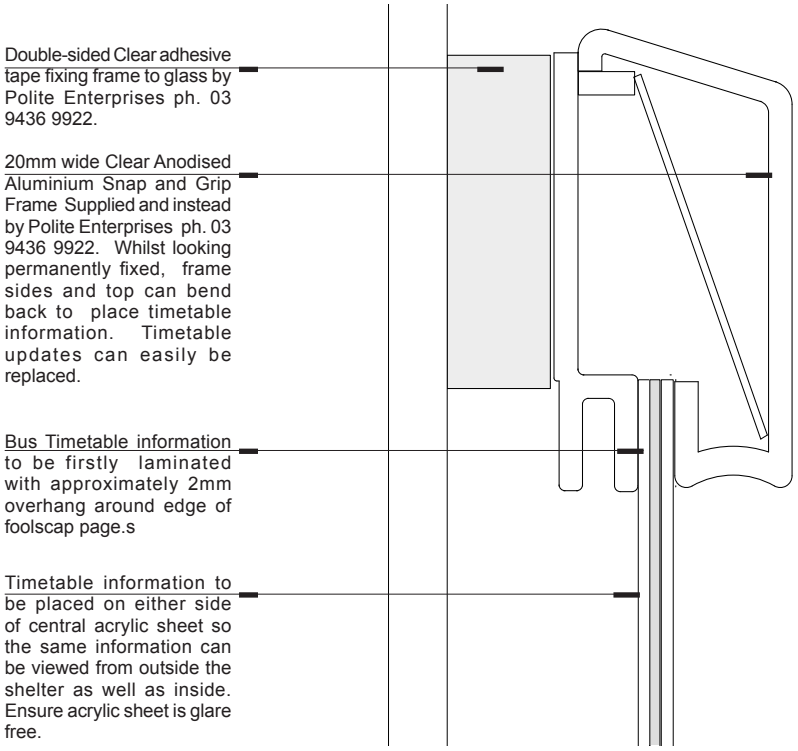
MATERIALS & FINISHES
20mm Snap & Grip Foolscap size Clear anodised aluminium frame. Frame to be mounted to glass as shown in drawing by supplier. Clear acrylic sheet to be glare free.

RECOMMENDED USE
In Shepparton City Centre Bus Shelters.

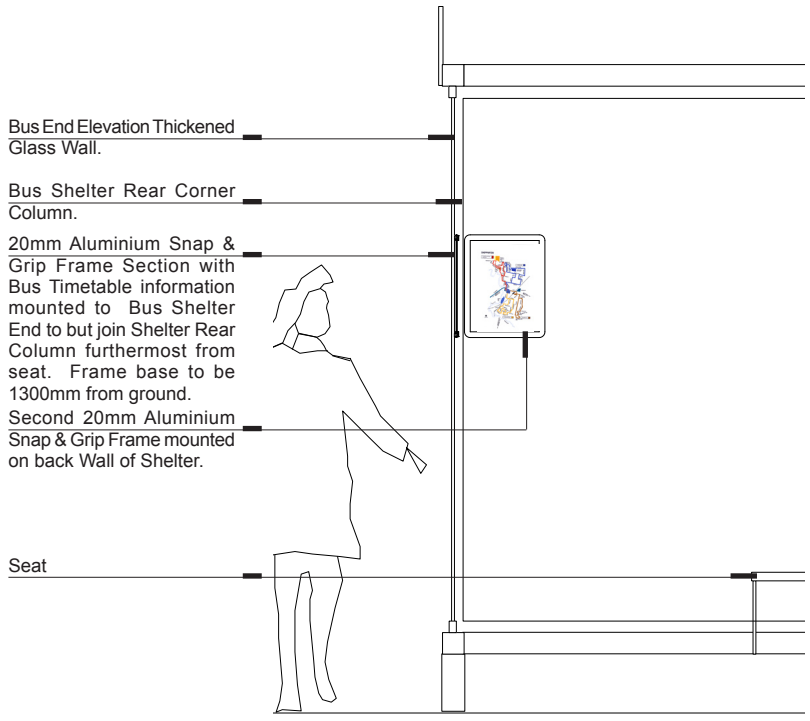
MAINTENANCE
Cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Bus Timetable Information and Frame Detail
Not to Scale



Timetable Frame Section/
Not to Scale

Bus Shelter - Municipal use

DESIGN PHILOSOPHY

The bus shelter is designed for town bus routes throughout Shepparton, Mooroopna and Kialla.

This shelter provides a simple, robust and cost effective bus shelter solution for bus routes within the Greater Shepparton area and outside of Shepparton's CBD.

SUPPLIER
Bus shelter to be built in accordance with drawings by Greater Shepparton City Council. Available from Council Approved Manufacturer such as,
Nathan Delmenico
ph. 0407 397 929

DESIGN CONTACT
Greater Shepparton City Council
ph. 03 5832 9700

MATERIALS
Main Purlin:
88.9ø x 3.2mm CHS
Curved Rafter:
88.9ø x 3.2mm CHS
Brace:
88.9ø x 3.2mm CHS
Intermediate Purlin:
43.8ø x 3.2mm CHS
Columns:
114.3ø x 4.5 CHS
Footings:
600ø x 1000 Deep mass concrete footing
Concrete pad: 4000 x 4000 x 100 Deep concrete pad

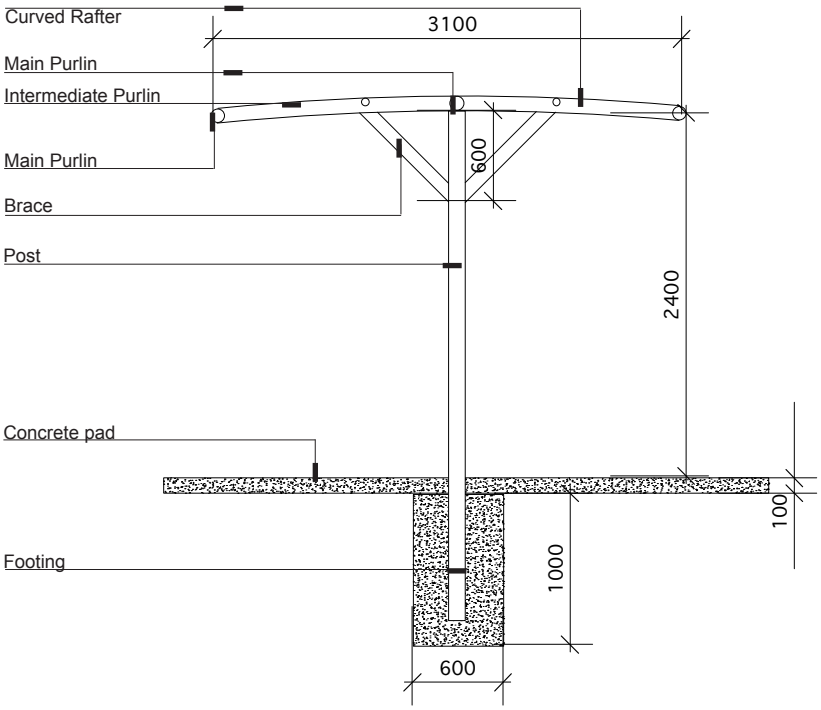
RECOMMENDED USE
Urban bus stops.

FINISH
Galvanised

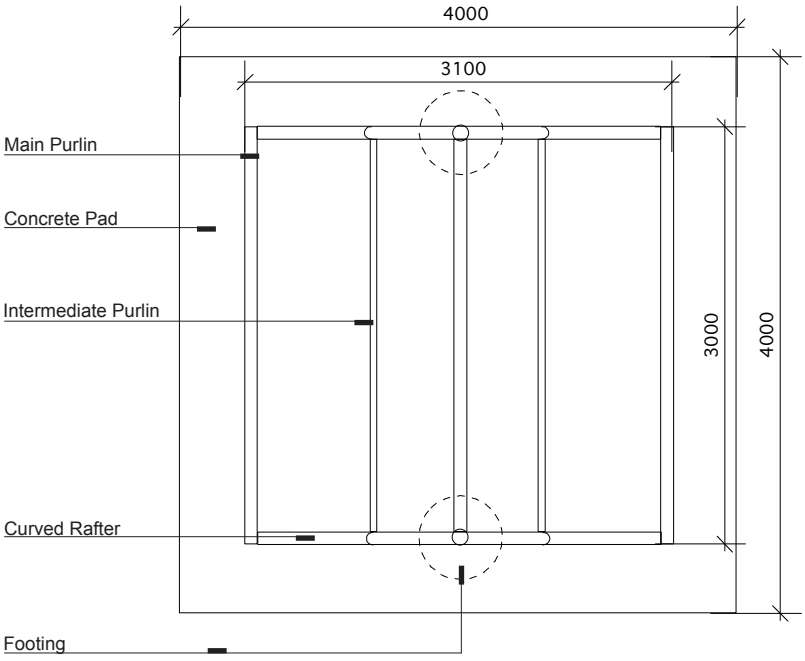
MAINTENANCE
Maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Bus Shelter Side Elevation



Bus Shelter Top View
Not to scale

Picnic Shelter

DESIGN PHILOSOPHY

The picnic shelter is designed as a flexible modular unit arrangement. It can be adapted to suit various size and site condition requirements. The shelter has a contemporary design style with a durable steel structure, it complements Greater Shepparton's selected furniture suite and is suitable for a wide range of park and open space installations.

Installation can be inclusive of lighting, electrical connection points, potable water supply, BBQ facilities, picnic tables and or seating. The shelter module can be installed as a singular, double or triple unit, and the modules can be arranged parallel or on a radius if preferred. The roof also has the flexibility of being installed as a continuous span or with separation per each module with stainless steel planting wires between.

Planting wires are a unique feature of this shelter design, they are installed off stylish steel fins at the top of the structure and are intended to provide additional shade, to enhance the aesthetics and improve the user experience.

Furniture layout beneath the shelter is flexible and can include standard furniture items such as BBQ, picnic tables, bench type seating or custom alternatives.

SUPPLIER

Picnic Shelter to be built in accordance with drawings by Urban Initiatives. Available from Council Approve Manufacturer, such as,
Nathan Delmenico
ph. 03 5831 2635
fax. 03 5831 7756

DESIGN CONTACT

Urban Initiatives
ph. 03 9329 6844

RECOMMENDED USE

Parks and open space areas within the Greater Shepparton area.

LAYOUT OPTIONS

The shelter module can be installed as a single, double or triple module unit.

MATERIALS & FINISH

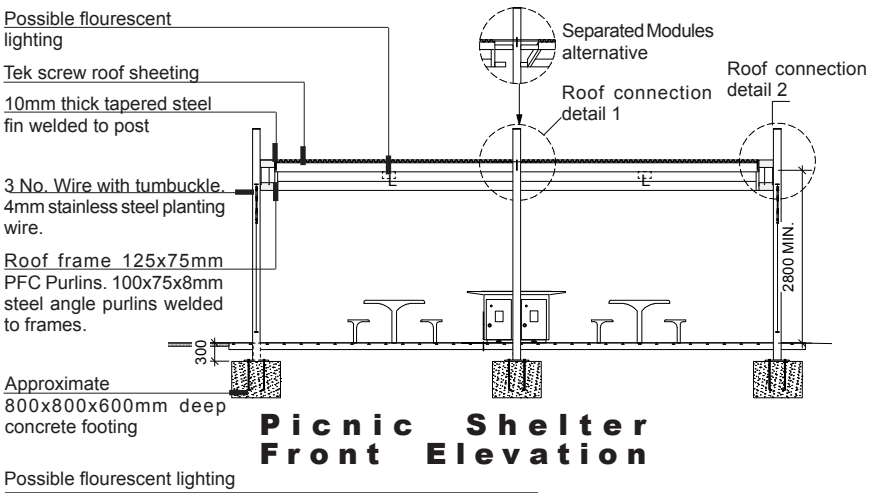
Post
125x125x6mm thick SHS with steel plates for climbing wires welded to face.
Roof Frame
125x75mm PFC Purlins
100x75x8mm steel angle purlins welded to frames.
Planting Wire
4mm stainless steel planting wire.
Fin
10mm thick tapered steel fin welded to post.
Roof Sheeting
0.48mm thick steel sheeting, grey colourbond.
Turnbuckles
Stainless teel, 1 per line.
Footing
Approximate 800x800x600mm deep concrete footing.
BBQ Tap
Enware Cam Action Tap (or similar approved). Attach tap and pipe to BBQ with anti vandal fitting. Ensure connection is made by qualified plumber and that fittings suit site water pressure.

MAINTENANCE

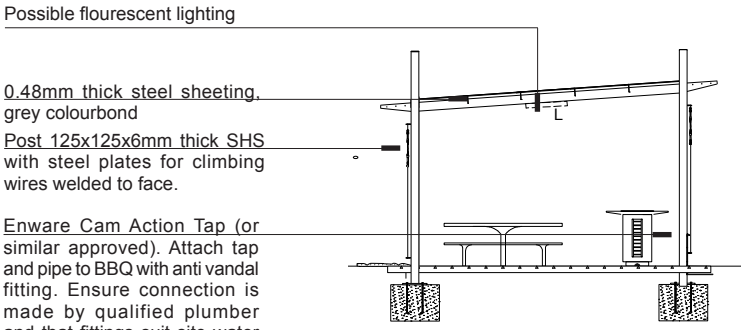
Maintenance as required.

RESPONSIBLE COUNCIL OFFICER

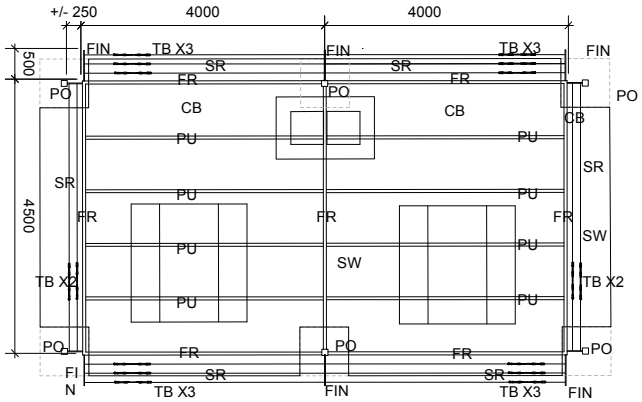
Manager - Engineering Projects
ph. 03 5832 9700



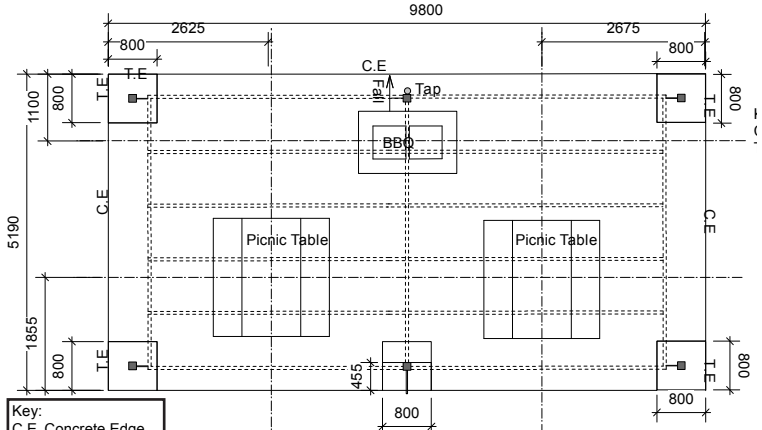
Picnic Shelter Front Elevation



Picnic Shelter Side Elevation



Picnic Shelter Roof Frame Plan



Picnic Shelter Setout Plan

Not to scale

RECOMMENDED PLANTING SPECIES

The following species are suitable planting options for planting in the garden bed at each shelter posts. Note the shelter posts are to be set down to a minimum of 300mm from the proposed ground level to allow for planting on top of the footing, and irrigation is recommended if available.

If no irrigation is possible planting two plants per post is recommended.

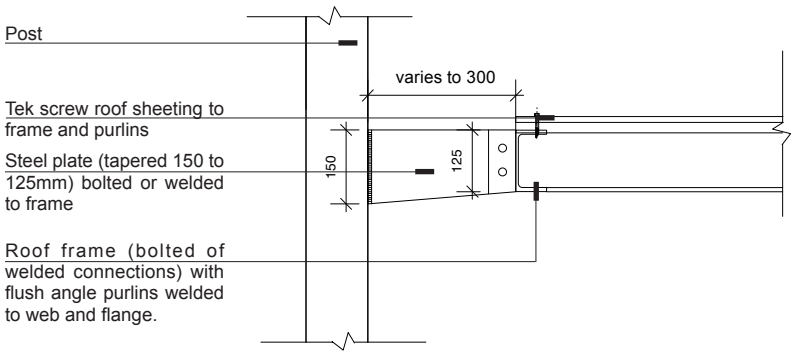
Ampelos quinquefolia
(Virginia Creeper)

Hibbertia scandans
(Snake Vine)

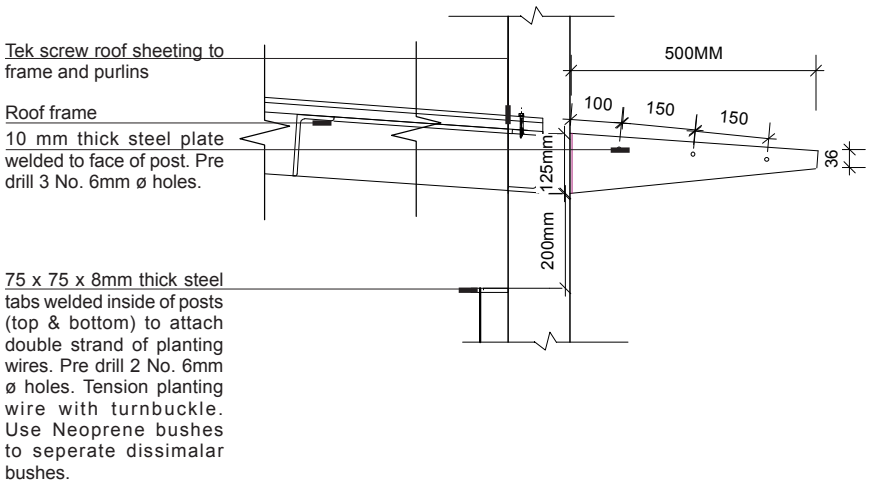
Pandorea pandorana
(Wonga Vine)

Trachelospermum jasminoides
(Chinese Star Jasmine)

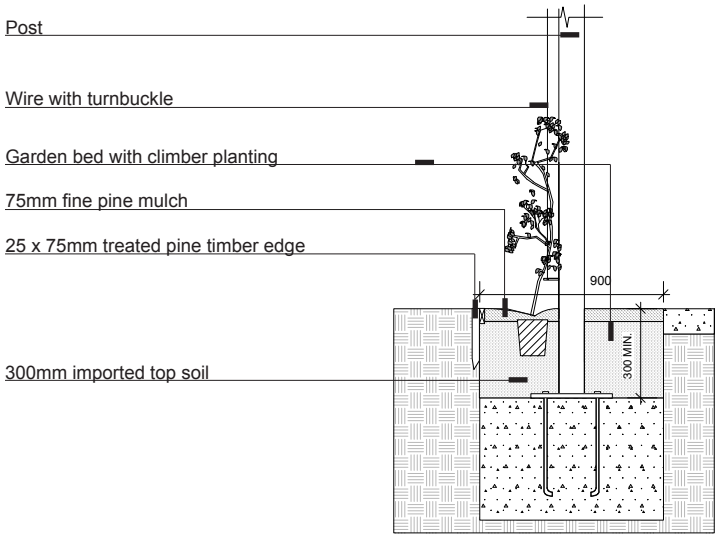
Bougainvillea glabra -
(Bougainvillea)



ROOF CONNECTION DETAIL 1



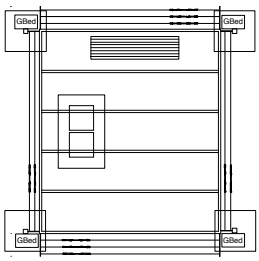
ROOF CONNECTION DETAIL 2



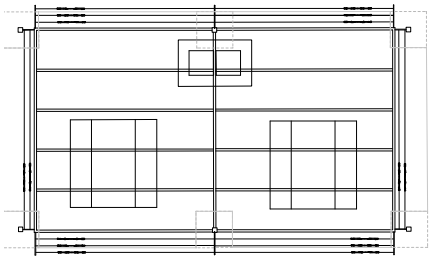
SHELTER POST CLIMBER PLANTING

Picnic Shelter Modules

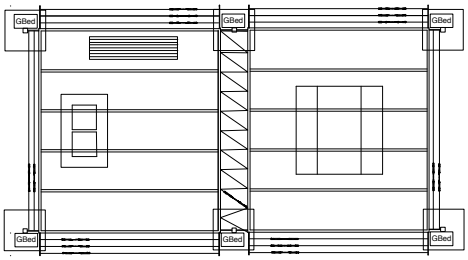
S I N G L E



DOUBLE MODULE

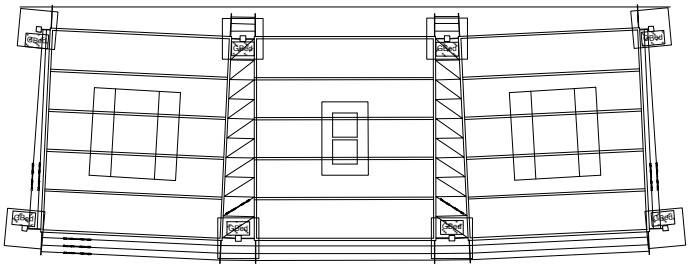


Joined

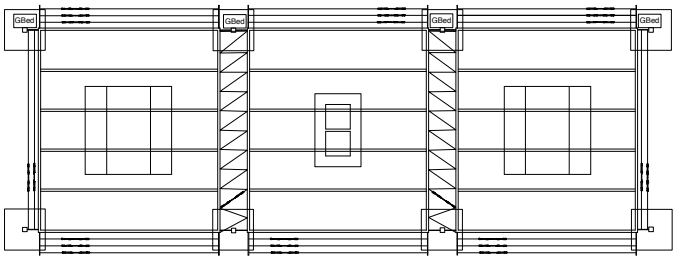


Separated

TRIPLE MODULE



Curved



Straight

Outdoor Cafes

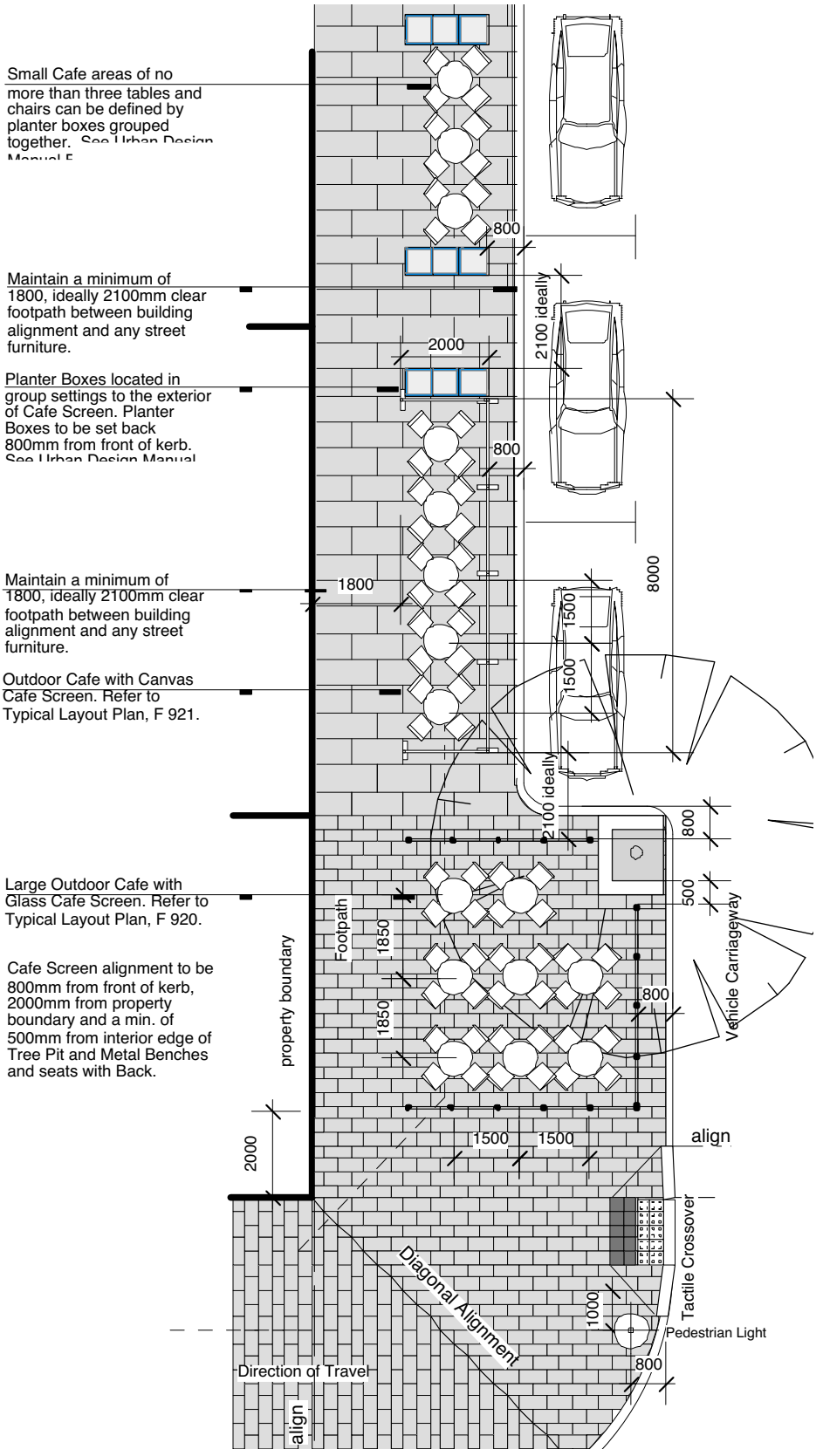
This section provides information on standard outdoor cafe layouts for the Greater Shepparton City central area and outdoor furniture for these cafes, including cafe screens, outdoor cafe chairs and tables and outdoor umbrellas.

F 900 Outdoor Cafes

Outdoor Cafe Layouts

DESIGN PHILOSOPHY

The range of outdoor cafe furniture is designed to compliment the cafe screen for approved cafe and restaurant outdoor cafe settings. These approved outdoor cafe settings are to comply with Council's bi-laws, planning and streetscape policies. The selected range of outdoor cafe furniture for Greater Shepparton continues the metallic finish of the new range of streetscape furniture. Any use of plastic is to be as a trim only and should be the colour blue. Advertising of products, such as soft drinks or of the cafe itself on these furniture items is seen as inappropriate and is to be restricted to the recommended scale of the cafe screen only. Use of sandwich boards are to be eliminated with outdoor cafes. There are two options for aluminium tables; those which are semi-permanently fixed using a socket and gib key system, and free standing tables. Both have a clear powder coat finish. Cafe and restaurant owners can elect to have umbrellas to provide shade for their clientele. The selected chairs made of aluminium provide a light weight material that allows for easy stacking and storage.



Various Outdoor Cafe's Layout Plans
Not to scale

DESIGN CONTACT

Urban Initiatives
ph. 03 9329 6844
fax. 03 9329 6336

RECOMMENDED USE

In Greater Shepparton Central City Area.

MATERIALS & FINISH

See Urban Design Manual
Notes F 920, F 930, F 940, F 950.

MAINTENANCE

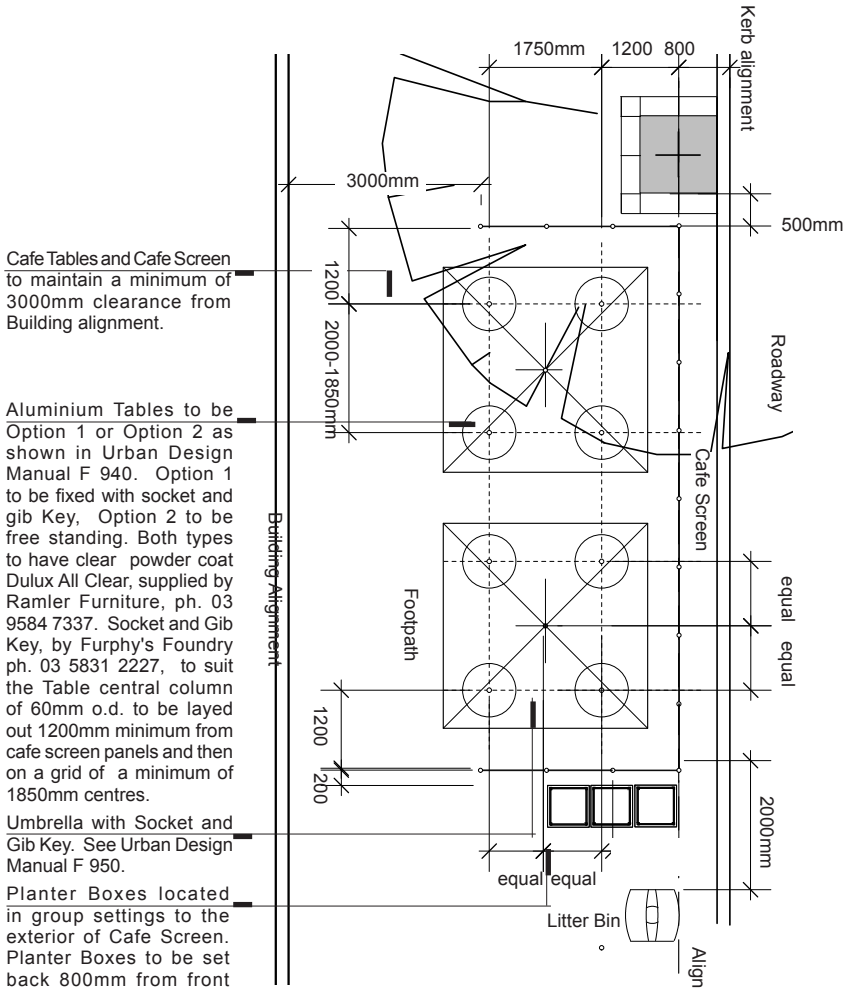
Daily cleaning and maintenance as required by cafe/restaurant owners.

DOCUMENTATION

Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700
Cross Reference with Council's Bi-Laws, Planning and Streetscape Policies.



Typical Outdoor Cafe Layout Plan
Not to Scale

Glass Cafe Screen

DESIGN PHILOSOPHY

The cafe screen selected for the Shepparton City Centre is a durable and contemporary screen that is consistent with the new furniture range.

It is simply and elegantly designed using anodised aluminium poles with glass panels. This screen is transparent and light in its design whilst providing protection and comfort for street side cafe seating. The cafe screens fit unobtrusively into the streescape character of Shepparton. The aluminium surface compliments the aluminium and galvanised finish of the new furniture. A simple line graphic using adhesive material or sand blasting onto surface of glass provides visibility of glass panels. An approved symbol or sign of proprietors' cafe or restaurant could be applied to the glass screen panel given that it occupied no more than 5% of glass screen surface area.

The new cafe screens are to be located in the Shepparton City Centre.

Cafe Screen to be supplied by Pizzey Engineering Pty Ltd. ph. 03 9899 0425. Screen to be Laminated Glass Panels and Aluminium Extruded Poles as shown in elevation and section.

Cafe Screen alignment to be 800mm from front of kerb and a minimum of 500mm from interior edge of Tree Pit and Metal Benches and Seats with Back.

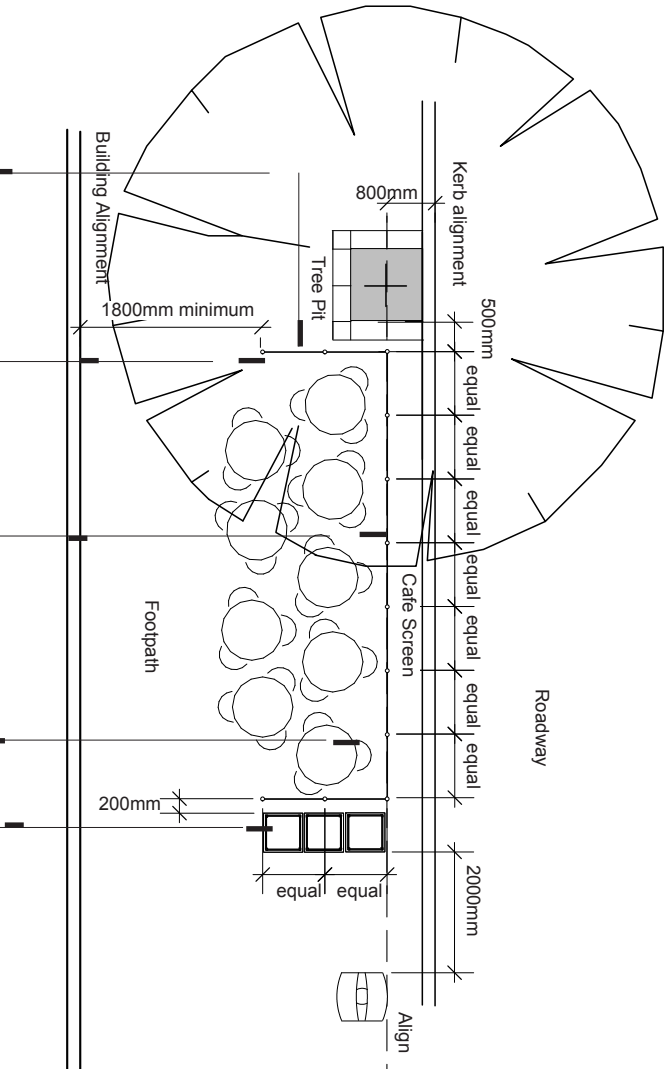
Cafe Screen to be a maximum of 8 No. panels in length adjacent to road edge and a maximum of 3 No. panels wide. Ensure that footpath width is maintained at a minimum of 1.8 metres.

Outdoor Cafe Furniture (See Urban Design Manual F 920 Outdoor Cafe Furniture).

Planter Boxes located in group settings to the exterior of Cafe Screen. Planter Boxes to be set back 800mm from front of kerb and 200mm from Cafe Screen Glass Panels.

Ensure that there is a 2.1m minimum break between adjacent cafes.

Outdoor cafe areas to be within property boundary.



Typical Layout Plan Not to Scale

SUPPLIER
Pizzey Engineering Pty. Ltd.
ph. 03 9899 0425
fax. 9899 6012

DESIGN CONTACT
Pizzey Engineering Pty. Ltd.
ph. 03 9899 0425

MATERIALS
Extruded Aluminium Poles.
Stainless Steel surround to base of pole. 10mm Thick Toughened Laminated Glass. Cafe/Restaurant Signage to be negotiated with Landscape Architect.

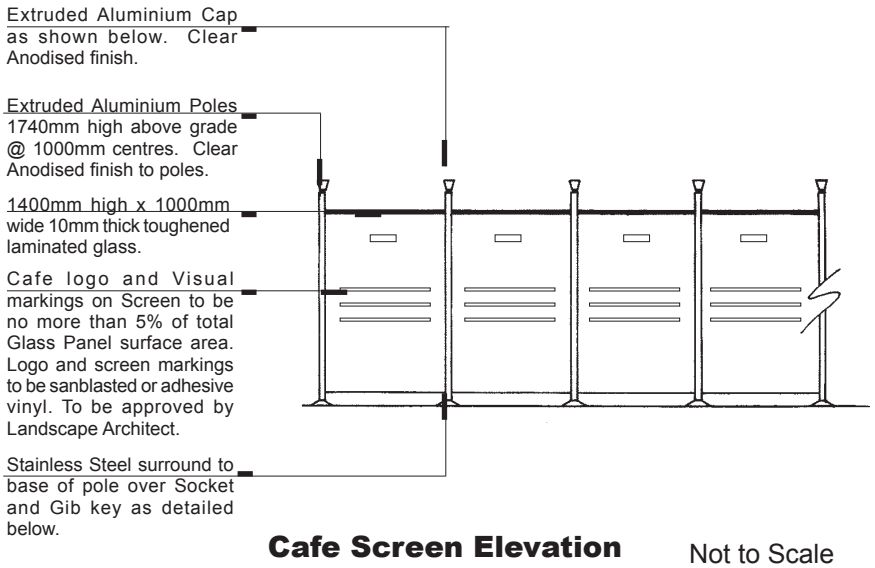
RECOMMENDED USE
In Greater Shepparton Central City Area.

FINISH
Anodised Aluminium Poles.
Stainless Steel.
Cafe/Restaurant Signage and Visual markings to screen to be Sandblasted or be applied with Adhesive Vinyl, to be approved by Landscape Architect.

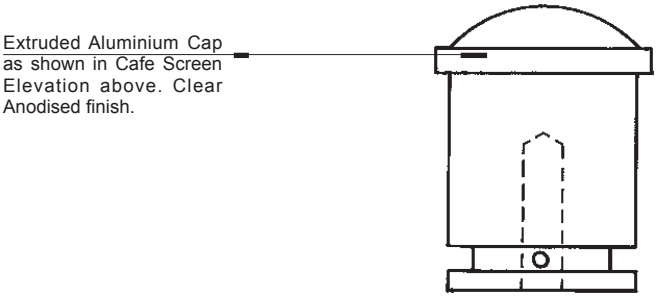
MAINTENANCE
Daily cleaning and maintenance as required by cafe/restaurant owners.

DOCUMENTATION
Cross reference with site layout drawings.

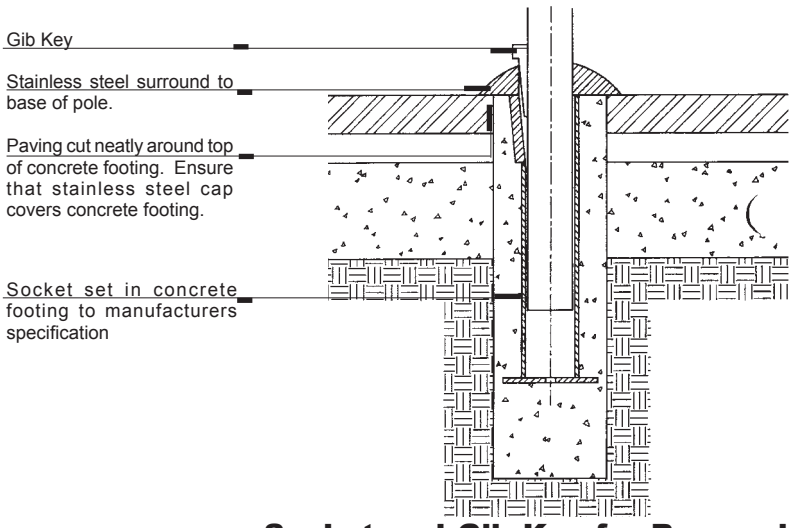
RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Cafe Screen Elevation Not to Scale



Cafe Screen Pole Cap Not to Scale



Socket and Gib Key for Removable Post Not to Scale

Canvas Cafe Screen

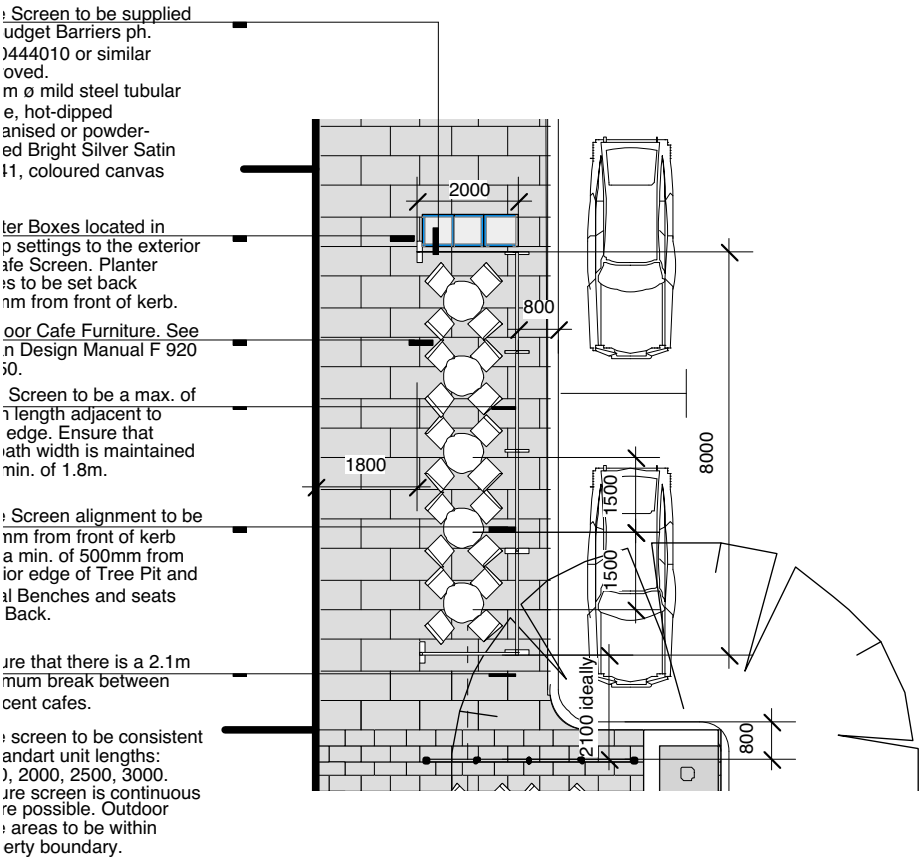
DESIGN PHILOSOPHY

This canvas cafe screen selected for the Shepparton City Centre is a durable and contemporary screen that is consistent with the new furniture range.

The screen has an hot-dipped galvanised or powdercoated bright silver satin finish to the structure and uses bright canvas colours for the screen infill. This will compliment the aluminium and galvanised finish of other City of Shepparton furniture. An approved symbol or sign of proprietors' cafe or restaurant could be applied to the canvas panel given that it occupied no more than 25% of canvas surface area.

There are two alternatives for the screen. One that has a base plate that sits above grade on the paved surface and another that can be plugged into a socket and gib key system allowing for a more permanent appearance. Both are easily removed for street cleaning and relocation.

The new cafe screens are to be located in the Shepparton City Centre.



Typical Layout Plan Not to scale

SUPPLIER
Budget Barriers
ph. 1800444010
fax. 97918363
or similar approved

DESIGN CONTACT
Chris Pierias
Managing Director
ph. 0417516181

MATERIALS & FINISH
Hot-dipped Galvanised or Dulux Powdercoated Dulux Bright Silver Satin 51941, Mild Steel Structure.

Canvas to be Fire Resistant such as:
Sunbrela Firesist, Glen Raven Mills, Inc. by Bradmill.
Colours to be Bright colours such as:
8610 Teal Blue
8601 Artic Blue
8642 Candy Apple Red
8604 Natural
8609 Orange
8602 Sunburst Yellow

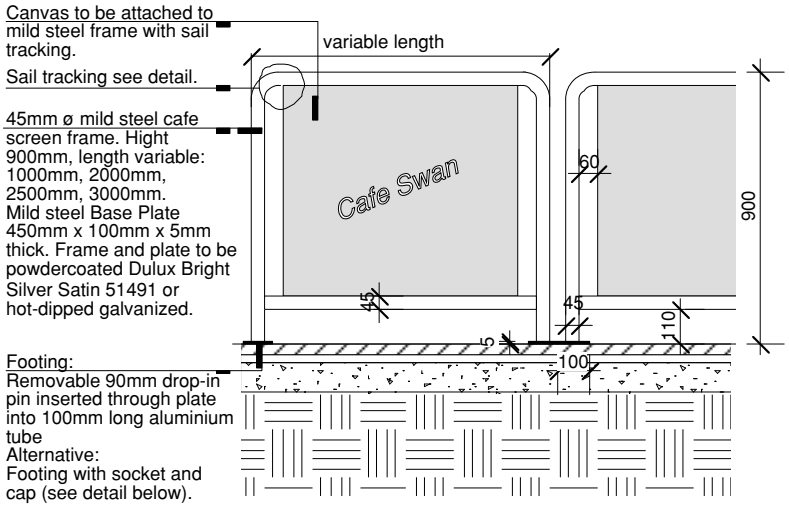
Advertising to be for cafe name only, occupying not more than 25% of the canvas' surface area. No brand names shall be advertised.

RECOMMENDED USE
In Greater Shepparton Central City Area.

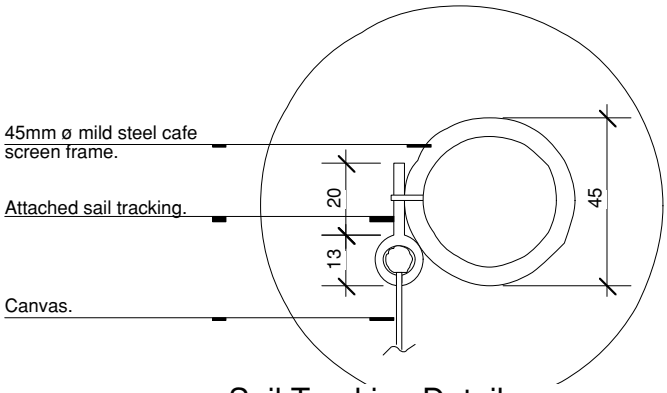
MAINTENANCE
Daily cleaning and maintenance as required by cafe/restaurant owners.

DOCUMENTATION
Cross reference with site layout drawings.

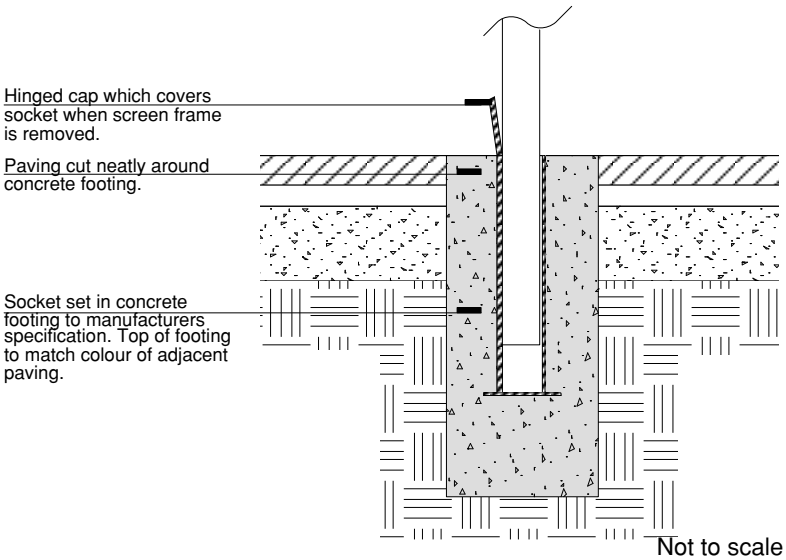
RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Cafe Screen Elevation — Not to scale



Sail Tracking Detail — Not to scale



Not to scale

Alternative footing for cafe screen

Outdoor Cafe Furniture -

SUPPLIER

Gossi Chairs
Bistro, Terrace or similar approved.
Ramler Furniture Pty. Ltd.
ph. 03 9584 7337
fax. 03 9583 2000
James Richardson Chairs:
Brenda, Gisella, Shushan, Sin Folder, Max Side, Max Arm, or similar approved.
James Richardson Corporation Pty Ltd.
ph. 03 9428 1621
fax. 03 9429 1428
Socket and Gib Key Unit:
Furphys Foundry
ph. 03 5831 2227
fax. 03 5831 2681

DESIGN CONTACT

Gossi Chairs:
Ramler Furniture Pty. Ltd.
ph. 03 9584 7337
James Richardson Chairs:
James Richardson Corporation Pty Ltd.
ph. 03 9428 1621
Socket and Gib Key:
Furphys Foundry
ph. 03 5831 2227
Fax. 03 5831 2681

MATERIALS & FINISH

Chairs:
Gossi Aluminium chairs to be Clear Anodised.
James Richardson Chairs to be Aluminium Finish or mid blue colour only.
Blue colour to be approved.

RECOMMENDED USE

In approved Cafe/Restaurant Outdoor Cafe Settings in the Shepparton City Centre.

MAINTENANCE

Daily cleaning and maintenance as required by cafe/restaurant owners.

DOCUMENTATION

Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700

Approved Aluminium Chairs, "Bistro" & "Terrace" by Gossi, supplied by Ramler Furniture, ph. 03 9584 7337 with a clear anodised finish. Similar approved outdoor cafe chairs to be light weight with a metallic finish.

BISTRO by Gossi

Terrace by Gossi

Brenda, Gisella, Shushan, Sin Folder, Max Arm,Max Side by James Richardson Corporation Pty Ltd. ph. 9428 1621. All chairs to be Aluminium anodised finish or blue colour if contrasting colour used in chair design. Blue colour to be approved.

JR 8101 Brenda

JR 8107 Gisella

A 0420 Shushan

JR 8112 Sin Folder

JR 8105 Max Arm

JR 8102 Max Side

Recommenced Outdoor Cafe Chairs
Not to Scale

Outdoor Cafe Furniture - Tables

SUPPLIER

Tables :
Ramler Furniture "Windsor Table" or similar approved.
Ramler Furniture Pty. Ltd.
ph. 03 9584 7337
fax. 03 9583 2000
Socket and Gib Key Unit:
Furphy's Foundry
ph. 03 5831 2777
fax. 03 5831 2681

DESIGN CONTACT

Tables:
Ramler Furniture Pty. Ltd.
Socket and Gib Key:
Furphy's Foundry
ph. 03 5831 2777

MATERIALS & FINISH

Tables :
Ramler Furniture "Windsor Table"
Spun Aluminium Table Top to be Clear Powder Coated using Dulux All Clear 95431959 or similar approved.

RECOMMENDED USE

In approved Cafe/Restaurant Outdoor Cafe Settings in the Shepparton City Centre.

MAINTENANCE

Daily cleaning and maintenance as required by cafe/restaurant owners.

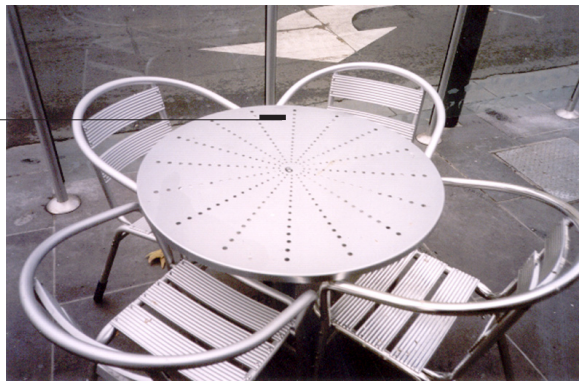
DOCUMENTATION

Cross reference with site layout drawings.

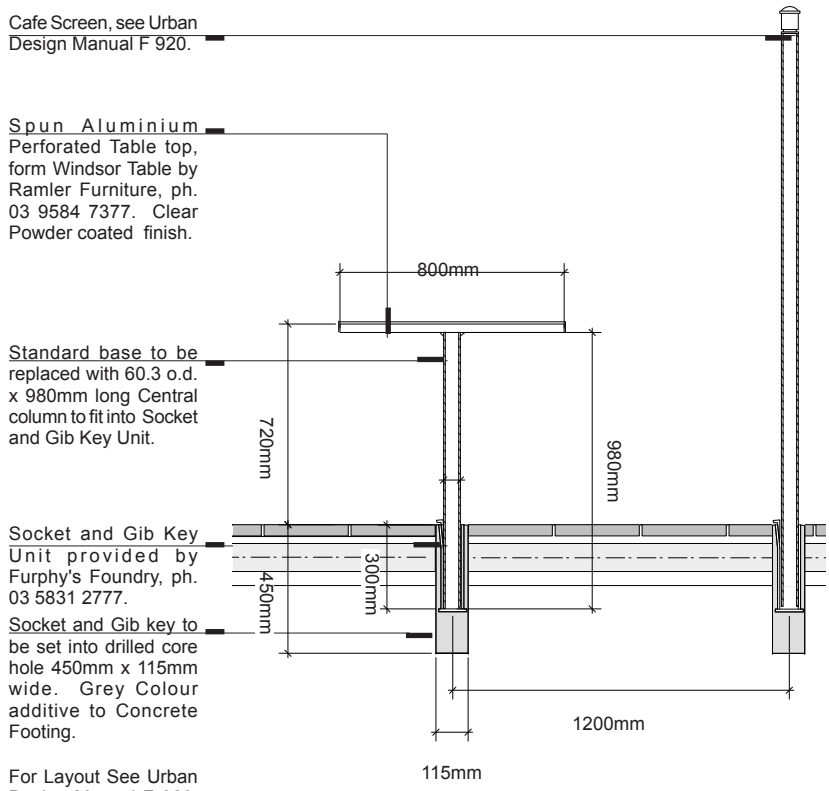
RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700

Spun Aluminium Perforated Table top, form Windsor Table by Ramler Furniture, ph. 03 9584 7377. Clear Powder coated finish.



Windsor Aluminium Table



Option 1: Semipermanent-fixed Aluminium Table

Not to Scale

Outdoor Cafe Furniture - Umbrella

SUPPLIER

Collapsable Square Umbrellas:
C 30 Casablanca with column extension of 300mm by
Shade Structures Pacific Pty Ltd
ph. 07 3252 0500
fax. 07 3252 0540
Permanent Shade Structure:
J.C. Brown - Blakiston & Shortell Pty. Ltd.
ph. 03 5221 3177
fax. 03 5221 3299
Umbrella Socket Unit (for Collapsable Umbrella):
J.C. Brown - Blakiston & Shortell Pty. Ltd.
ph. 03 5221 3177

DESIGN CONTACT

Collapsable Umbrellas:
Peter Flint
Shade Structures Pacific
ph. 07 3252 0500.
Umbrella Socket Unit:
David Nadorp
J.C. Brown - Blakiston & Shortell Pty. Ltd.
ph. 03 5221 3177
Permanent Shade Structure:
J.C. Brown - Blakiston & Shortell Pty. Ltd.
ph. 03 5221 3177

MATERIALS & FINISH

Collapsable Umbrellas:
White Colour PVDF membrane. U.V. rated.
Powdercoat all internal structure and column to be DULUX Bright Silver Satin 51491 or Stainless Steel.
Permanent Shade Structure:
White Colour PVDF membrane. U.V. rated.
Powdercoat all internal structure and column DULUX Bright Silver Satin 51491 or Stainless Steel.

RECOMMENDED USE

In approved Cafe/Restaurant Outdoor Cafe Settings in the Shepparton City Centre.

MAINTENANCE

Collapsable Umbrellas:
White Colour PVDF membrane cleaned with warm soapy water once every 4 months.
Permanent Umbrellas:
Cleaned and maintained as required.

DOCUMENTATION

Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects
ph. 03 5832 9700

Collapsable Cafe Umbrella

Permanent Shade Structure

Hard Landscaping:

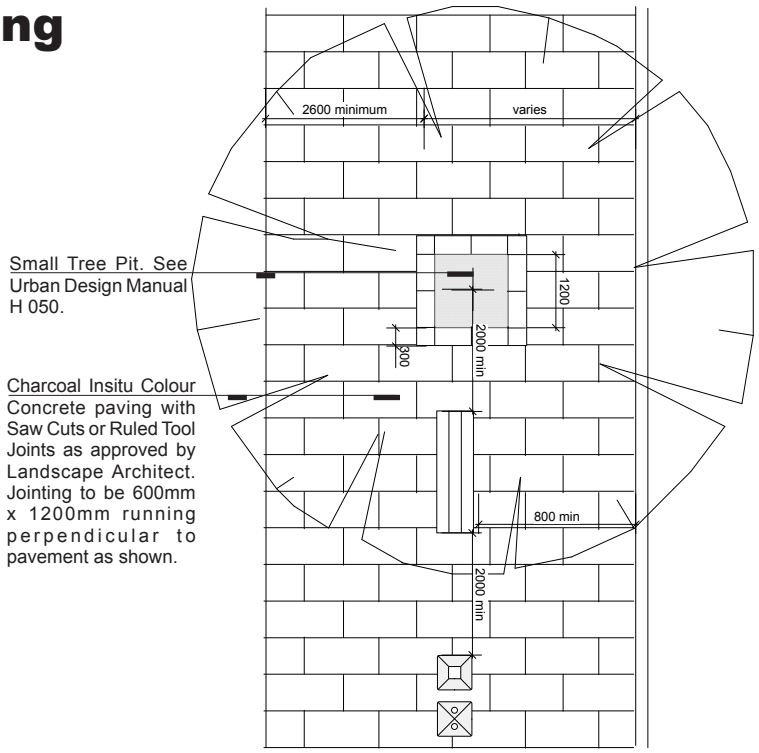
H 000	**Paving**
H 010	Insitu Concrete PedestrianPaving
H 020	Insitu Concrete Pedestrian Crossover
H 030	Granite Feature Bands
H 040	Granitic Gravel Paving
H 050	Footpath Tree Pits
H 060	Road Reserve Tree Pits
H 100	**Kerb and Channels**
H 110	Cast-Insitu Concrete Kerb
H 120	Cast-Insitu Concrete Semi Mountable Kerb
H 130	Cast-Insitu Concrete Kerb & Channel
H 200	**Carparking & Road Markings**
H 210	Carparking Layouts
H 220	Disabled Carpark
H 300	**Standard Specifications**
H 310	Standard Paving & Kerb Specification

Paving

This section of the manual outlines the standard paving types and details as selected for use within Greater Shepparton.
The section includes insitu concrete paving, granitic gravel paving, tree pit paving and crossing point detailing.

H 000 Paving

Insitu Concrete Paving



Small Tree Pit. See Urban Design Manual H 050.

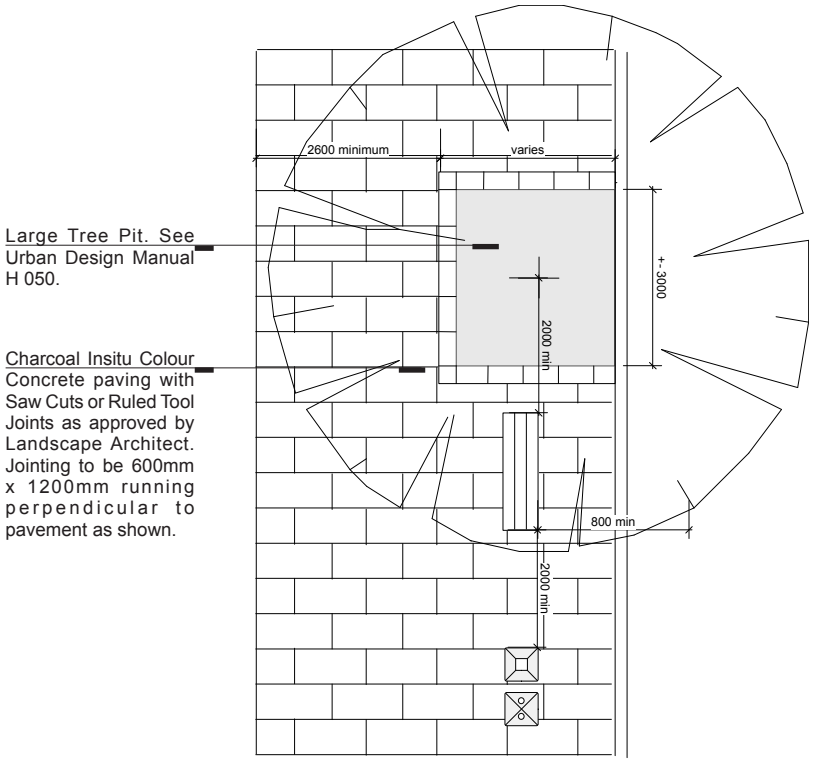
Charcoal Insitu Colour Concrete paving with Saw Cuts or Ruled Tool Joints as approved by Landscape Architect. Jointing to be 600mm x 1200mm running perpendicular to pavement as shown.

DESIGN PHILOSOPHY

Insitu Concrete paving is the predominant new paving in Shepparton's City Centre. It is a charcoal colour to to reduce the reflective glare from standard grey concrete in our hot sunny local environment. It is intended to have a broom finish with sawcut or tooled jointing.

The paving's neutral colour will harmonise with the surroundings and the new range of furniture designed for Greater Shepparton City Council.
The paving is safe, with suitable grip and provides a comfortable surface for pedestrians to traverse.

This paving is recommended for the Shepparton City Centre.



Large Tree Pit. See Urban Design Manual H 050.

Charcoal Insitu Colour Concrete paving with Saw Cuts or Ruled Tool Joints as approved by Landscape Architect. Jointing to be 600mm x 1200mm running perpendicular to pavement as shown.

Typical Layout Plans
Not to Scale

SUPPLIER
By Nominated Contractor

DESIGN CONTACT
Urban Initiatives
ph. 03 9329 6844

MATERIALS
Concrete Quantities per cubic metre;
Type "A" Geelong Cement - 40kg
20mm Pakenham Blue Metal Aggregate - 800kg
Off-white Lang Lang sand - 1100kg
"Abilox" Black Iron Oxide CAF - X2 - 35kg

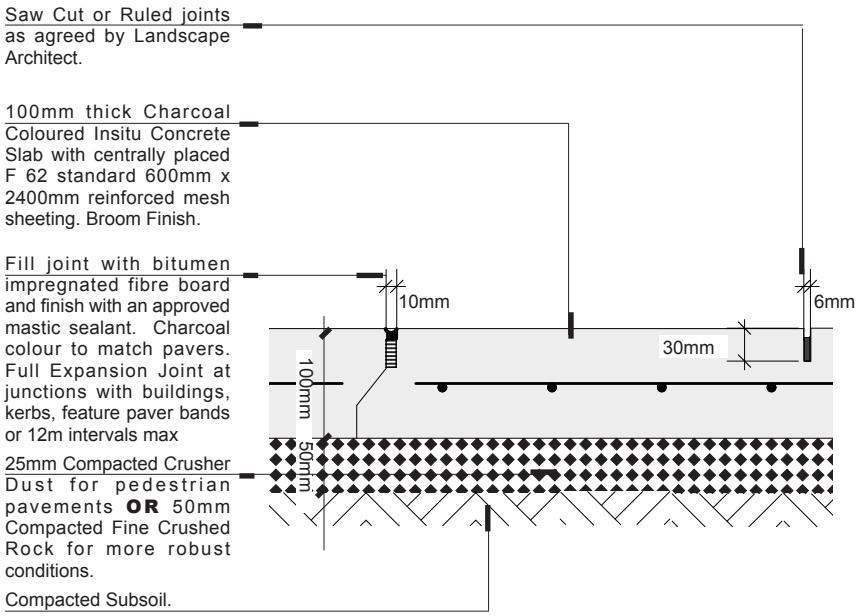
RECOMMENDED USE
In the Shepparton City Centre.

FINISH/COLOURS
Colours:
Charcoal grey to match Precast Concrete Pavers, as specified above.
Finish:
Broom Finish.
Joints:
Joints to be two alternatives with sample approved by the Landscape Architect, with pattern as shown.
1. Saw cuts to be 6mm wide x 30mm deep.
2. Ruled Tool joint.
Maximum spacing of expansion joints in longitudinal plane to be 12 metres.

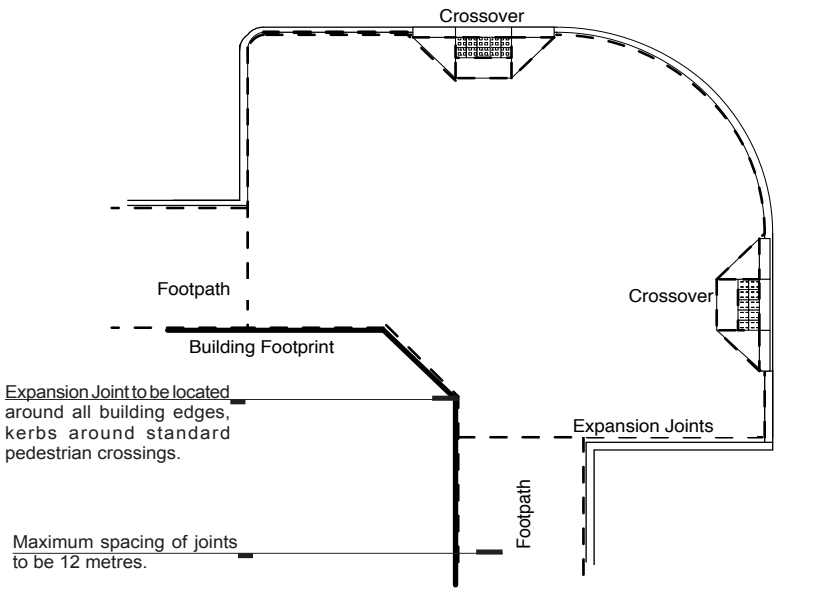
MAINTENANCE
Cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Saw Cut / Tool Control Joint Detail
Not to Scale



Typical Layout of Expansion Joints for Insitu Paving
Not to Scale

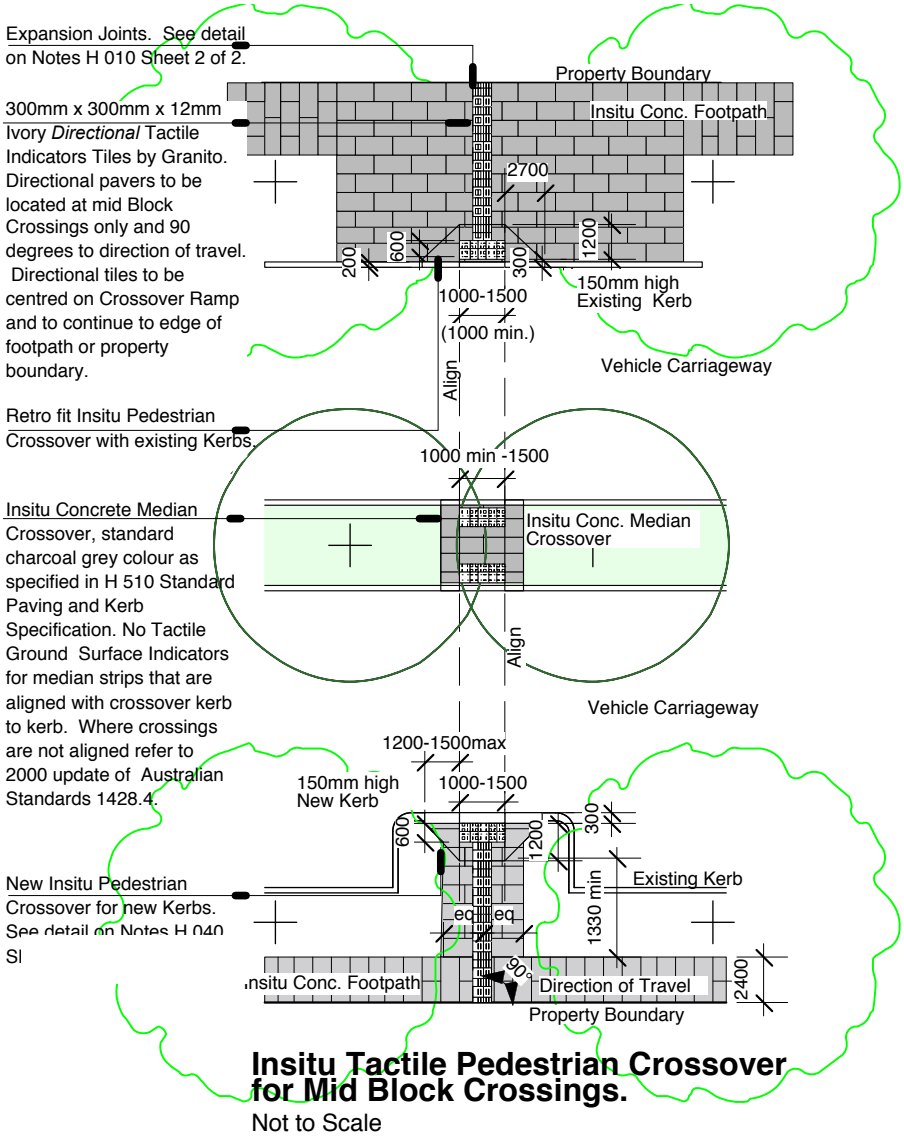
Insitu Concrete Pedestrian

DESIGN PHILOSOPHY

The Insitu Concrete Pedestrian Crossover with tactile ground surface indicators provides a safe and comfortable crossing for pedestrians, particularly those with visual impairment and those with pushers and shopping trolleys.

The Insitu Concrete Crossovers are recommended for areas that have insitu concrete or existing precast concrete type paving in Greater Shepparton's central areas.

The Insitu Concrete Crossovers are designed to comply with the 2000 Update of the AS 1428. This document should be used in conjunction with these Urban Design Manual Notes.



Insitu Tactile Pedestrian Crossover for Mid Block Crossings.

Not to Scale

SUPPLIER
Insitu Concrete:
By nominated Subcontractor.
Tactile Tiles:
Granito, Australian Building Ceramics.
ph. 03 9794 9199
fax. 03 9706 5322

DESIGN CONTACT
Insitu concrete
Urban Initiatives
ph. 03 9329 6844

MATERIALS
Hazard and Directional Tactile Tiles:
300 x 300 x 12mm Granito Tactile Hazard-classification B 1b, Vitrified Porcelain Tile. Insitu Concrete:
As nominated in Notes H 510
Joints:
Control Joints to be two alternatives with sample approved by the Landscape Architect.
1. Saw cuts to be 6mm wide x 30mm
Expansion Joints as shown.

COLOURS
Hazard Tactile Tiles:
Ivory HT3324
Directional Tactile Tiles:
Ivory DT 3324
Concrete Colour:
Charcoal colour as nominated in Notes H 510 Standard Paving and Kerb Specification. Broom Finish.

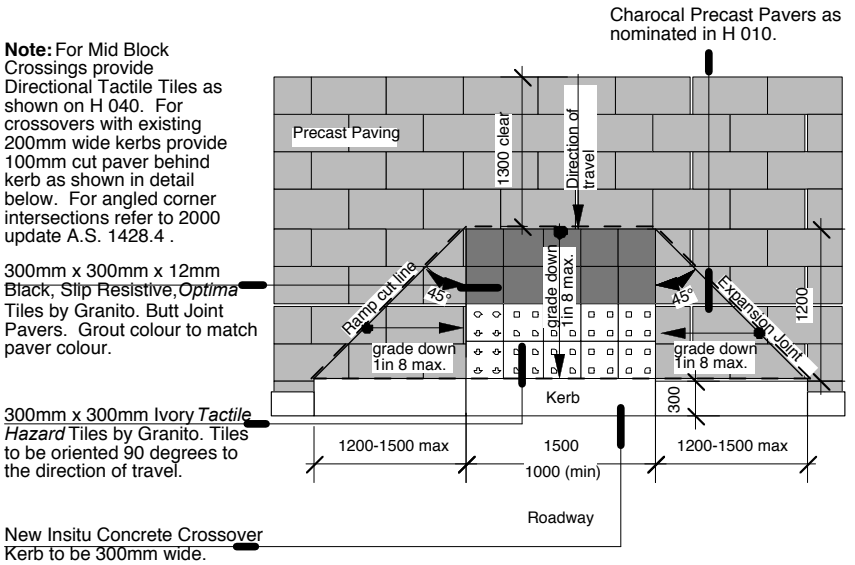
INSTALLATION
Install Tiles according to Manufacturers instruction. See Granito, Porcelain Tile Manual, Edition 1999.1.
Grout colour to match tile colour.

MAINTENANCE
Cleaning and maintenance as required and to manufacturers instruction.

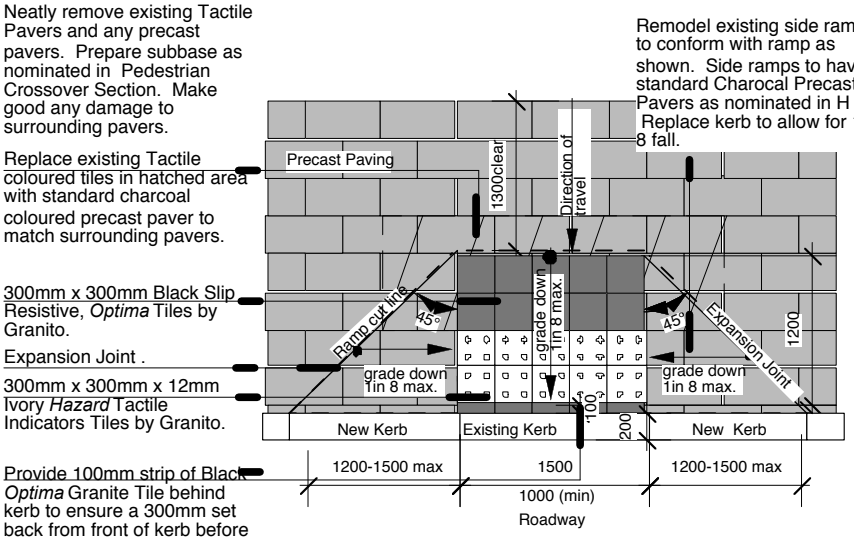
RECOMMENDED USE
In the Shepparton City Centre.

DOCUMENTATION
Cross reference with site layout drawings.

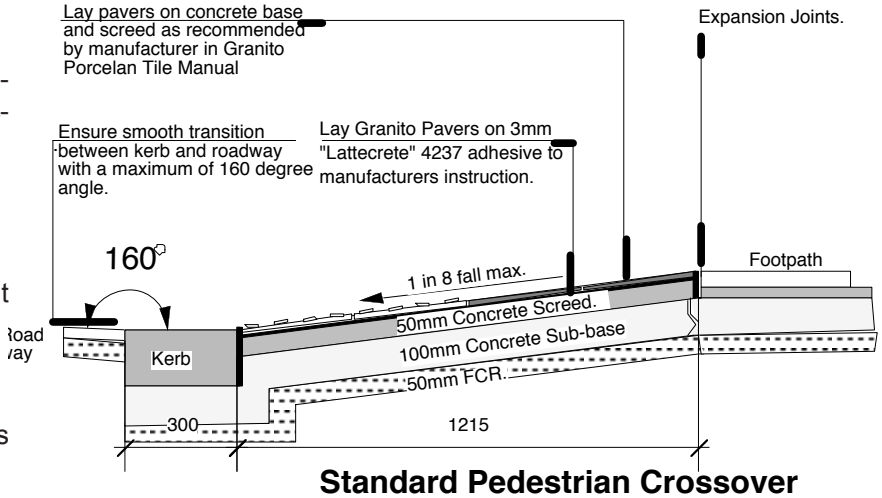
RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700.



Precast Pedestrian Crossover for Precast Paved Corner Intersections.
Not to Scale



Retro-Fit Precast Pedestrian Crossover with existing Kerbs Not to Sc



Standard Pedestrian Crossover Section for New Kerbs. Not to Scale

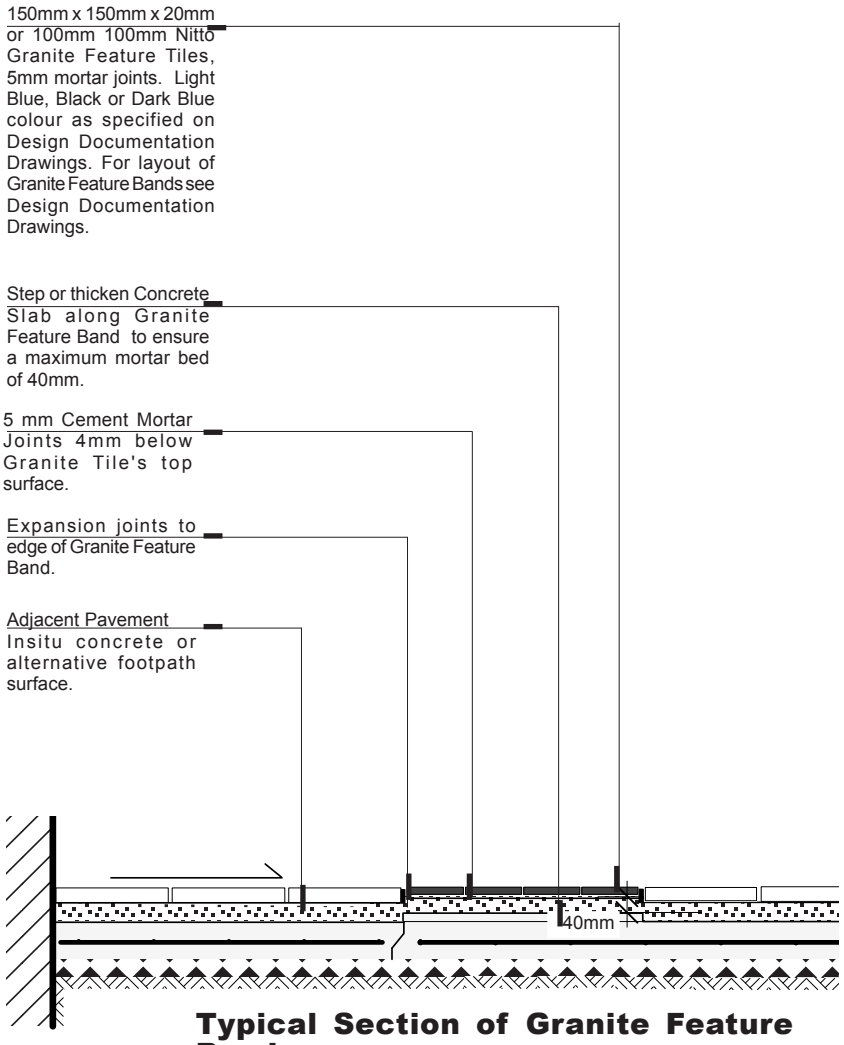
Granite Feature

DESIGN PHILOSOPHY

The Granite Pavers are for special use only. They are to be used as highlight paving in significant locations in Shepparton's City Centre.

This paving is subject to appropriate design consideration and approval from the Landscape Architect. The tile pavers are a reconstituted granite and provide a non slip, safe surface for pedestrians. The blue colour of the pavers contrasts in detail and colour to the broader areas of precast and insitu concrete pavements. The colour reinforces the theme colour of Shepparton and will compliment well the new range of furniture.

The Granite Feature Bands are recommended for the Shepparton City Centre.



Typical Section of Granite Feature Bands

Not to Scale

SUPPLIER
Reconstituted granite tiles as available from:
Nitto Granite & Ceramics Pty Ltd.
ph. 02 9810 6300
fax. 02 9810 6302
(or similar approved manufacturer).

DESIGN CONTACT
Urban Initiatives
ph. 03 9329 6844

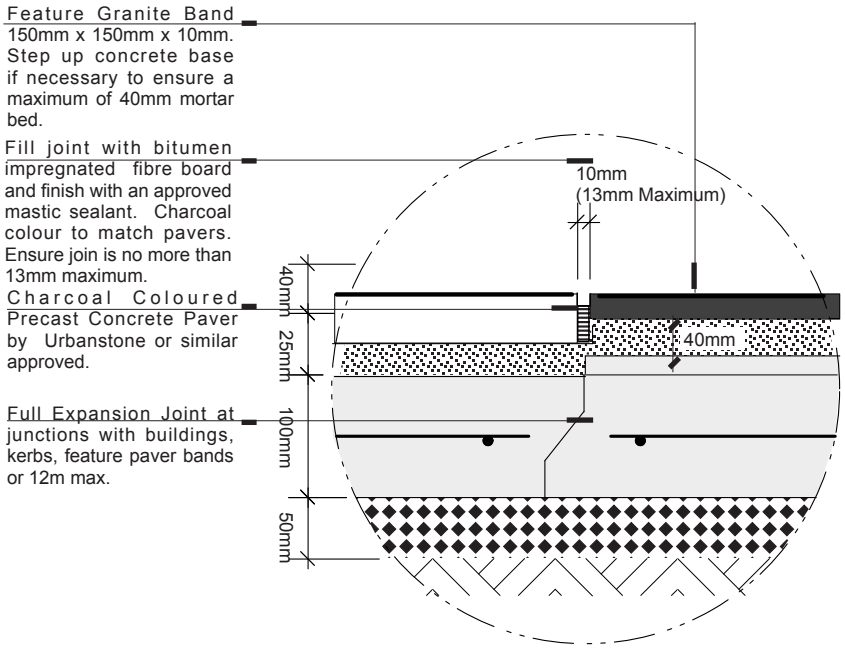
MATERIALS
Reconstituted Granite Paving Tiles
140 x 140 x 20mm thick.
90 x 90 x 20mm thick.
Refer to the precast concrete paver section of this specification for details of mortar and grout.

RECOMMENDED USE
In the Shepparton City Centre.
FINISH/COLOURS
Tiles shall be
Blue Colour: TEM 12, TEM 13.
Grey Colour: BG
White Colour: SW
Black Colour: M1
Tiles to have Ripple Finish.
Tiles shall be laid butt jointed as indicated. In other instances as indicated joints to be a maximum 5mms. Grout colour to match tiles or as specified.

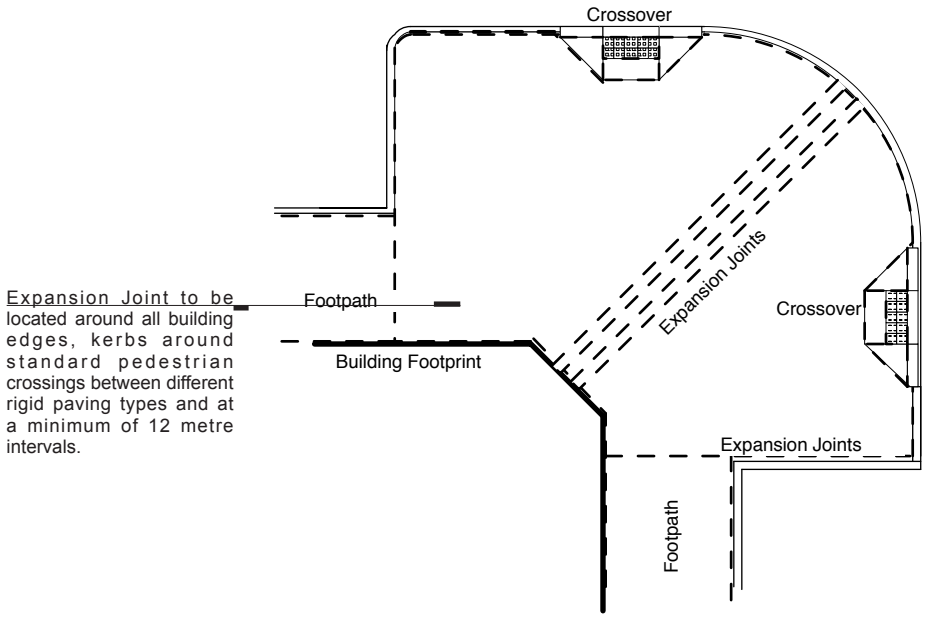
MAINTENANCE
Cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Expansion Joint Detail
Not to Scale



Typical Layout of Expansion Joints
Not to Scale

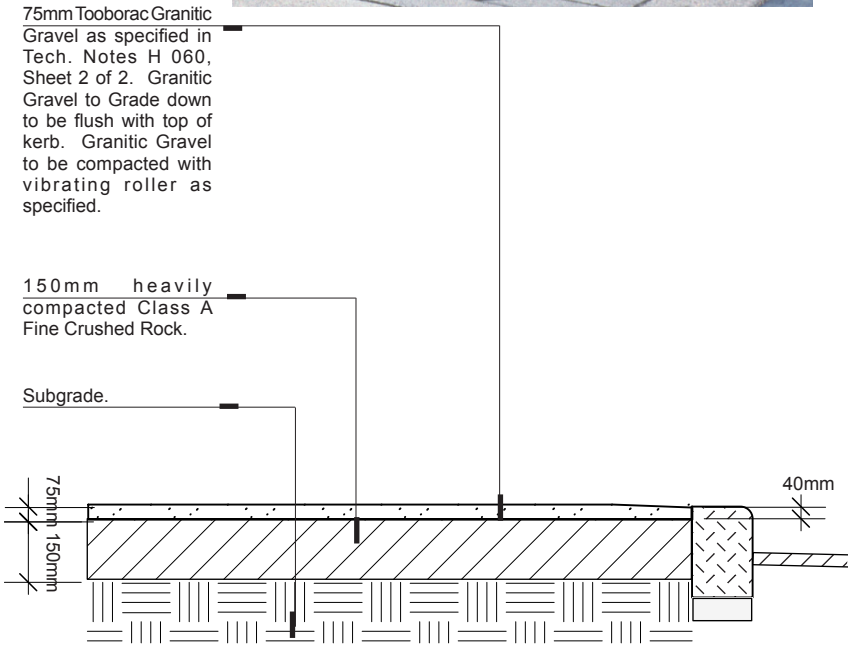
Granitic Gravel Paving

DESIGN PHILOSOPHY

Granitic Gravel Paving provides an informal surface for areas such as nature strips, central medians and grass replacement areas. It is intended for wide spread application throughout the Shepparton City Centre and the Greater Shepparton Municipality. It is useful in areas where pedestrian traffic would compromise the use of grass, and where grass can not be maintained.

While Granitic Gravel Paving has a loose top surface, the granitic gravel has a clay content which sets compact, making it a sustainable surface for areas with high levels of pedestrian traffic, yet it remains partially permiable.

The granitic gravel is an attractive yellow-brown colour that contrasts well with the predominant charcoal grey of the new paving. Shepparton also has a locally sourced pink gravel which can be considered for limited application use such as at the Shepparton Showgrounds.



Typical Section of Granitic Gravel Paving
Not to Scale

SUPPLIER

Yellow Tooborac Granitic Gravel
Rocla Quarry Products
ph. 03 9548 2684
fax. 03 9548 4359

DESIGN CONTACT

Rocla Quarry Products
ph. 03 9548 2684

MATERIALS

Tooborac Fine Grained, Yellow/Brown Granitic Gravel of Low Plasticity, by Rocla Quarries or similar approved, with a PH of 4-7 and a maximum silt content of 6 % (By Volume) as specified by AS 1141-33. Maximum 5mm diameter aggregate size. A sample to be approved by the superintendent supplied by the contractor.
Refer to Urban Design Manual H 510 Standard Paving and Kerb Specification. Class A Fine Crushed Rock.

RECOMMENDED USE

In the Shepparton City Centre.

FINISH

Granitic Gravel to be compacted with vibrating roller or vibrating plate. Compaction must comply with Urban Design Manual H 510 Standard Paving and Kerb Specification.
The finished surface to be free draining.

MAINTENANCE

Maintenance must comply with Urban Design Manual H 510 Standard Paving and Kerb Specification.
Surface to be racked to eliminate cigarette butts and fine rubbish with a leaf rake, not a mechanical street sweeper. Prevent depressions occurring from wear and ponding. Granitic Gravel in pedestrian areas not to become lower than the surrounding area. Prevent large build ups of loose gravel, usually caused by water rushing over gravel causing clay to be washed from content of gravel.

DOCUMENTATION

Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER

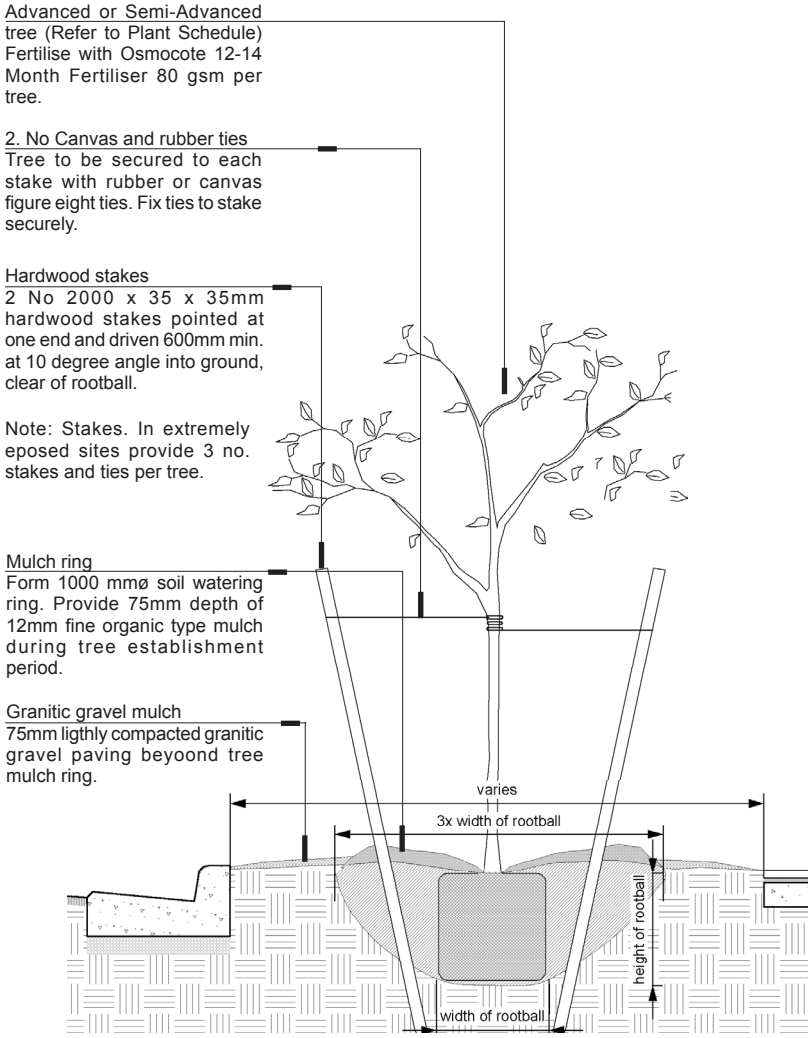
Manager - Engineering Projects
ph. 03 5832 9700

Footpath Tree Pits

DESIGN PHILOSOPHY

The Footpath Tree Pits are designed to accommodate existing trees and newly planted advanced trees. They are spaced at regular intervals corresponding with street tree planting in road reserves to achieve a leafy canopy over the major streets in Shepparton's CBD and surrounding township urban centres. The Footpath Tree Pits are to be a generous scale, generally abutting the kerb edge.

Each pit is to have a smooth and lightly compacted granitic gravel surface that is flush with adjacent paving. The colour of the granitic gravel contrasts well with the predominant charcoal coloured paving and matches other granitic paving in the central area.



Typical Footpath Tree Pit Section

Not to Scale

SUPPLIER
Granitic Gravel Paving
See Urban Design Manual H 040
Tree Pit Surround
i) In Insitu Concrete Paving
By nominated Contractor.
ii) Advanced Tree
By nominated Contractor

DESIGN CONTACT
Urban Initiatives
ph. 03 93296844

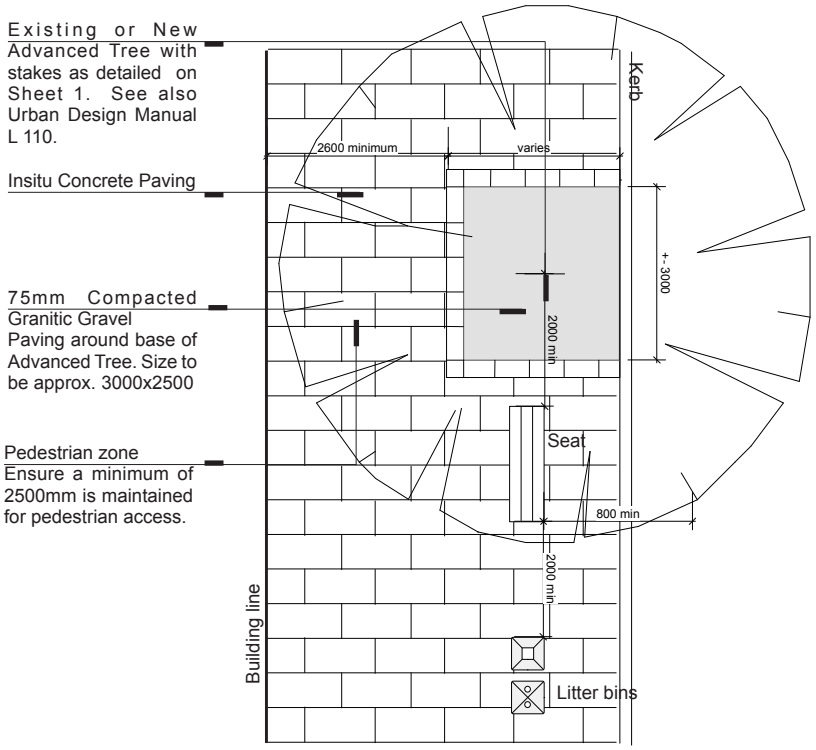
MATERIALS
Compacted Granitic Gravel
See Urban Design Manual H 060 & H 510 Standard Paving and Kerb Specification.
Tree Pit Surround
i) In Insitu Concrete Paving
See Urban Design Manual H 010.
ii) Advanced Tree
See Urban Design Manual L 010.

RECOMMENDED USE
In the Shepparton City Centre.

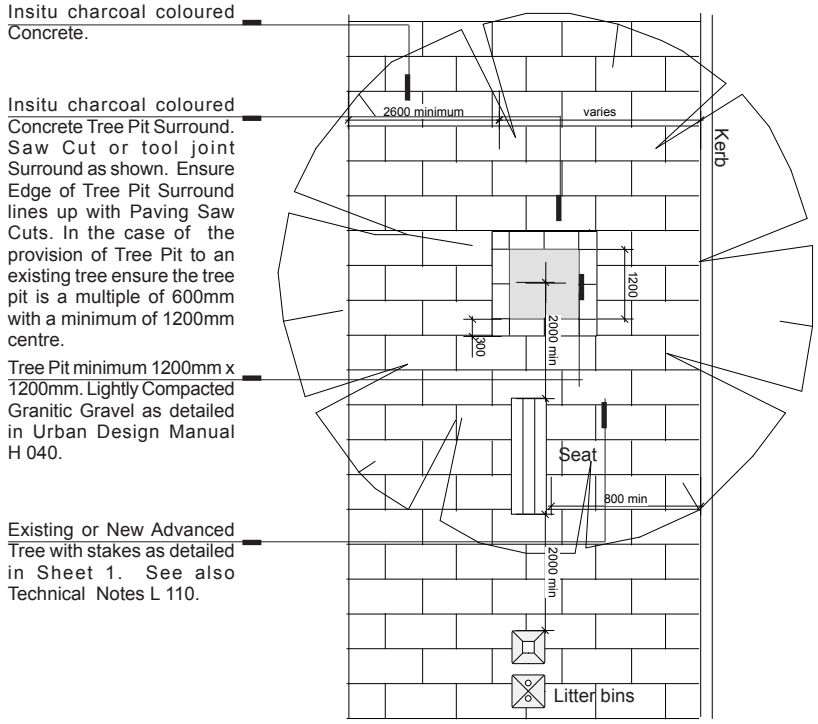
MAINTENANCE
Regular maintenance of Trees and gravel as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Footpath Tree Pit - Road Edge
Not to Scale



Footpath Tree Pit - Wide footpaths only
Not to Scale

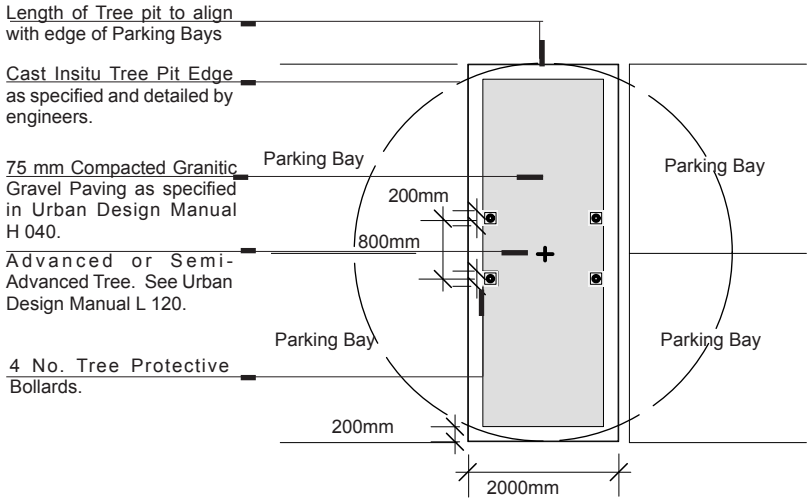
Road Reserve Tree Pits

DESIGN PHILOSOPHY

The Road Reserve Tree Pits are designed for use in Shepparton's Central Business District road network. The tree pits are rectangular or square in form and spaced at regular intervals along the length of the street. They align with central or roadside carparking bays. The tree pits are designed to provide adequate space for the healthy maturation of street trees, some which are existing and others that are proposed, and to achieve a leafy canopy over the Central Business District's major streets. This will reduce the wide and exposed existing scale of the streets and the sense of broad expanses of road paving.

The Tree Planting Pits are designed to maximise carparking whilst providing shade for cars and pedestrians during summer months. The compacted granitic gravel paving provides a robust material that can sustain vehicular movement whilst remaining permeable to allow aeration and infiltration for tree roots.

The concrete tree pit edge acts as a root barrier to minimise shallow lateral root growth which contributes to surface damage of adjacent paving. The Tree Protective Bollards are used to protect trees from vehicular traffic and are constructed from thin walled hot-dip galvanise pipe which if knocked minimises any damage to cars, as documented in Urban Design Manual F 510.



Tree Pit Layout Plan to Centre of Road

Not to Scale

SUPPLIER
Tree Protective Bollards
As nominated by
Urban Design Manual F 510.
Compacted Granitic Gravel Paving
As nominated by
Urban Design Manual H 040.
Tree Pit Edge
As nominated by Engineers
Advanced Tree
As nominated by
Urban Design Manual L 120.

DESIGN CONTACT
Urban Initiatives
ph. 03 93296844

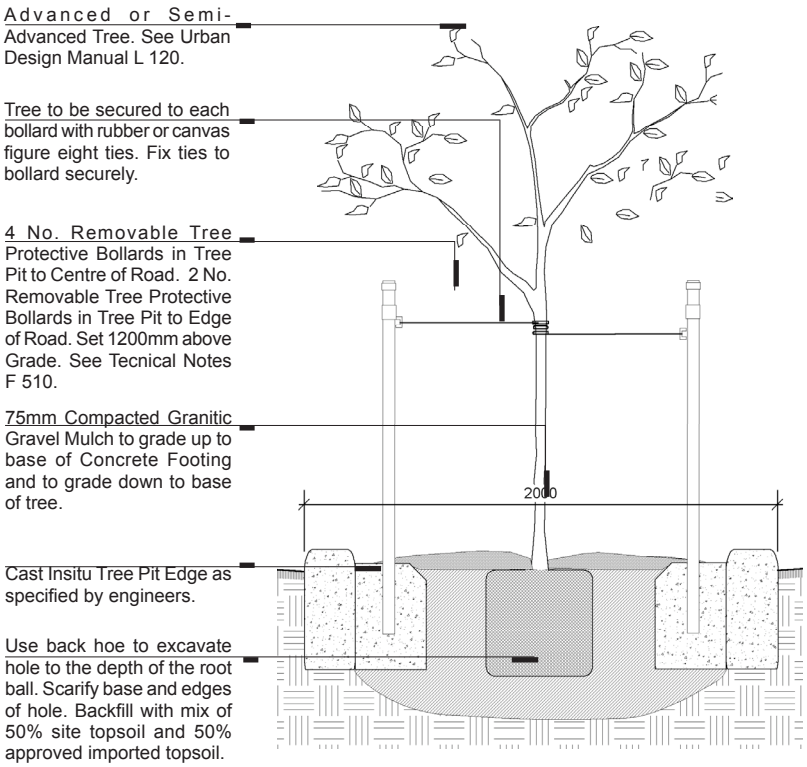
MATERIALS
Tree Protective Bollards
See Urban Design Manual H 060 & H 510 Standard Paving and Kerb Specification.
Compacted Granitic Gravel Paving
As nominated by
Urban Design Manual H 060
Tree Pit Edge
As nominated by Engineers
Advanced Tree
As nominated by Urban Design Manual L 120.

RECOMMENDED USE
In the Shepparton City Centre.

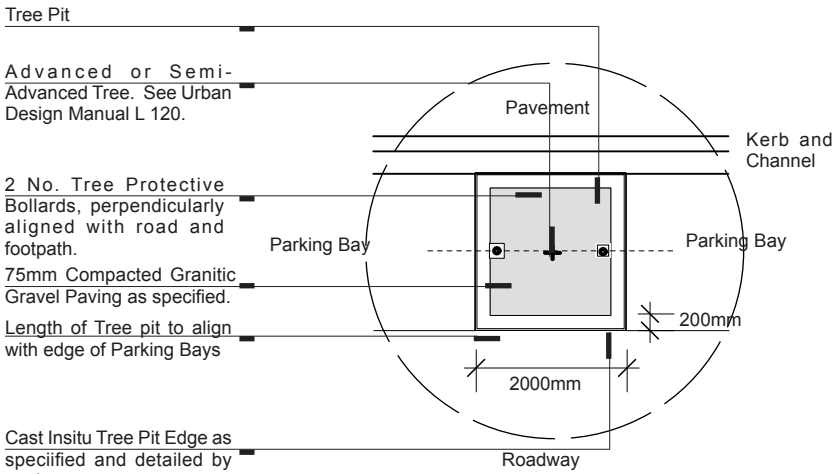
MAINTENANCE
Maintenance of Tree Protective Bollards, Trees and Compacted Granitic Gravel as specified in Urban Design Manual, F 510, L 120, H 040 & H 510.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Typical Section of Tree Pit Surround in Road
Not to Scale



Tree Pit Layout Plan to Edge of
Not to Scale

H 100 Kerb and Channels

Kerb and Channels

The standard kerb and channels selected for Greater Shepparton include insitu kerb, insitu concrete kerb and channels, and mountable kerbs for roundabout use.

H 100 Kerb and Channels

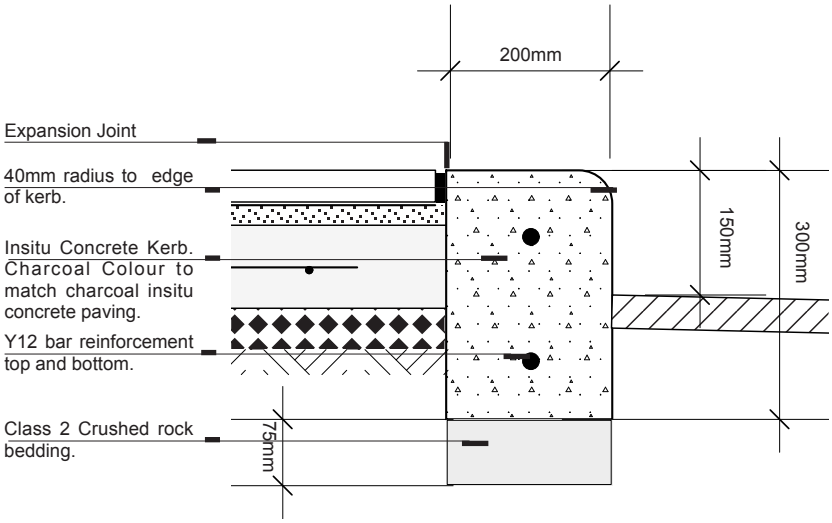
Insitu Concrete Kerb

DESIGN PHILOSOPHY

The charcoal coloured Insitu Concrete Kerb provides a neat and simple linear edge, separating pedestrian pavements from roadway environments.

The charcoal colour of the kerb matches the new charcoal coloured concrete footpath pavements, and is consistent with the selected Shepparton urban furniture colour suite.

The charcoal coloured Insitu Concrete Kerb is recommended for use in Shepparton City Centre, and where a higher quality design finish is required within the urban centres of surrounding Greater Shepparton townships.



Cast-Insitu Concrete Kerb
Not to Scale

SUPPLIER
By Nominated Contractor

MATERIALS
Concrete Quantities per cubic metre;
Type "A" Geelong Cement - 40kg
20mm Pakenham Blue Metal Aggregate - 800kg
Off-white Lang Lang sand - 1100kg
"Abilox" Black Iron Oxide CAF - X2 - 35kg

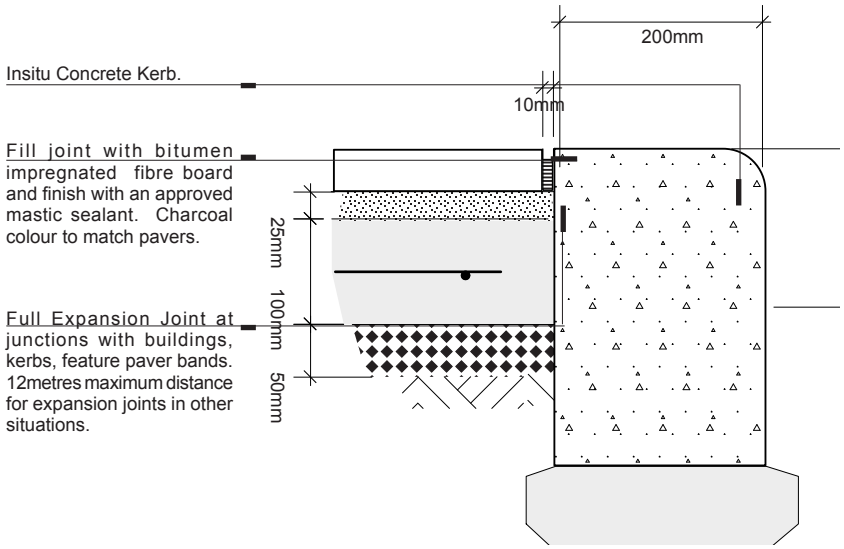
RECOMMENDED USE
Greater Shepparton City Centre and selected Greater Shepparton urban centres

FINISH/COLOURS
Colour: Charcoal grey as above.
Finish: Off form.

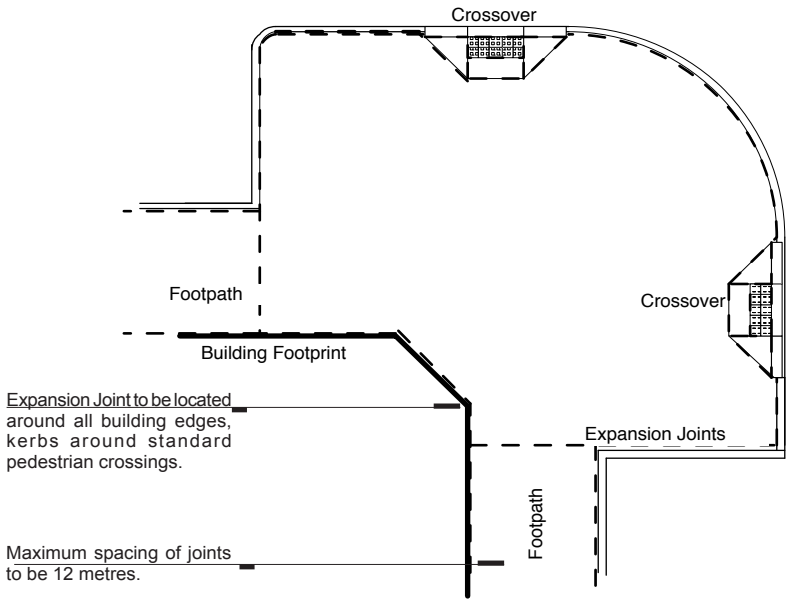
MAINTENANCE
Cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



Insitu Concrete Kerb Expansion Joint Detail
Not to Scale



Typical Layout of Expansion Joints
Not to Scale

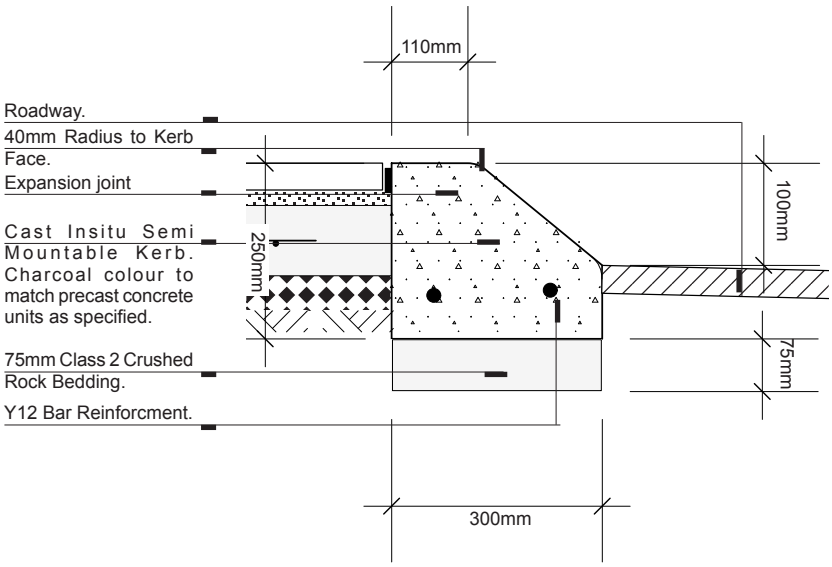
Cast-Insitu Semi Mountable Kerb

DESIGN PHILOSOPHY

The charcoal coloured Cast-Insitu Semi Mountable Kerb is utilised as the edging treatment for roundabouts in the City of Shepparton's CBD. It provides a safe delineation of the roundabout edge that minimises damage to vehicles in the intersection.

The charcoal grey colour of the kerb matches Shepparton's insitu concrete kerbs and new paving colour schemes for the central area.

The cast-insitu semi-mountable kerb is recommended for use within traffic roundabout situations in Greater Shepparton.



Cast Insitu Semi Mountable Kerb Section

SUPPLIER
By Nominated Contractor

MATERIALS
Concrete Quantities per cubic metre;
Local Materials to be sourced to be similar approved as following:
Type "A" Geelong Cement - 40kg
20mm Pakenham Blue Metal Aggregate - 800kg
Off-white Lang Lang sand - 1100kg
"Abilox" Black Iron Oxide CAF - X2 - 35kg

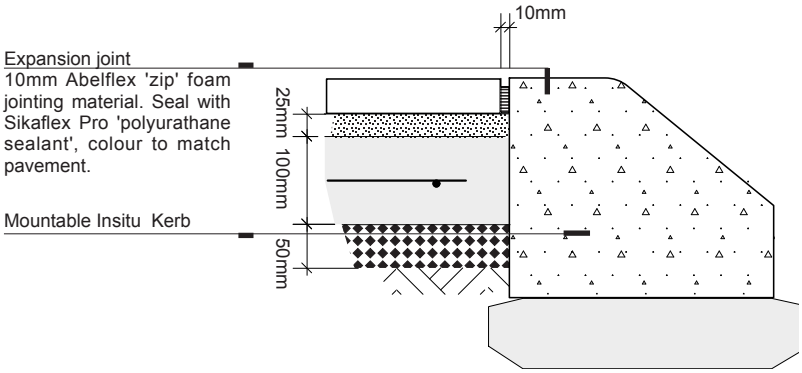
RECOMMENDED USE
In the Shepparton City Centre.

FINISH/COLOURS
Colours:
Charcoal as above.
Finish:
As specified in Standard Works Contract.

MAINTENANCE
Cleaning and maintenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects ph. 03 5832 9700



Expansion Joint Detail
Not to Scale

Cast Insitu Concrete Kerb and

DESIGN PHILOSOPHY

The charcoal coloured Cast Insitu Concrete Kerb and Channel provides a neat and simple solution to road edge detailing within Greater Shepparton's urban environments. The charcoal grey colour of the kerb and channel fits comfortably and unobtrusively into the new paving colour schemes for the central area.

SUPPLIER
By nominated contractor

MATERIALS
Concrete quantities per cubic metre; Local materials to be sourced to be similar approved as following: Type "A" Geelong Cement - 40kg 20mm Pakenham Blue Metal Aggregate - 800kg Off-white Lang Lang sand - 1100kg "Abilox" Black Iron Oxide CAF - X2 - 35kg

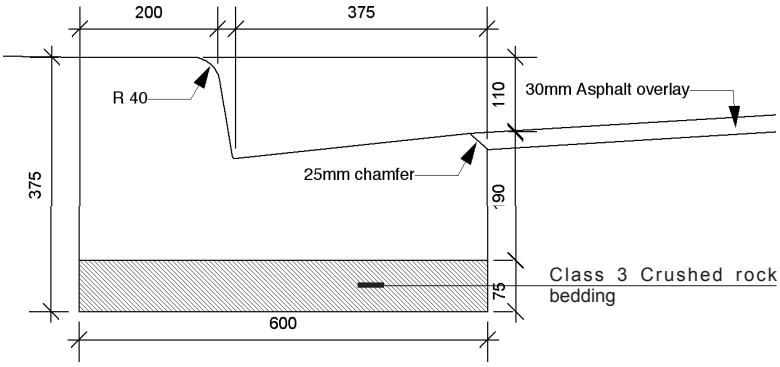
RECOMMENDED USE
In the Sheppaton City Centre

FINISH
Colours:
Charcoal as above.
Finish:
As specified in Standards Work Contract.

MAINTENANCE
Cleaning and mainenance as required.

DOCUMENTATION
Cross reference with site layout drawings.

RESPONSIBLE COUNCIL OFFICER
Manager - Engineering Projects
ph. 03 5832 9700



H 200 Carparking & Road Markings

Carparking and Road Markings

This section of the Urban Design Manual outlines standard carparking dimensions for kerbside, centre of the road parallel parking

H 200 Carparking & Road

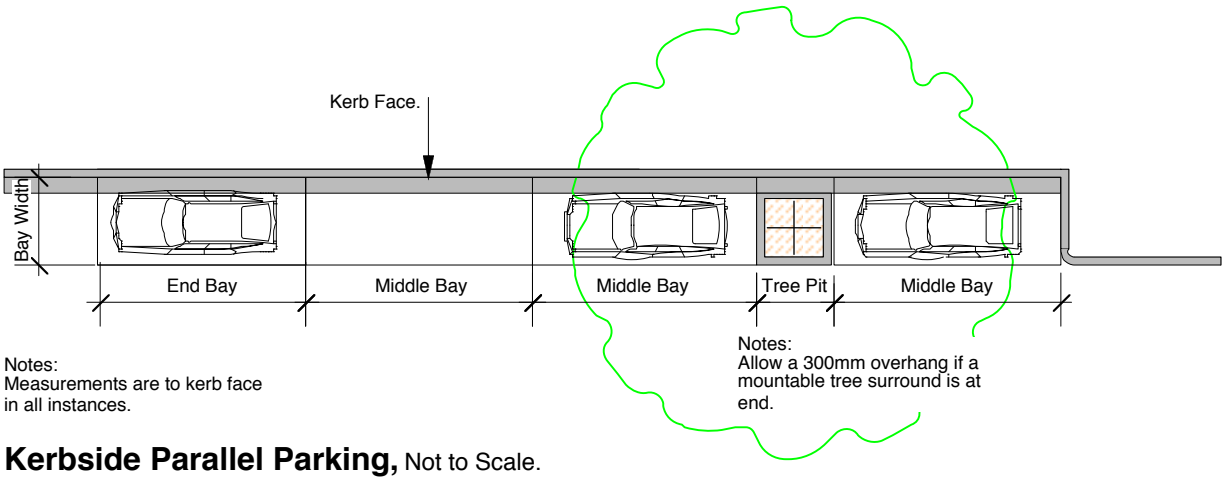
Carparking Layouts

DESIGN PHILOSOPHY

These notes on carparking dimensions have been developed by Council to provide guidelines for kerbside parallel parking and centre of the road parallel parking. They provide a comparative basis for parking sizes from the standards established by the Australian Standards and Austroad. These guidelines are recommended for use the central area of the City of Greater Shepparton.

Kerbside Parallel Parking:

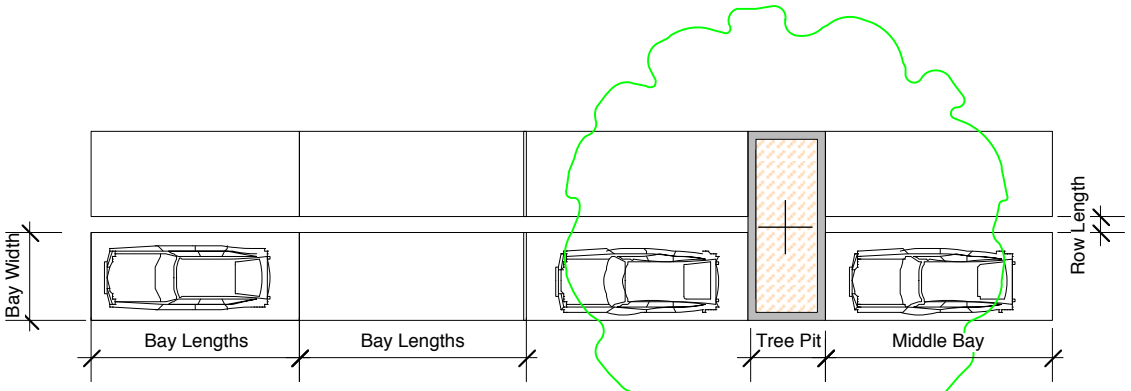
DIMENSION	AS 2890.5 (OR AS 1742.11)	AUSTROADS Part 11	CITY OF GREATER SHEPPARTON		
			MINIMUM	STANDARD	DESIRED
Middle of Bay Length	6.0-6.7 (max 8.0)	6.0	6.5	6.7	7.0
End of Bay length	5.4 (min)	5.5 (min)	5.5	6	6.5
Bay Width	2.3 (2.1 abs.min.)	2.3	2.3	2.5	2.7
Manouvering Lane	0.5 (min)	3.0	0.0	1.5	3.0



Kerbside Parallel Parking, Not to Scale.

Centre of the Road Parallel Parking:

DIMENSION	AS 2890.5 (OR AS 1742.11)	AUSTROADS Part 11	CITY OF GREATER SHEPPARTON		
			MINIMUM	STANDARD	DESIRED
Bay Length	Only 90⁰ shown. 5.4 m across. Road 22-29m. For each way <200 & < 450 vph (ie 6.0-9.5 m lanes)	Only 90⁰ shown. 5.4 m across. Road 22-29m. For each way <400 & < 800 vph (ie 6.0-9.5 m lanes)	6.5	7.0	7.2
Bay Width			2.3	2.5	2.7
Gaps between Rows of Bays			0.4	0.7	1.0
Tree Gap Between Bays			0.6	1.0	1.2
Traffic land Beside			4.5	5.0	6.0



Notes:
Bay at start of row is most suitable as a Disabled Bay if there is no Tree in front.

End Bays are usually the same length due to tree surround of island.

Bays are longer to encourage forward entry into bays.

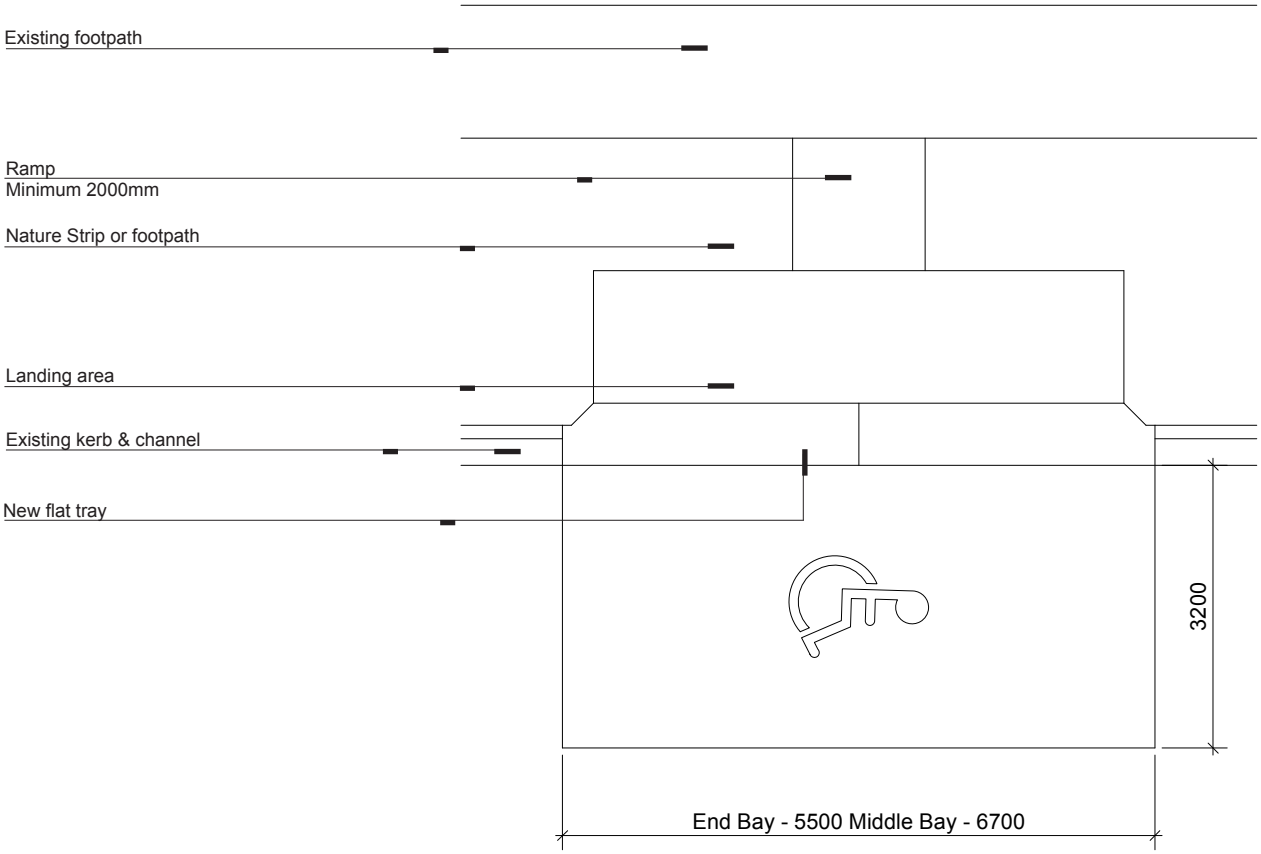
Usually have longer parking times in centre bays to minimise pedestrian/vehicle conflict.

Centre of the Road Parallel Parking, Not to Scale.

Disabled Carpark

DESIGN PHILOSOPHY

The following disabled carparking dimensions have been developed by Council to provide guidelines for kerbside parallel and 90º parking situations within Greater Shepparton. All horizontal and vertical alignments are to Australian standards, AS2890:6.



Typical Parallel Parking Layout

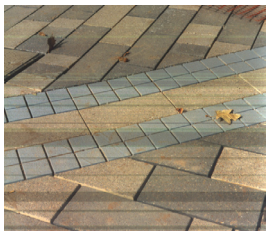
Not to Scale

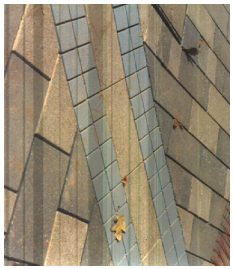
Note

All horizontal and vertical alignments are to Australian standards, AS2890:6.

Standard Specifications

The following standard specification section is to be read in conjunction with any other specifications produced for or by the Greater Shepparton City Council. All works should comply with the Greater Shepparton City Council Standard Works Contract. It covers general items such as





H 500 Standard

Standard Paving & Kerb

General Items:

DESCRIPTION

All works are to comply with the Greater Shepparton City Council Standard Works Contract. This section covers the requirements for the construction of cast-in-place concrete edgings (i.e. kerbs, channels, edge strips, and vehicle and perambulator crossings), footpaths, and median and other surfacing, together with the necessary excavation and backfilling.

TOLERANCES ON LINE, LEVEL, AND SHAPE

All surfaces shall be finished in conformity with the lines, grades, thicknesses and cross sections shown on the drawings or as specified, within the following limits:

(a) Footpaths and surfacing shall be shaped to match existing fixtures, e.g. pit covers, edgings and driveways, within 5 mm. Elsewhere the departure of the finished work from line or level shall not exceed 10 mm at any point, and the rate of change of deviation from line or level shall not exceed 10 mm in 10 m.

(b) Section dimensions shall not differ from those shown on the drawings by more than 5 mm except that overall width shall not exceed the specified width by more than 15 mm; and on dimensions less that 25 mm the tolerance shall be ± 3 mm.

(c) Unless otherwise specified or shown on the drawings, footpaths and surfacing shall be 75 mm thick except that median surfacing within 2 m of the ends of medians shall be 150 mm thick.

(d) Where median surfacing is to be constructed between edge sections of substantially the same level, the paving shall be crowned to produce a crossfall towards the edges not exceeding 3% nor less than 1%.

MATERIALS

Unless otherwise specified or shown on the drawings, concrete shall be 20 MPa strength grade complying with the requirements of AS 3600 - Concrete Structures.

Concrete used in kerb extrusion machines will not be subject to these compressive strength requirements but shall have a minimum cement content of 280 kg/m3 of finished concrete.

SETTING OUT

(a) The Contractor shall set out the work in accordance with the drawings.

The Superintendent will review and confirm the set out. The work shall be constructed in accordance with the confirmed set out to the line and level specified by the Superintendent.

(b) The work will be set out initially by the Superintendent in accordance with the alignments, levels, grades, and sections shown on the drawings.

The alignment and level pegs will be indicated to the Contractor on the Site by the Superintendent prior to the commencement of work.

PROVISION FOR DRAINAGE DURING CONSTRUCTION

Before obstructing any waterway, channel or culvert, the Contractor shall make appropriate provision for its temporary diversion. The Contractor shall make provision for the safe discharge of drainage and stormwater at all times during the construction of the Works.

HOUSEHOLD DRAINAGE CONNECTIONS

Unless otherwise specified, existing household drains which are not connected to underground stormwater drains shall be altered as necessary and connected through the kerbing to drain into the channel.

Provision shall be made for connection of future household drains as specified or shown on the drawings or as directed by the Superintendent.

EXCAVATION

The Contractor shall carry out any necessary excavations and disposal of excavated material off site.

Where it is necessary to excavate existing pavement in order to construct the section, the excavation shall not extend more than 150 mm from the edge of the adjacent section face. Existing asphalt or bituminous surfacing shall be saw cut for a sufficient depth to produce a neat vertical face.

BEDDING PREPARATION

(a) Bedding will be supplied, placed and compacted by others. The Contractor shall trim the bedding to the appropriate levels where necessary and recompact any disturbed areas. Immediately before concrete is placed, the bedding shall be moist but shall have no free water on the surface.

Standard Paving & Kerb

(b) Bedding of crushed rock, gravel or concrete, or other specified material shall be provided by the Contractor as follows:
(i) Edgings
Where edgings are constructed over pavement layers, bedding shall be provided between the pavement layer and the underside of the edging, or the edging thickened to match the pavement layer. Where edgings are not constructed over pavement layers, bedding shall be not less than 75 mm compacted thickness.
(ii) Footpaths and Surfacing
Unless otherwise specified or shown on the drawings not less than 50 mm compacted thickness.
Bedding shall be trimmed to the appropriate levels, moistened as necessary, and firmly compacted.
For footpaths and surfacing the foundation shall be brought true to grade and cross section as shown on the drawings by filling and excavating as necessary. All soft wet or unstable material shall be removed to a depth of not less than 75 mm below the design level of the underside of the bedding and the resulting space filled with bedding material moistened and compacted to form a stable foundation.
Immediately before concrete is placed, the bedding shall be moist but shall have no free water on the surface.

PROVISION FOR PERMANENT SIGNS

Unless otherwise specified sign post sleeves shall be supplied and placed by the Contractor to provide for erection of permanent signs in the areas to be paved.
Sleeves shall be placed at the locations shown on the drawings or where directed by the Superintendent.
Unless otherwise specified or shown on the drawings, sign post sleeves shall be 100 mm nominal diameter 500 mm long, plugged at one end. They shall be placed vertically in the ground, with the plugged end at the bottom and with the top of the sleeve 15-20 mm above the finished level of the footpath or surfacing and shall be installed before concreting is commenced. Any concrete which falls into the sleeve shall be removed.

MACHINE EXTRUSION

Where an extrusion or slip form machine is used the datum for grade and alignment of the section to be extruded shall be established by the Contractor.
Concrete shall be fed to the machine at a uniform rate. The machine shall be so operated as to produce a satisfactorily compacted mass of concrete. Surfaces shall be substantially free from surface pitting larger than 5 mm diameter.
Where work using fixed forms is combined with extruded work and similar concrete mixes are used for both, the concrete in the fixed form sections shall be compacted to produce a satisfactory compacted mass of concrete.

PROFILE TRANSITIONS

Where it is necessary to join to an existing section of profile different from that being constructed, the change of profile, unless otherwise specified, shall be made at a constant rate between 10 and 20 mm per metre. Transitions between different profiles being constructed under the Contract shall be made in accordance with the drawings.

SURFACE FINISH

Exposed surfaces shall be treated as follows, unless otherwise nominated in design drawings:

(a) Edgings

All edgings shall be rendered and have a steel trowel finish.
Rendering shall be applied within 30 minutes of placing or extruding concrete in the forms. The mortar used shall consist of two parts of fine aggregate, one part of cement, and sufficient water to produce a mix of suitable consistency. The thickness of rendering shall not exceed 3 mm. Exposed surfaces shall be given a steel trowel finish.

(b) Footpaths and Surfacing

Fresh concrete shall be compacted and worked until all the coarse aggregate is below the surface and the mortar comes to the top. It shall then be struck off and finished to grade and cross section with a wooden float to produce a lightly textured non skid surface. All outside edges of slabs and all joints shall be finished with a suitable tool.

Standard Paving & Kerb

After finishing, the whole of the work shall present a consistently neat appearance of uniform colour. All arrises shall be sharp and clean, no ragged edges shall be left, and bullnoses shall be regular and of uniform radius. All discoloured concrete shall be cleaned or replaced by the Contractor at no cost to the Greater Shepparton City Council.

JOINTS

Unless otherwise specified, transverse joints shall be constructed at right angles to both the back of edgings and the edge of surfacing. Joints in surfacing shall be opposite joints in adjacent edgings.

(a) Edgings

(i) Transverse Joints

Transverse joints shall be constructed at regular intervals not exceeding 2.5 m. For extruded edgings this shall be done by a method which does not damage or distort the adjacent surfaces; for edging constructed using fixed forms, templates shall be removed as soon as practicable after finishing the work. The guillotine (for extruded work) or template (for fixed form work) shall cut between 40% and 70% of the area of the section. In both cases the resultant slot in the edging shall be tooled to a depth of 20 mm to produce a neat groove not less than 5 mm wide on the exposed surfaces, following which a vertical cut shall be made through the base of the groove to a depth not less than 50 mm from the surface of the section.

(ii) Expansion Joints

Expansion joints shall be placed at junctions with bridges, shall be 15 mm wide and filled with cork or bituminous impregnated particle board strip extending for the full width and full depth of the edging. The filler shall be placed in position before concrete is placed, and shall be held firmly in position during the placing of the concrete.

(b) Footpaths and Surfacing

(i) Expansion Joints

Expansion joints shall be placed at intervals not exceeding 12.5 m, on either side of vehicle crossings, and at junctions with bridges. The expansion joint shall be 15 mm wide and filled with cork or bituminous impregnated particle board strip extending for the full width and full depth of the paving. The filler shall be placed in position before concrete is placed, and shall be held firmly in position during the placing of the concrete.

(ii) Dummy Joints

Unless otherwise specified, dummy joints at least 20 mm deep and 5 mm wide shall be formed with a cutting tool at 2.5 m intervals.

(c) Between Edgings and Footpaths and Surfacing

Except on narrow medians (less than 2.0 m wide) surfaced full width, bonding between the surfacing and the edging shall be prevented by painting the back of the edging with bitumen, or by using a strip of bituminous felt material between the edging and the surfacing.

MARKING OF CONDUIT POSITIONS

The positions of any existing conduits passing under edgings shall be marked by a chase in the edging immediately above the conduit together with a suitable identification mark designated by the Superintendent or as specified.

BACKFILLING AND PAVEMENT RESTORATION

Unless otherwise specified, as soon as the concrete has cured sufficiently, topsoil material, free from perishable matter, lumps or balls of clay or other deleterious matter, shall be placed and firmly compacted behind the edging to the level of the top of the edging and to a width not less than 300 mm.

Where edging has been constructed alongside an existing pavement part of which has been excavated to permit the construction of the edging and unless otherwise specified or shown on the drawings, ensure that existing paving is neatly saw cut parallel to kerb prior to excavation to create a straight edge to work from. The excavated space shall be backfilled to the surface level of the existing pavement to meet neatly with straight edge of existing paving. Unless otherwise specified, size 7 or 10 asphalt shall be used for this work.

Standard Paving & Kerb
Insitu Concrete Paving

INSITU CONCRETE PAVING TO FOOTPATHS

Location:
Supply and lay coloured insitu concrete paving in the locations and to the pattern as indicated on the Drawings.

General -
Finished paved surface shall be uniform and even and conform to the following tolerances:
(I) Departure from any design level by not more than + or - 3mm
(ii) Any lipping of adjacent units not more than 2mm

Concrete finish (to approved sample panel):

Finish:
Textured Broom finish

Tool Pattern:
Stretcher Bond (1200 x 600mm stretcher bond pattern) perpendicular to kerb.

Colour:
"ABILOX' Warm Grey (integral colour)

Supplier:
Ability Building Chemicals
124 Northern Road,
West Heidelberg,
Victoria, 3081
Ph. 9457 6488
Fax. 94584683

COLOUR TO CONCRETE APPLICATION:

Colour for insitu concrete paving shall be achieved by adding Ability Building Chemicals "ABILOX' UV resistant colour pigment in cast-in place concrete through entire mix.
The particular 'ABILOX' brand of fine colour pigment powder known as 'ABILOX' Black Iron Oxide CAF – X2, shall be added to the transit mixer truck containing all of the premixed concrete materials. (The minimum characteristic compressive strength specification for the mix shall be f/c 25 Mpa at 28 Days).

The 35kg net, of the above stated 'ABILOX' pigment shall be added to every cubic metre of the wet plastic concrete which shall then be efficiently re-mixed and the pigment grains uniformly dispersed in the stationary transit mixer truck for exactly 10 minutes at the fastest mixer barrel speed. Each consecutive load of concrete shall have exactly the same amount of 'ABILOX' colour pigment added (35kg bag/m3) and be mixed to the SAME colour uniformity for exactly the SAME time before discharge.

The resultant 'ABILOX' Warm Grey coloured plastic concrete shall then be correctly handled, placed and site processed in normal ways. It shall be discharged, in place and the correct grade of reinforcing steel in place on bar chairs, adequately vibrated and compacted and then finished, jointed and continuously cured, according to the above Concrete Work Specification.

Concrete:
25 Mpa concrete to AS 3600.

Base:
Provide fine crushed rock base compacted to 98% of modified maximum dry density and graded to falls. FCR shall be 50mm thick.

Minimum slab thickness:
75 mm to all areas.

Reinforcement:
Provide F62 mesh, centrally placed.

Standard Paving & Kerb

Curing:
To AS 3600 clause 19.1.5. Protect fresh concrete from premature drying and from excessively hot or cold temperatures. Maintain the concrete at a reasonably constant temperature with minimum moisture loss for the curing period. Concrete exposed to rain before it has set, including during mixing, transport or placing, shall be liable to rejection.

Sequence of pours:
Minimise shrinkage effect by pouring the sections of the work between approved construction joints in a sequence such that there will be suitable time delays between adjacent pours.

Expansion joints:
Provide expansion joints in the insitu concrete paving at min. 12m centres and along the junction with precast paving, along the back of kerbs, and adjacent to walls. Expansion joints shall be 10mm wide and shall consist of 10mm Abelflex closed cell polythene foam jointing material or approved equivalent.
HPL by Tremco (colour grey) sealant or approved equivalent shall be placed in the joint to make a flush joint with the finished surface level.

INSITU CONCRETE PAVING TO ROUNDABOUT

Location:
Supply and lay coloured insitu concrete paving to the centre of the roundabout as indicated on the Drawings.

General -
Finished paved surface shall be uniform and even and conform to the following tolerances:
(I) Departure from any design level by not more than + or - 3mm
(ii) Any lipping of adjacent units not more than 2mm

Colour:
Grey (integral colour) to match roll over concrete kerb

Concrete:
25 Mpa concrete to AS 3600.

Concrete finish (to approved sample panel):
Finish: Smooth finish

Tool Pattern:
Radial tooled to pattern indicated

Base:
Provide fine crushed rock base compacted to 98% of modified maximum dry density and graded to falls. FCR shall be 75mm thick.

Minimum slab thickness:
150mm minimum.

Reinforcement:
Provide F82 mesh, min 50mm cover.

Curing:
To AS 3600 clause 19.1.5. Protect fresh concrete from premature drying and from excessively hot or cold temperatures. Maintain the concrete at a reasonably constant temperature with minimum moisture loss for the curing period. Concrete exposed to rain before it has set, including during mixing, transport or placing, shall be liable to rejection.

Sequence of pours:
Minimise shrinkage effect by pouring the sections of the work between approved construction joints in a sequence such that there will be suitable time delays between adjacent pours.

Expansion joints:
Provide expansion joints in the insitu concrete paving as indicated and along the back of the kerb, and concrete wall. Expansion joints shall be 10mm wide and shall consist of 10mm Abelflex closed cell polythene foam jointing material or approved equivalent.
HPL by Tremco (colour grey) sealant or approved equivalent shall be placed in the joint to make a flush joint with the finished surface level.

Dowells:
Provide 300mm long y12 smooth dowel rods at 600mm centres, keyed into roll over kerb and concrete retaining wall.

Standard Paving & Kerb
Granitic Gravel Paving

SPECIFICATION DESCRIPTION

Base Course

The base course for the granitic gravel will consist of a minium depth of 150mm compacted Class A fine crushed rock, formed and compacted in two layers to achieve a minimum density of 98% Modified Relative Compaction.

Finishing Course

The finishing course will consist of a 5mm ø maximum aggregate, a minimum 50mm compacted thickness 'Tooborac fine grained, yellow / brown, granitic gravel of low plasticity, as supplied by Rocla Quarry Products (or an approved equivalent to the satisfaction of the superintendent), with a pH range of 4-7, and a maximum silt content of 6% (by volume) as specified by the AS 1141-33.

A sample of the granitic gravel should be provided by the Contractor for approval by the client's representative prior to delivery and placing on site.

The gravel material shall be laid over the compacted FCR sub base and well watered (without saturation). Water activates Stabilizer™ so it is essential that the full depth of stabilised material is moistened. The gravel shall then be levelled and compacted to achieve the required fall and levels.

Compaction shall be a static roller to a tolerance of plus or minus 5mm of the finished surface level when measure with a 3m straight edge. The finished surface shall be free draining, not liable to ponding and flush with all adjoining edges. Compaction shall commence only after wetting of the entire gravel profile, ensuring the material is moist, but before any surface becomes evident. The material shall be moist but not wet. Compact to a minimum density of 98% Modified Relative Compaction.

The site shall be divided into four sub areas and a minimum of one field density test shall be taken from a representative point for each sub area as base and finished surface levels. Testing shall include laboratory compaction (modified) and field density and shall be carried out in accordance with AS 1289. The cost of tests, including re-testing of previously rejected portions shall be deemed to be included in the contract sum of rates.

MAINTENANCE

Timely maintenance will assist with the success of any granitic gravel surface. Regular sweeping of the adjacent pavements will be required. This should not need to be more frequent than the current footpath sweeping, that is necessary to avoid the accumulation of litter. The maintenance regime and systems required for the gravel surface will be different from the adjacent concrete pavements, however comparable to the time and resources currently given to the maintenance cleaning of hard pavements in this precinct. The following points need to be incorporated into maintenance contracts for granitic gravel areas of this nature.

Prevent depressions from wear, causing ponding and a surface unsuitable for pedestrian activity.

The material must not be allowed to become lower than the surrounding surface containing it, as surface drainage becomes a problem, and the uneven edge surfaces become dangerous for pedestrians.

Prevent the build up of large amounts of loose gravel, usually caused by water rushing over the surface and washing the clay content from the gravel. Regular cleaning out of the storm water silt trap will be required.

Maintain the surface by raking cigarette butts, and fine rubbish with a leaf rake, and not by the means of a mechanical street sweeper.

The granitic gravel is to be topped up or resurfaced as required, but not to a height above the surroundings, causing the materials to wash onto the surrounding surfaces. When resurfacing or adding granitic gravel the material must be compacted as with initial installation. Failure to compact top dressing on tree pits around the CBD is a common current problem.

The granitic gravel used to resurface wear areas is to be of the same material and compacted in accordance with the installation specification.

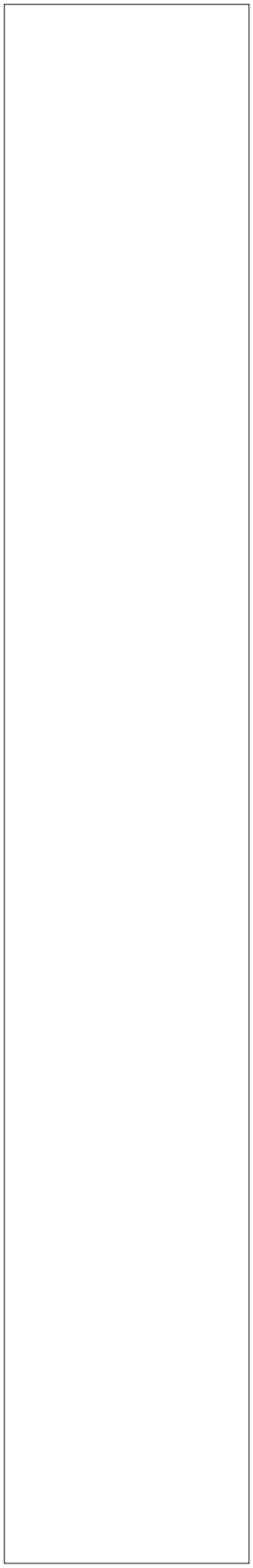
Soft Landscaping:

L 000 Grassed Areas

L 010 New Grassing
L 020 Standard Grassed Areas Specification

L 100 Advanced Tree Planting

L 110 Advanced Tree Planting in Lawn &Paving (typical)
L 120 Advanced Tree Planting in Road Reserve (typical)
L 130 Advanced Tree Specification
L 140 Shepparton's CBD Tree Planting Plan



Grassed Areas

DESIGN PHILOSOPHY

The use of grassed areas in the Shepparton City Centre provides a soft surface that gives relief and visual contrast to the predominantly hard surfaces of roads and pavements in the central area. These grassed areas are located in median and nature strips where they will not be damaged by pedestrian traffic. Grassed areas, in the appropriate locations in the centre of Shepparton, can also provide places for pedestrian rest and relaxation.

Turf, seed for grass, sprigging and hydroseeding are the four techniques used in the Shepparton City Centre to produce grassed surfaces.

Turf can be used for the production of grassed surfaces where the location of the grassed area requires it to be used in a short period of time or seasonal limitations do not favour the growth of grasses.

The hydroseeding and seed for grass mixes have a quick establishment period and should be sown in autumn only. Hydroseed for grass is planted in areas of significant size, over 100 square metres, such as in median strips. Seed for grass can be used for small areas that are difficult to access with hydroseeding and do not warrant the purchase of turf.

Sprigging is used to establish warm season grasses and is usually performed in the spring or early summer. Small sprigs of the root area of the desired grass is either planted using special machinery or alternatively rotary hoed into the surface.

In some instances existing grass areas may need to be revitalised by top-dressing using the same seed mix.

Instant Turf

TURF TYPE

All mown type grass should be warm season varieties. These grasses are low water use, tolerate drought conditions and require less moving the English type turf. These grasses include couch, kikuyu and buffalo. Other grasses establishing similar characteristics may be acceptable but advice should be sought from the Waste & Open Space department prior to committing to other varieties.

SUPPLIER

Available from Council Approved Supplier

CONTACT

COGS Depot
ph. 03 5832 9350

LAYING OF TURF

Preparation:
With topsoil raked smooth and lightly watered the turf shall be laid in a stretcher bond pattern. Edges shall be cut with a sharp knife and shall be firmly butted to adjoining strips. The turf shall be pushed, not pulled into position, and shall not be stretched.
Any occasional gaps shall be filled with topsoil and tamped. The entire laid surface shall be tamped with a flat board or lightly rolled. Excess traffic shall be avoided over newly laid areas.
Newly laid areas shall be watered during laying and more thoroughly at the end of each day to saturate the soil to a depth of 75-10mm. During hot, dry conditions turf may require watering twice a day. Watering shall be at least daily for the first week except in periods of heavy rain.
Handling:
Turf shall be delivered to the site within 24 hours after being cut and shall be installed within 36 hours after being lifted from the nursery. During dry, windy, weather the stacks of turf shall be sprayed with water and covered with hessian to keep them moist.
Fertiliser:
A prepared mix of approved lawn starter fertiliser (N.P.K. ratio 12:112:8) shall be spread evenly over the prepared surface. The fertiliser shall be raked into the bed to a depth of 50mm and applied at the time of turfing.

Hydroseeding

SEED SCHEDULE

Council Approved Seed Schedule

Mix type / Seed species

Provide 5% Kykuyu in Rye grass mixture (turf type)

Application rates (kg/ha)

1 kg per 25 m2

SUPPLIER

Valley Seeds Pty Ltd.
ph. 03 5797 6203
fax. 03 5797 6307

HYDROSEEDING PREPARATION

Hydroseeding of this seed blend must only occur in the autumn.
Generally hydroseeding shall be the preferred method of grass seed application. An approved experienced hydroseeding contractor shall carry out all works.
Seed pretreatment: Place in a calico bag those species of seed to be pre-treated, and immerse in water kept at a temperature between 80°C and 95°C for a period of ten minutes. Do not boil. Allow to cool and to soak for 24 hours, then use immediately.
Hydroseeding mixture: A slurry of seed mixture, fertiliser, dye and water.
Use grass seed mixes and fertilisers as specified below.
Mixing: Thoroughly mix the slurry in a purpose-made mechanical mixer.
Binder: Refer to Binders. For application to sloping areas include a bitumen emulsion or polymer binder, either as part of the mix, or applied separately.
Application rates: Seed mixture: The rate applicable to the mix type (as previously specified).
Mulch: Not less than 2.5 t/ha with seed, or 5 t/ha without seed.
Bitumen emulsion binder: 2000 L/ha of residual bitumen.
Polymer binder: 250 L/ha.

PREPARATION

Scarify the area to be seeded to provide a firm friable seed bed. If the area is to have added topsoil, place it before scarifying.

Hydroseeding (cont.)

APPLICATION

Moisten the topsoil to its full depth before applying the slurry. Apply the slurry using high pressure pumping equipment operated by trained personnel. Spray the mixed slurry under pressure, maintaining a thoroughly mixed supply, operating on a front so that the mixture is evenly distributed over the area. Complete each front before commencing the next.

WATERING

Water the seeded area with a fine spray until the topsoil is moistened to its full depth. Continue watering until germination. Keep the surface damp and the topsoil moist but not waterlogged. After germination, water to maintain a healthy condition, progressively hardening off to the natural climatic conditions.

HYDROSEEDING CONTRACTORS:

Hydroseeding and fertilising works shall be carried out by qualified and experienced hydroseeding contractors. These include:
BWD (Hydraulic Seeding) Pty Ltd
Cranbourne, Victoria
ph. (0359) 961 677
Aquaseeding Pty Ltd
505 Canterbury Road, Vermont, Victoria
ph. 9874 2194
Northern Spray Seeding
P.O box 1250 Yeppoon 4703
ph. 04 3862 36777
If a hydroseeding sub contractor other than those listed above has been selected by a tenderer, this sub contractor (including a list of personnel, experience and equipment), should be nominated with the tender.

Seed for Grass

SEED SCHEDULE

Council Approved Seed Schedule

Mix type/Seed species:

Provide 5% Kikuyu in a Rye mixture

Application rates (kg/ha):

1 kg per 25 m2

SUPPLIER

Available from Council Approved Supplier

CONTACT

COGS Depot
ph. 03 5832 9350

PREPARATION

Hydroseeding of this seed blend must only occur in the autumn.
Use seed mixtures which are thoroughly premixed with a bulking material such as safflower meal. Use fresh, clean new seed. Do not use wet, mouldy, or otherwise impaired seed.
Before sowing submit a certificate from the supplier identifying seed species and germination viability.

SPRIGGING

TURF TYPE

Couch sprigs (sports areas) or Kikuyu (parks) sprigs

Application rates (kg/ha):

30kg per 1000m2

SUPPLIER

Available from Council Approved Supplier

CONTACT

COGS Depot
ph. 03 5832 9350

SOWING

Use either an inline planter or rotary hoe into surface.

Topdressing for Grass

Top dress existing grassed areas with 25mmm of imported approved topsoil as nominated in the Standard Works Contract. Scarify the area to be seeded to provide a firm friable seed bed.
Apply "Premiership Dry Ground" by Valley Seeds, or similar approved, as nominated above in Seed for Grass.
Sow only in autumn months.

Standard Grassed Areas Specification

Standard Preparation for Grassed Areas

All preparation of grassed area is to conform to specification nominated in the Standard Contract supplied by the Greater Shepparton City Council Council.

SUBSOIL PREPARATION

Excavated lawn areas:

Remove all weeds, roots, builders rubbish and other debris as required to achieve the required design levels for lawn areas. Shape the subsoil to fall to subsoil drains where applicable. For excavation into natural soil, break up the subsoil to a further depth of 100mm.

Cultivation:

Cultivate to 100mm. Do not disturb services or tree roots; if necessary cultivate these areas by hand. During cultivation thoroughly mix any materials required to be incorporated into the subsoil. Cultivate manually within 375mm of paths or structures. Remove stones exceeding 25mm, clods of earth exceeding 50mm, and any weeds, rubbish or other deleterious material brought to the surface during cultivation.

SUBSOIL ADDITIVES

Gypsum, 2 kg per m^2, in upper 100mm layer of subsoil. Apply after ripping or cultivation at manufacturer's recommended procedure and rates.

TOPSOIL

Topsoil to be imported or sourced from the site as nominated in Design Documentation Drawings.

Imported Topsoil:

Imported topsoil is to comply generally with texture classification and typical uses of AS 2232 Table B2.

Imported topsoil for grass is to be Medium (Sandy Loam) 100mm deep or as nominated on drawings. Supply and spread as indicated on the Drawings. Topsoil to be from an approved supplier. Topsoil raised to the standard of appropriate type by use of additives may be used subject to compliance with relevant test criteria.

PLACING TOPSOIL

Contamination:

Where diesel oil, cement, cement or other phytotoxic material has been spilt on the subsoil of topsoil, excavate the contaminated soil, dispose of it off site and replace it with site topsoil or imported topsoil, as directed to restore design levels.

Placing:

Place the appropriate topsoil on the prepared subsoil. Spread and grade evenly, making the necessary allowances so that the required finished levels and contours may be achieved after light compaction, and grassed areas may be finish flush with adjacent hard surfaces such as kerbs, paths and mowing strips, where required.

Compaction:

Prevent areas of excess compaction from being caused by constructional plant. Compact lightly and uniformly in 100mm layers. Avoid differential subsidence and produce a finished topsoil surface which is at: design levels, smooth and free from stones or lumps of soil, graded to drain freely, without ponding to catchment points, graded evenly into adjoining ground surfaces and ready for planting.

LAWN FERTILISER

Lawn Starter:

Council Approved Lawn Starter, 2.5kg per $100m^2$.

Lawn Maintenance:

Council Approved Lawn Fertiliser, 2.5kg per $100m^2$.

Application:

Apply lawn fertiliser evenly over the prepared seed bed. Starter fertiliser shall be raked into seed bed to a depth of 50mm at the time of sowing. Apply Lawn Fertiliser during maintenance period to assist with establishment.

SITE WORKS TEMPORARY FENCING

Once seeding works have been completed erect a temporary fence to the newly seeded or turfed areas. Where fences have been constructed to protect the existing grass areas these may be adjusted as required to provide protection to the new grass areas.

Standard Grassed Areas Specification

Fence shall be 1.2 m high strand wire (double row of wire) secured to star pickets (nom 5m centres). Provide a fluorescent flagging tape tie between the two strands of wire.
Remove the temporary protective fence at the end of the grass establishment period.

MAINTENANCE

The contractor is to maintain the whole of the landscape works performed under the Contract for the entirety of the Defects Liability Period as stated in the Annexure of the Contract.
Maintenance of the grassed areas will include; weed control, watering, mowing, re-seeding, pest and disease controlled, repairs to erosion treated areas.
Weed control in lawn areas shall include broadleaf and noxious weeds.
Lawn shall be watered to ensure a good healthy and vigorous growth.
Mowing of lawn shall be to maintain grass height to 25-100mm.
Re-seeding of grassed areas shall occur if within three months growth the area of cover is less that 90%. This shall be resown at the contractors expense.
All lawns are to be free of insect infestation and plant disease.

Advanced Tree

DESIGN PHILOSOPHY

The use of advanced trees in the City Centre is a part of the overall Street Tree Strategy for City of Shepparton..

Planting of advanced trees as proposed for the city centre reinforces the existing structure of planting. The native Eucalypt trees are used at key intersections such as roundabouts and centre of road plantings to emphasize an "Australian" character. This is contrasted with the use of Plane trees for the edge of road planting. The original street planting theme for the CBD used two species Plane tree - one following east-west alignments, London Plane (Platanus hybrida), and the other following north-south alignments, Oriental Plane (Platanus Orientalis). More recent Plane tree plantings have favoured the use of Platanus x acerifolia (London Plane).

In the main streets new advanced trees are planted at regular intervals reinforcing the formal qualities of the street and creating visual spatial definition of the urban environment. Where possible the advanced trees are planted to reinforce any existing street tree planting. Trees are to be planted in tree pits or compacted granitic gravel nature and median strips (see Urban Design Manual H 050 & H 060). Trees are aligned on street edges (either on footpaths or on the edge of the road) and in median strips to the centre of the road. This alignment of street tree planting will reduce the scale of the originally broad and exposed main streets, providing shade for pedestrians and carparking during the spring, summer and autumn seasons. Advanced trees planted in median strips provide structure to central carparking aisles. An additional benefit of the street tree plantings includes the definition of pedestrian pavements from vehicular traffic and thus increasing the safety of the Shepparton City Centre.

L 100 Advanced Tree Planting

L 100 Advanced Tree

Advanced Tree in Lawn & Paving

Apply 'Osmocote' or similar approved slow release fertiliser. For deciduous tree (Plane Tree) provide 80g per tree, NPK 18-4.7-8.3. For evergreen tree (Eucalypt) provide 80g per tree NPK 17-1.6-8.7.

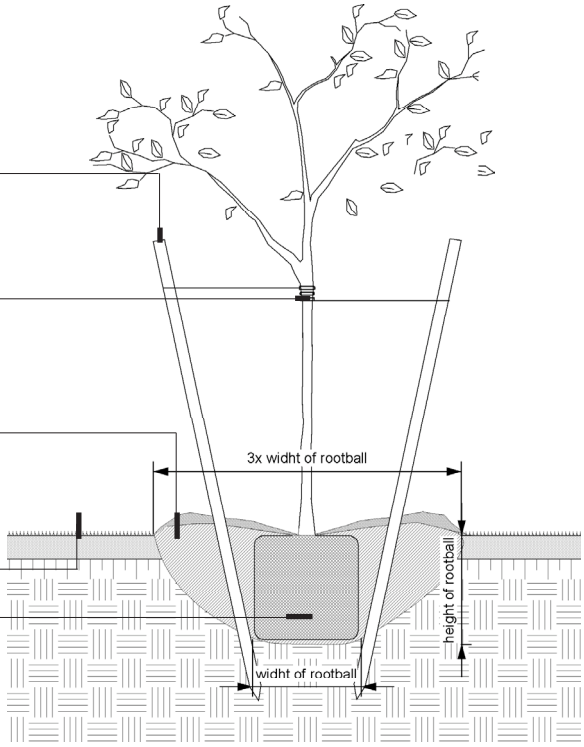
2 No 2000 x 35 x 35mm hardwood stakes pointed at one end and driven 600mm min. at 10 degree angle into ground, clear of rootball.

Tree to be secured to each stake with rubber or canvas figure eight ties. Fix ties to stake securely.

Form soil watering ring. Provide 75mm depth of 12mm fine organic mulch.

Lawn as specified.

Use back hoe to excavate hole to the depth of the root ball. Scarify base and edges of hole. Backfill with mix of 50% site topsoil and 50% approved imported topsoil.



Advanced Tree in Lawn Not to Scale

Advanced or Semi-Advanced tree (Refer to Plant Schedule) Fertilise with Osmocote 12-14 Month Fertiliser 80 gsm per tree.

2. No Canvas and rubber ties
Tree to be secured to each stake with rubber or canvas figure eight ties. Fix ties to stake securely.

Hardwood stakes
2 No 2000 x 35 x 35mm hardwood stakes pointed at one end and driven 600mm min. at 10 degree angle into ground, clear of rootball.

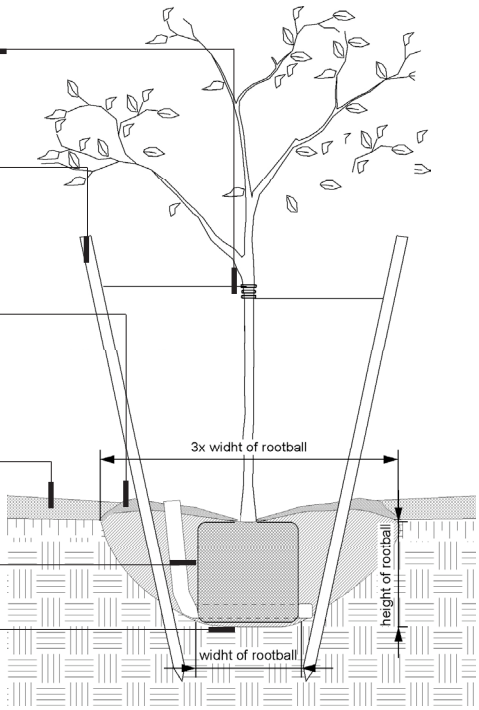
Mulch ring
Form 1000 mmø soil watering ring. Provide 75mm depth of 12mm fine organic type mulch during tree establishment period.

Granitic gravel mulch
75mm ligthly compacted granitic gravel paving beyond tree mulch ring.

Watering Sleeve
1000mm long x 90mm diameter Ag. Coil.

Hole
Use back hoe to excavate hole to the depth of the root ball. Scarify base and edges of hole. Backfill with mix of 50% site topsoil and 50% approved imported topsoil.

Note: Stakes. In extremely eposed sites provide 3 no. stakes and ties per tree.



Advanced Tree in Gravel
Not to Scale

SUPPLIER

Advanced Trees:

Advanced trees to be sourced from approved established tree nurseries. It is recommended that trees to be pre-selected prior to the initiation of the Contract, preferably when trees are in leaf.

DESIGN CONTACT

Urban Initiatives
ph. 03 93296844
fax: 03 93296336

MATERIALS

Mulch Ring (Lawn Only):
10-12mm Fine Pine Bark Mulch.
75mm Depth.
Compacted Granitic Gravel:
Yellow Tooborac Granitic Gravel
75mm Depth.
Rocla Quarry Products.
ph. 03 9548 2684
Refer to Urban Design Manual H 160 Granitic Gravel Paving and H 510 Standard Paving and Kerb Specification.
Hardwood Stakes:
Hardwood Stakes 35 x 35 x min 2000mm, to be durable hardwood, free of knots and twists and pointed at one end.
3 No. Stakes per trees greater that 2.5 metres.
Ties:
For trees taller that 2.5 metres provide 50mm wide Hessian webbing fixed securely to stakes.

RECOMMENDED USE

Greater Shepparton City.

MAINTENANCE

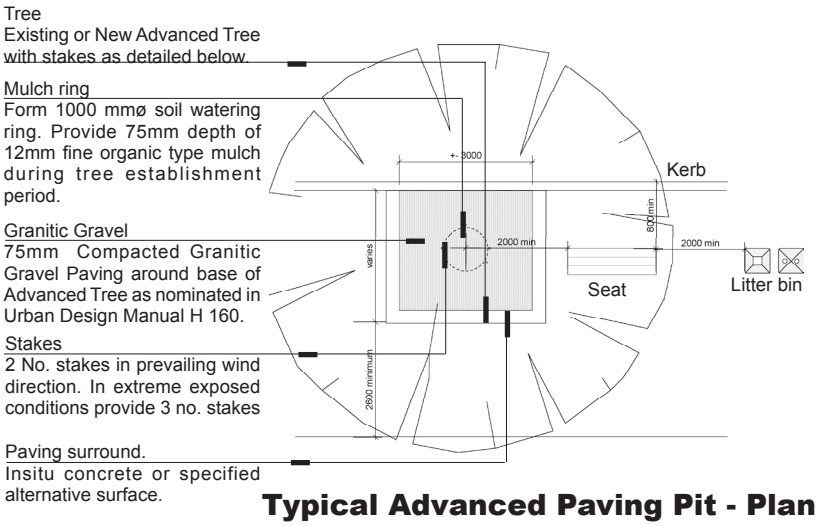
It is recommended that Council continue to water Advanced Trees for the following three years after the completion of the defects Liability Period. Watering program as instructed by Landscape Architect.

DOCUMENTATION

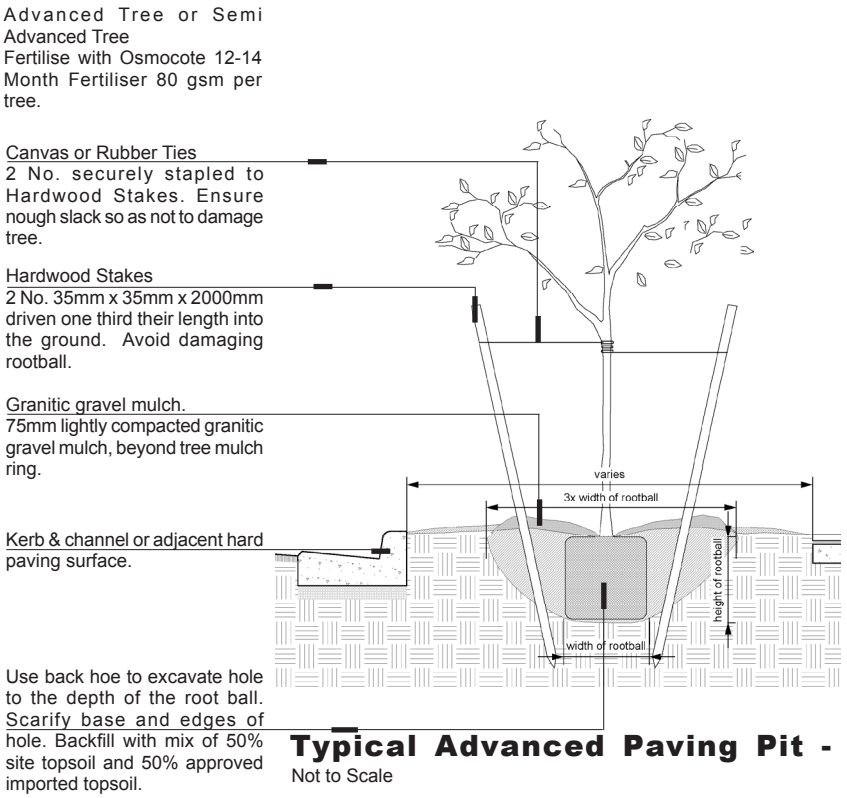
Cross reference with Site Layout Design Documentation Drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects

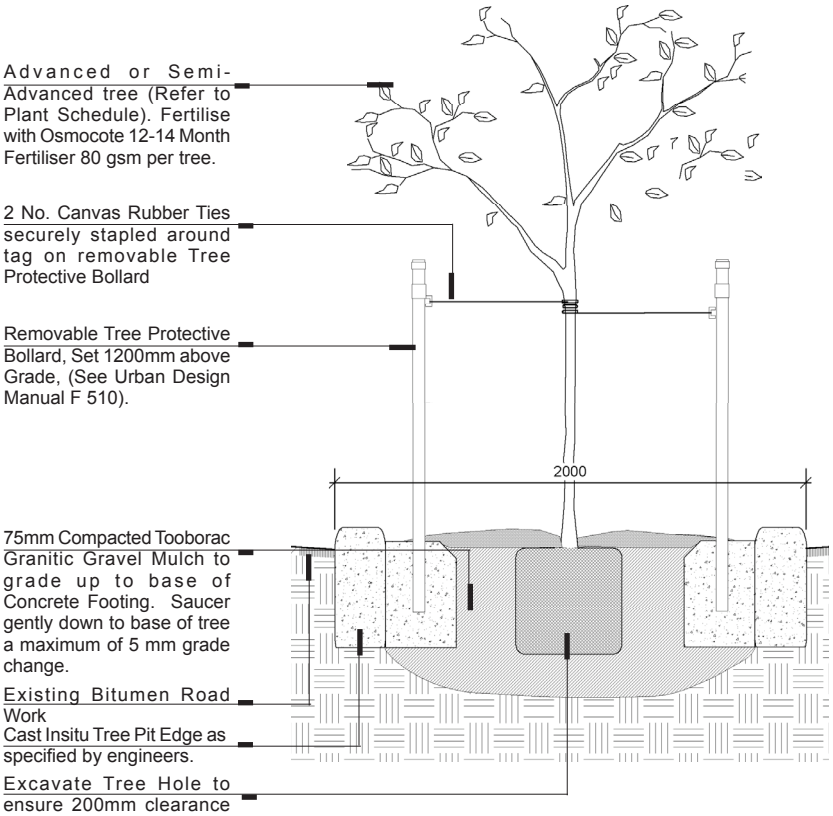


Typical Advanced Paving Pit - Plan
Not to Scale



Typical Advanced Paving Pit -
Not to Scale

Advanced Tree Planting in Road



Advanced Tree in Road Reserve Tree Pit Section

Not to Scale

SUPPLIER

Advanced Trees:

Advanced trees to be sourced from approved Established Tree Nurseries. It is recommended that trees to be pre-selected prior to the initiation of the Contract, preferably when trees are in leaf.

DESIGN CONTACT

Urban Initiatives
ph. 03 93296844
fax: 03 93296336

MATERIALS

Compacted Granitic Gravel:
Yellow Tooborac Granitic Gravel 75mm Depth.
Rocla Quarry Products,
ph. 03 9548 2684
Refer to Urban Design Manual H 040 Granitic Gravel Paving and H 130 Standard Paving and Kerb Specification.

Tree Protective Bollard:
Supplied by Furphys Foundary.
ph. 03 5831 2777
Refer to Technical Note F 510 Tree Protective Bollard.

Ties:
For trees taller that 2.5 metres provide 50mm wide Hessian webbing fixed securely to Bollards.

RECOMMENDED USE

In Shepparton City Centre.

MAINTENANCE

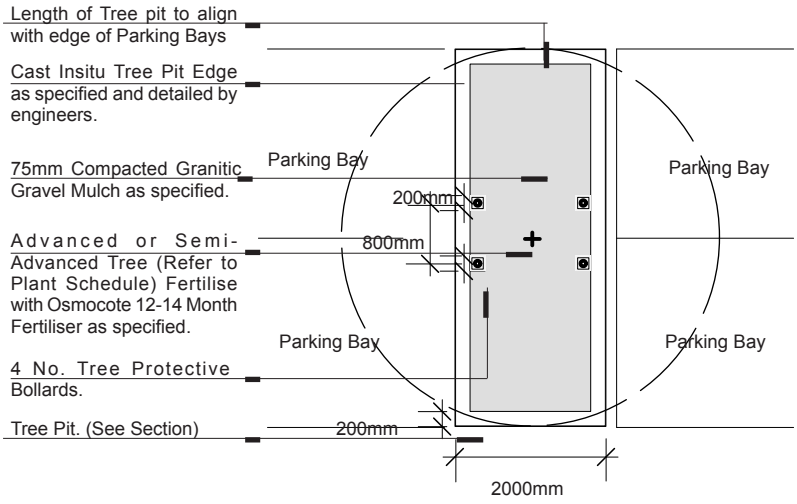
It is recommended that Council continue to water Advanced Trees for the following three years after the completion of the defects Liability Period. Watering program as instructed by Landscape Architect.

DOCUMENTATION

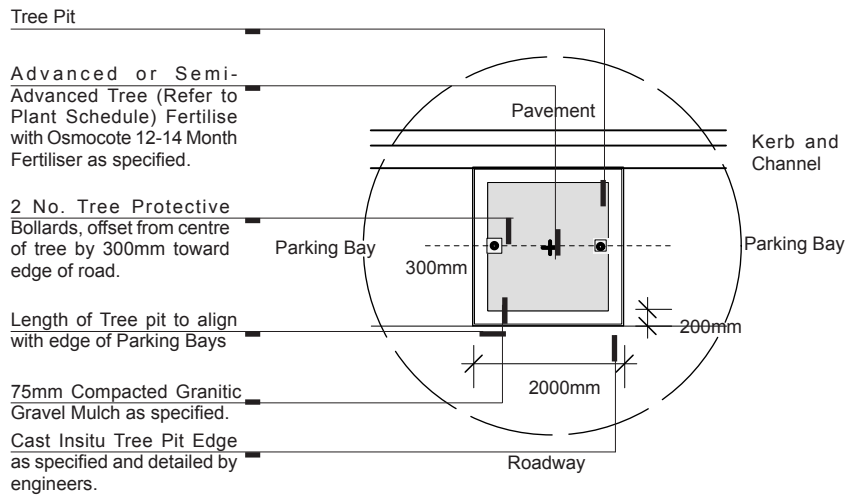
Cross reference with Site Layout Design Documentation Drawings.

RESPONSIBLE COUNCIL OFFICER

Manager - Engineering Projects



Advanced Tree in Centre of Road Tree Pit Plan Not to Scale



Advanced Tree in Edge of Road Tree Pit Plan Not to Scale

Standard Advanced Tree Planting Specification
Standard Preparation for Advanced Trees:

SUBSOIL PREPARATION

Excavated lawn areas:

Remove all weeds, roots, builders rubbish and other debris as required to achieve the required design levels for Advanced Trees. Excavate required depth for Advanced tree ensuring a minimum clearance of 200mm to sides and base of rootball of tree. Shape the subsoil to fall to subsoil drains where applicable. For excavation into natural soil, break up the subsoil to a further depth of 100mm.

Cultivation:

Cultivate to 100mm. Do not disturb services or tree roots; if necessary cultivate these areas by hand. During cultivation thoroughly mix any materials required to be incorporated into the subsoil. Cultivate manually within 375mm of paths or structures. Remove stones exceeding 25mm, clods of earth exceeding 50mm, and any weeds, rubbish or other deleterious material brought to the surface during cultivation. Crown and scarify base and edges of hole.

SUBSOIL ADDITIVES

Gypsum, 2 kg per m^2, in upper 100mm layer of subsoil. Apply after ripping or cultivation at manufacturer's recommended procedure and rates.

TOPSOIL

Topsoil to be imported or sourced from the site as nominated in Design Documentation Drawings.

Imported Topsoil:

Imported topsoil is to comply generally with texture classification and typical uses of AS 2232 Table B2.

Imported topsoil for Advanced trees to be Fine (Garden Soil) 200mm deep or as nominated on drawings. Supply and spread as indicated on the Drawings. Topsoil to be from an approved supplier. Topsoil raised to the standard of appropriate type by use of additives may be used subject to compliance with relevant test criteria.

PLACING TOPSOIL

Contamination:

Where diesel oil, cement, cement or other phytotoxic material has been spilt on the subsoil of topsoil, excavate the contaminated soil, dispose of it off site and replace it with site topsoil or imported topsoil, as directed to restore design levels.

Placing:

Place the appropriate topsoil on the prepared subsoil. Spread and grade evenly, making the necessary allowances so that the required finished levels and contours may be achieved after light compaction.

PLANTS

Advanced Trees to have healthy large root systems, with no evidence of root curl, restriction or damage. Trees to be well established, free form disease and pests, of good form consistent with the species or variety. Trees to be hardened off, not soft or forced and suitable for planting in the natural climatic conditions. Trees are required to have a single lead shoot, unless otherwise required by species. Trees are to be weed free.

PLANTING

Deliver plants to the site on a day to day basis and plant immediately after delivery. (Consult Standard Contract for further details).

Locations:

Do not vary the plant locations from those specified. If it appears necessary to vary the locations and spacing to avoid service lines or for other reasons, apply for directions.

Planting Conditions:

Do not plant in unsuitable weather conditions such as extreme heat, cold, wind or rain. In other that sandy soils, suspend excavation when the soil is wet or during frost periods.

Watering:

Thoroughly water the trees before planting, immediately after planting and as required to maintain growth rates free of stress.

Placing:

When the hole is the correct size and not before, remove the plant from the container with minimum disturbance to the rootball, ensure that the rootball is moist and place it in its final position, in the centre of the hole and

plumb. With the tip soil level of the plant root ball level with the finished surface of the surrounding soil.
Backfilling:
Backfill with topsoil moisture. Lightly tamp and water to eliminate pockets of air. Ensure that topsoil is not placed aver the top of the root ball, so that the plant stem remains the same height above ground as it is in the container.

FERTILISER

Osmocote 12-14 Month fertiliser 80 gsm per tree.
Application:
Place fertiliser pellets around the plants at the time of planting, at the rate recommends as per manufacturers instruction.

SPRAYING

Immediately report any evidence of insect attack or disease amongst plant material. Where required spray with insecticide or both in accordance with the manufacturers recommendations. Submit proposal before starting this work.

STAKES AND TIES

Unless otherwise nominated on drawings, such as the tree protective bollards to trees planted in road medians, stakes to be durable hardwood, straight and free from knots and twists and pointed at one end. Drive stakes into the ground with a minimum of one third of their length, avoiding damage to the root system.
For trees greater than 2.5 metres high provide three 50 x 50 x 2600 stakes per plant.
Provide ties fixed securely to stakes one tie at half the height of the main stem others as necessary to stabilise the plant. For trees greater than 2.5 metres high provide 50mm hessian webbing stapled to the stakes.

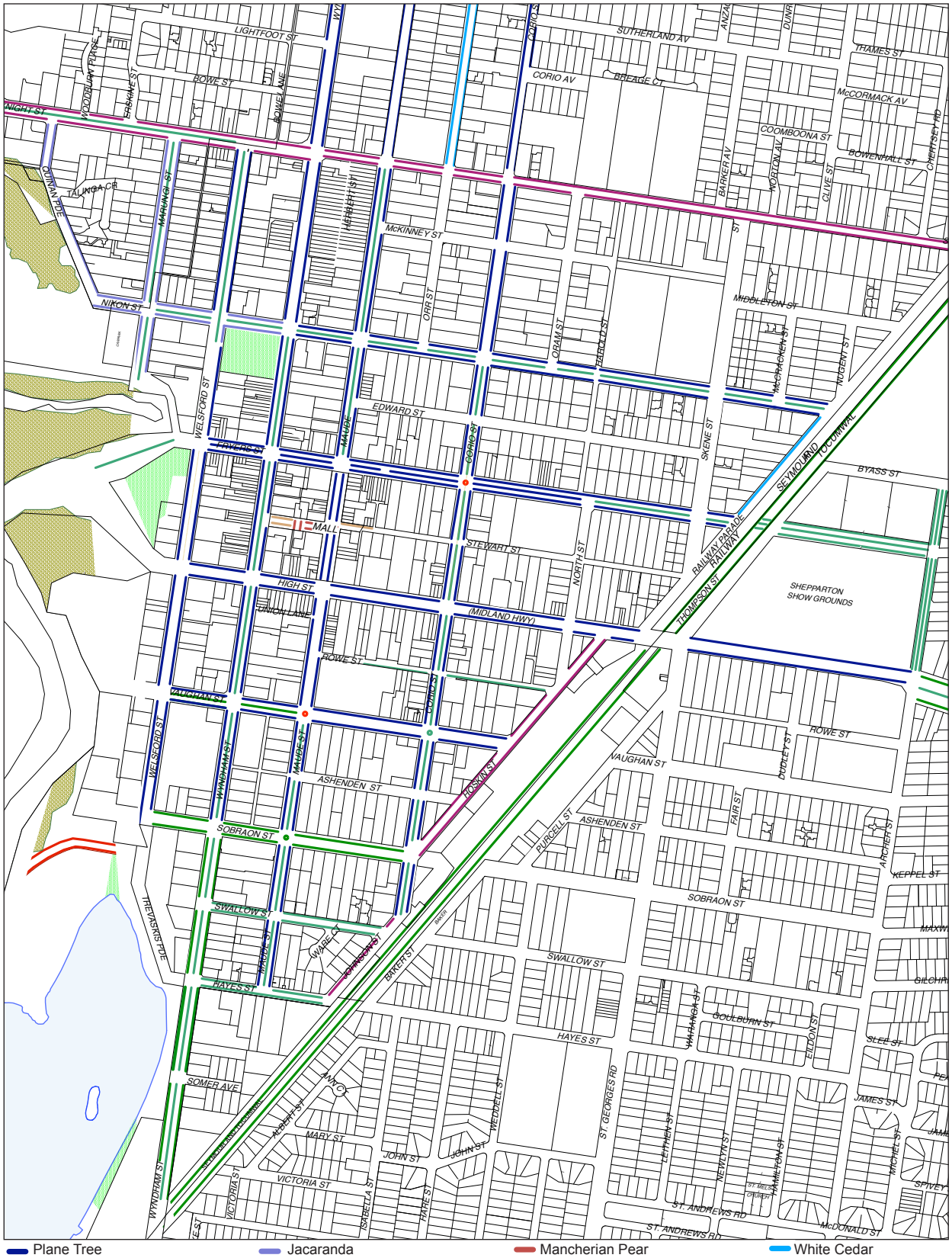
WATERING SLEEVES

Supply and install a slotted flexible watering sleeve as indicated on the drawings.
The sleeve is to be 1 metre long length of 90mm slotted pvc pipe set 20mm above the adjacent ground level, provide a removable solid capped end to ensure the pipe remains free of debris. Nominated details only.

MAINTENANCE

The contractor is to maintain the whole of the landscape works performed under the Contract for the entirety of the Defects Liability Period as stated in the Annexure of the Contract.
Maintenance of the Advanced Trees will include; weed control, watering, pest and disease control, repairs to erosion treated areas.
Weed control shall include broadleaf and noxious weeds.

Shepparton Street Tree Strategy -



- Plane Tree (Platanus sp.)
- Eucalypt (Eucalyptus species)
- Brush Box (Lophostemon confertus)
- Jacaranda (Jacaranda mimisofolia)
- Cherry Plum (Prunus cerasifera 'Vesuvius')
- Honey Locust (Gleditscia tricanthos shademaster)
- Mancherian Pear (Pyrus ussuriensis)
- Maple (Acer x freemanii 'Jefferson Red')
- Scarlet Oak (Quercus coccinea 'Splendens')
- White Cedar (Melia azederach 'australasica')
- Exotic Deciduous
- Exotic Evergreen
- Native Evergreen

GREATER SHEPPARTON

Greater Shepparton City Council Urban Design Manual

A Catalogue of approved furniture, soft and hard landscape details for use in the Shepparton C.B.D.

Sheet 1 of 1

October 2007 **L 140 Shepparton's CBD Tree Planting**

Greater Shepparton City Council Urban Design Manual

A Catalogue of approved furniture, soft and hard landscape details for use in the Shepparton C.B.D.

GREATER SHEPPARTON

October 2007