



# DENILIQVIN PUBLIC DOMAIN TECHNICAL MANUAL

Date: May 2020

REV 4



EDWARD RIVER

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4	Updated Issue	29.05.2020	JH	JH
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# 1.0 BACKGROUND & APPROACH

## 1.1 INTRODUCTION

This Public Domain Technical Manual (PDTM) is to be read in conjunction with the Edward River Council 'Deniliquin Masterplan'.

The PDTM is intended as a primary reference document to establish a strategic direction for the installation of a new and distinctive suite of street furniture and urban infrastructure within Deniliquin Public Domain Precincts.

From a functional perspective, the Manual will provide a framework to improve the quality, consistency and efficient fit out of the public realm. From an "activation" perspective, the Manual will provide a guide to improve the vibrancy, image and appeal of the Town.

The PDTM is aimed primarily at a professional audience involved in planning, designing, constructing and managing development within the Council's public domain.

The Manual has three main user groups in mind:

- Staff within Edward River Council whose decision-making impacts on the public domain.
- Development applicants, and professionals working in the built environment, including consulting planners, architects, landscape architects, and engineers.
- Infrastructure agencies whose public domain works require co-ordination with council assets.

The wider community may also find the PDTM to be of interest in explaining key considerations in designing for the Council's public domain.

## 1.2 STUDY AREA

The accompanying map indicates the extent of the three zones for consistent public domain elements:

- Deniliquin CBD
- Waring Gardens
- Riverfront and Lagoon

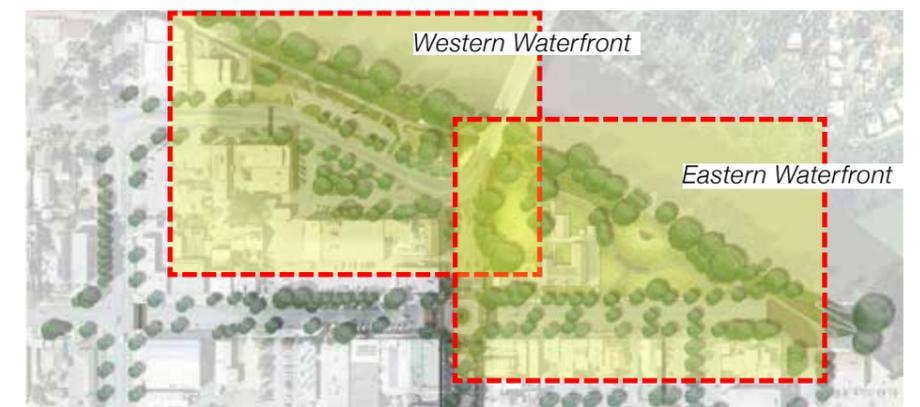
### 1 - CBD PUBLIC DOMAIN INCLUDING CRESSY, NAPIER, GEORGE AND EDWARDES STREETS



### 2 - WARING GARDENS



### 3- RIVERFRONT & LAGOON



## 1.3 DESIGN PRINCIPLES & CONSIDERATION

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This project offers the opportunity to upgrade public realm furniture and treatments to improve amenity, provide greater consistency and contribute to a more lively and active municipality. Key objectives and considerations in the development of the strategy include:

- Sustainability
- Aesthetics, ergonomics and functionality
- Ease of installation and replacement
- Longevity of installation
- Suitability for reuse
- Durability against vandalism
- Maintenance and whole of life costs
- Public safety and compliance with relevant Australian Standards; and
- Universal access

Based on these objectives, the following design principles and considerations have been developed to assist in the selection of furniture and treatments within the Council.

### 1.3.1 Appropriateness of existing street furniture

There is significant variety in the type and style of the existing public realm furniture across the Council. Careful consideration needs to be given to what is used at present, whether those elements are suitable and what new or modified treatments are needed.

### 1.3.2 Appropriateness to the location

The Manual identifies the typical application of the various items of furniture or treatments so that it is clear where they are required and for what purposes, helping to avoid clutter, duplication or the misuse of elements.

### 1.3.3 Consistency

The use of selected furniture elements within the Council is an important consideration and will help to unify the public realm. New furniture items should be simple and contemporary in design to reflect the design qualities, materials and architectural era that they are being manufactured in.

### 1.3.4 Colour and material

Where appropriate and practical, new furniture elements should be left non-painted. The use of stainless steel elements and durable non-painted finishes (such as hardwood timber or composite timber products) should be encouraged to improve durability and minimise maintenance requirements.

### 1.3.5 Function

Each item should be designed or detailed to achieve the fundamental outcome of being suitable for the intended purpose or application. The design and placement of furniture elements should also consider social behaviour, personal comfort and safety.

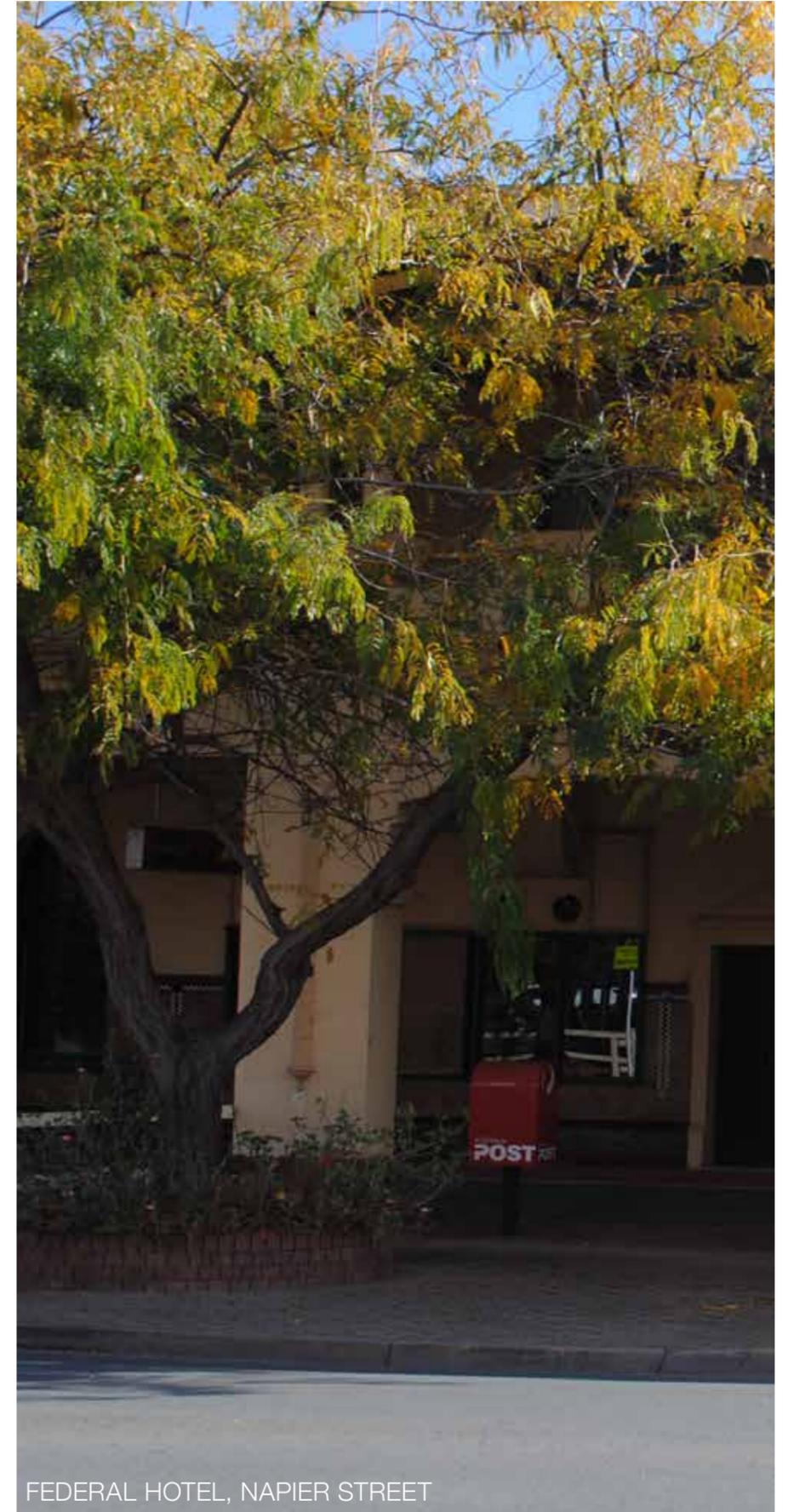
### 1.3.6 Sustainability

Considerations that reduce the ecological impact of furniture elements or urban treatments should be primary to the design and selection process. The design and choice of materials should consider the total impacts and benefits to the environment. This includes the environmental ethics and practices of suppliers; options for the use of recycled materials, plantation timbers, and low embodied energy materials in the production process; use of local and sustainable or plantation timbers; capacity to recycle materials at end of life; use of local suppliers or manufacturers for reduced transport costs etc.

These factors should be considered at all levels of the process in order to minimise environmental degradation and wastage.

### 1.3.7 Design standards, public safety and disability access

The implementation of the Manual will need to address all relevant standards or legislation to ensure that elements do not represent a hazard to either pedestrians or motorists.



FEDERAL HOTEL, NAPIER STREET

## 1.4 SELECTION POLICIES

The design, selection and placement of streetscape elements shall conform to relevant Australian Standards including but not limited to:

AS/NZS 1158 (2010) Lighting for Roads and Public Spaces

AS 1742.15—2007 Manual of uniform traffic control devices—Direction signs, information signs and route numbering.

AS 1428 Design for access and mobility.

AS 1428.1 Part 1: General requirements for access—New building work.

AS 1428.2 Part 2: Enhanced and additional requirements—Buildings and facilities.

AS 1428.3 Part 3: Requirements for children and adolescents with physical disabilities.

AS 1428.4.1 Part 4.1: Means to assist the orientation of people with vision impairment—Tactile ground surface indicators.

AS 1428.5 Part 5: Communication for people who are deaf or hearing impaired.

AS 2890.3-1993 : Parking facilities - Bicycle parking facilities

### 1.4.2 Maintenance

The design and material selection should consider maintenance factors including the ease of replacement of the entire unit, the replacements of parts, the capacity to remove graffiti and whether maintenance can be carried out in-situ or off site. Costs and frequency of recurring maintenance should be assessed at the selection phase. The costs of ongoing maintenance may warrant higher initial expenditure to reduce costs over the long term.

### 1.4.3 Cost

The cost effectiveness of furniture elements and public realm treatments is an important consideration. The expenditure on particular elements will vary according to the locality. High profile areas often warrant a special treatment or higher quality and more durable elements, hence the costs may be higher. Cost should be considered in relation to efficiency of manufacturing, production runs, availability and timing and delivery (i.e. the costs of some elements may be lower if ordered in larger quantities).

### 1.4.6 Supply

To ensure an efficient supply capacity it is preferable that furniture items be commercially available or able to be manufactured locally in a timely manner. Some customised items may be appropriate for high profile projects.

### 1.4.7 Installation

If furniture cannot be maintained in-situ, it should be installed to facilitate removal space for off site maintenance. Installation and footing details will need to consider a range of situations including varying surface finishes, gradients and sub-surface materials. If furniture is to be removed then any subsequent hazards must be minimised due to potential public liability issues.



ARTIST IMPRESSION: CRESSY STREET (WEST FACING)



ARTIST IMPRESSION: CORNER NAPIER STREET & COBB HIGHWAY (WEST FACING)

## 2.0 'DENILIQUIN FAMILY' PUBLIC DOMAIN ELEMENTS

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## 2.1 PREAMBLE

In this section, the street/park furniture elements and treatments have been developed. These are consistent in style and utilise similar materials and design language. The accompanying images illustrate a consolidated suite of elements, mostly off the shelf items, that have been determined as suitable for general use within the Deniliquin Public Domain.

The PDTM identifies all the Public Domain elements, highlighting where and each element is to be located within the associated table diagram. The location extends to:

- Deniliquin CBD
- Waring Gardens
- Riverfront and Lagoon

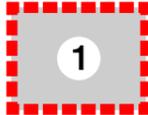
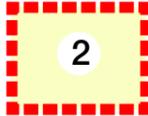
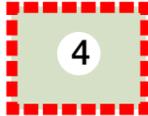
The location is indicative only, however should be considered by Council in future developments or public domain guideline for specific projects. The design and selection of these elements should consider the design criteria and selection policies outlined in Sections 1.1 and 1.3 of the PDTM.

The elements are divided across a series of standard furniture/ treatment explanations and technical details.

<b>PUBLIC DOMAIN ELEMENT</b>	 <b>DENILIQVIN CBD</b>	 <b>WARING GARDENS</b>	 <b>RIVERFRONT &amp; LAGOON</b>
<i>2.3 Paving</i>			
2.3.1 Asphalt Footpath Infill Panels with Banding			
2.3.2 Concrete Unit Paver			
2.3.3 Feature Concrete Unit Paver Panels			
2.3.4 Concrete Footpath			
2.3.5 Asphalt Footpath			
2.3.6 Granitic Gravel			
<i>2.4 Kerb &amp; Thresholds</i>			
2.4.1 Concrete Barrier Kerb			
2.4.2 Concrete Kerb & Channel			
2.4.3 Concrete Semi-Mountable Kerb			
2.4.4 Concrete Pedestrian Crossing			
2.4.5 Concrete Edge			
2.4.6 Tactile Indicators (A & B)			
2.4.7 Exposed Aggregate Concrete Vehicular Threshold			
2.4.8 Traffic Island Infill Concrete - no colour (no detail incl)			
<i>2.5 Furniture</i>			
2.5.1 Steel Bollard			
2.5.2 Timber Bollard			
2.5.3 Bike Racks			
2.5.4 Banners			
2.5.5 Bin Recepticle			
2.5.6 Drinking Fountain			
2.5.7 Bench			
2.5.8 Seating			
2.5.9 Picnic Setting			
2.5.10 Light Pole & Luminaire (Waring Gardens)			
2.5.10 Light Pole & Luminaire (Generally)			
2.5.11 Riverfront Timber Fence			
2.5.12 Coloured Steel Fence Barrier			
<i>2.6 Trees</i>			
2.6.1 Tree in Garden Bed			
2.6.2 Street Tree in Kerb Outstand			

## 2.2 PEDESTRIAN PAVEMENT MAPPING

The pavement mapping is a guide for Council and future developments when determining the type of paving material for pedestrian areas. The following paving materials palette includes but not limited to:

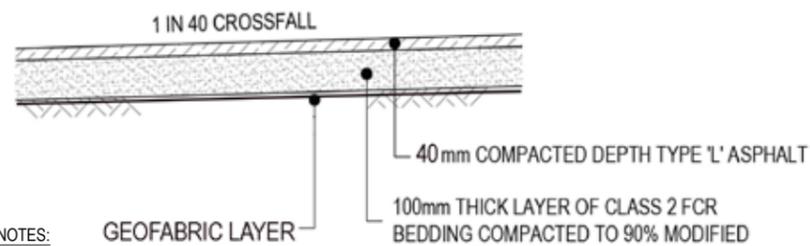
- 
Concrete footpaths
- 
Asphalt Footpath Infill Panels with paver banding
- 
Asphalt to Riverfront edge
- 
Waring Gardens - various finishes



PAVEMENT MAPPING LOCATION IS INDICATIVE ONLY

## 2.3 PAVING

### 2.3.1 ASPHALT FOOTPATH IN FILL PANELS WITH BANDING



1. 'D' = DEPTH OF ASPHALT FOOTPATH  
TYPICAL ASPHALT FOOTPATH DEPTH 'D' = 130mm  
VARIED 'D' MAY OCCUR DEPENDANT ON CBE TYPE

#### TYPICAL 140mm ASPHALT FOOTPATH SECTION

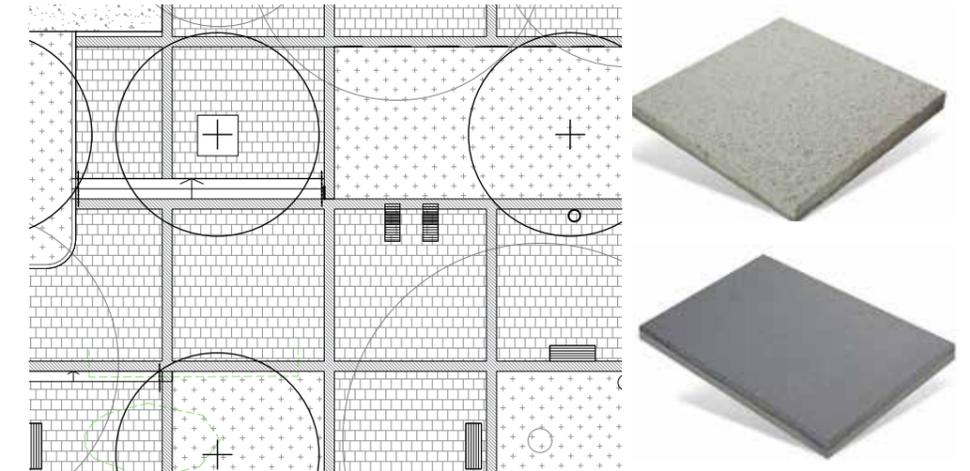
Item:	Asphalt Footpath
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 40mm depth compacted depth Type 'L' Asphalt (size 7mm).</li> <li>– 100mm depth Class 2 FCR</li> <li>– Geofabric layer</li> </ul>
Finish:	– Smooth continuous asphalt finish with minimal joints
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– Install as per Infrastructure Design Manual (IDM) Standard Drawings Version 5.01- SD 206.</li> <li>– Detail not to scale, Indicative only.</li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

### 2.3.2 CONCRETE UNIT PAVING BAND



Item:	Feature Concrete Unit Paver
Supplier:	Adbri Masonry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– 40mm depth compacted depth Type 'L' Asphalt (size 7mm).</li> <li>– 100mm depth Class 2 FCR</li> <li>– Geofabric layer</li> <li>– 20mm wet mortar bed (50/50 sand/ cement).</li> </ul>
Dimensions:	400 x 400 x 40mm depth
Finish:	<ul style="list-style-type: none"> <li>– Riverina colour</li> <li>– Finish flush with surrounding surfaces.</li> <li>– Asphalt sawcut for pavers to have 5mm grout joints or paver lock.</li> <li>– Longitudinal fall minimum 0.5%</li> </ul>
Notes:	<ul style="list-style-type: none"> <li>– Installed as per manufacturers specification and with Councils approval .</li> <li>– Sealed with an approved concrete sealant.</li> <li>– Website reference: <a href="http://adbrimasonry.com.au/homeowners/paving/see-all-paving/euro-stone">adbrimasonry.com.au/homeowners/paving/see-all-paving/euro-stone</a></li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> </ul>

### 2.3.3 FEATURE CONCRETE UNIT PAVER PANELS



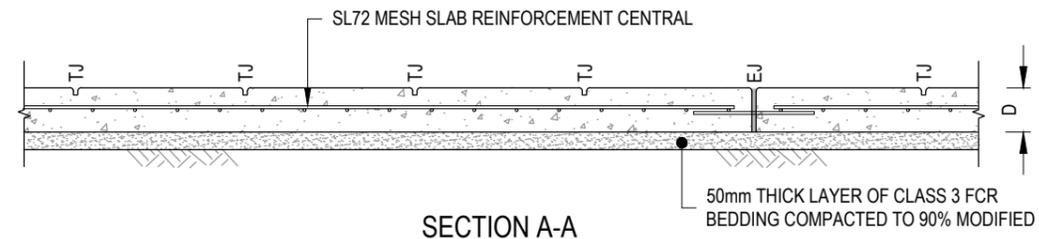
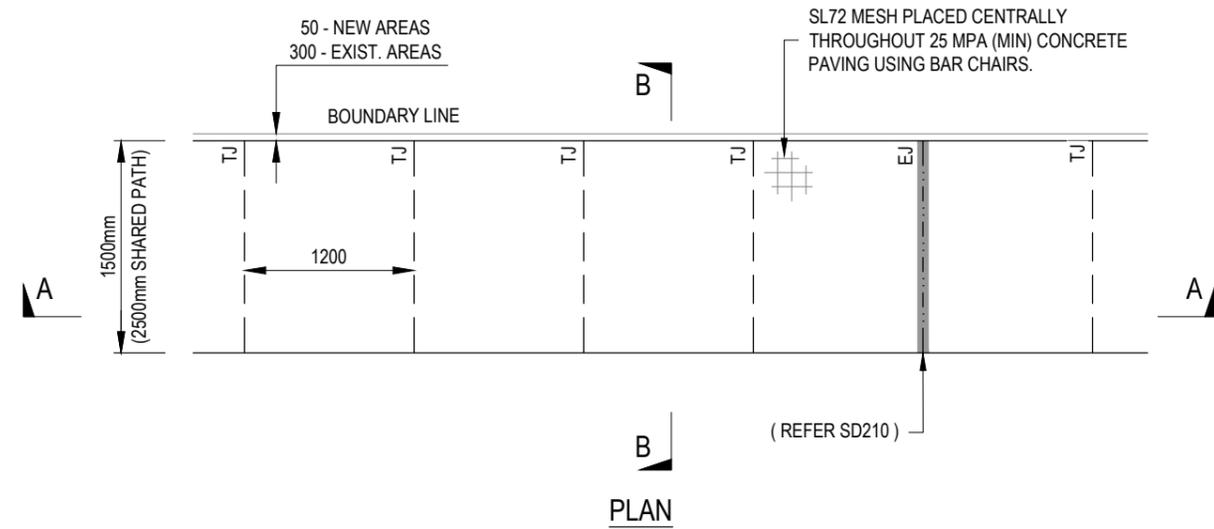
Item:	Feature Concrete Unit Paver Panels
Supplier:	Adbri Masonry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– 100mm depth Class 2 FCR</li> <li>– Geofabric layer</li> <li>– 20mm wet mortar bed (50/50 sand/ cement).</li> </ul>
Dimensions:	400 x 400 x 40mm depth
Finish:	<ul style="list-style-type: none"> <li>– Infill : Riverina colour</li> <li>– Bands : Prague colour</li> <li>– Finish flush with surrounding surfaces.</li> <li>– Longitudinal fall minimum 0.5%</li> </ul>
Notes:	<ul style="list-style-type: none"> <li>– Installed as per manufacturers specification and with Councils approval .</li> <li>– Sealed with an approved concrete sealant.</li> <li>– Website reference: <a href="http://adbrimasonry.com.au/homeowners/paving/see-all-paving/euro-stone">adbrimasonry.com.au/homeowners/paving/see-all-paving/euro-stone</a></li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: green;">●</span> Waring Gardens</li> </ul>

### 2.3.4 CONCRETE FOOTPATH- P05

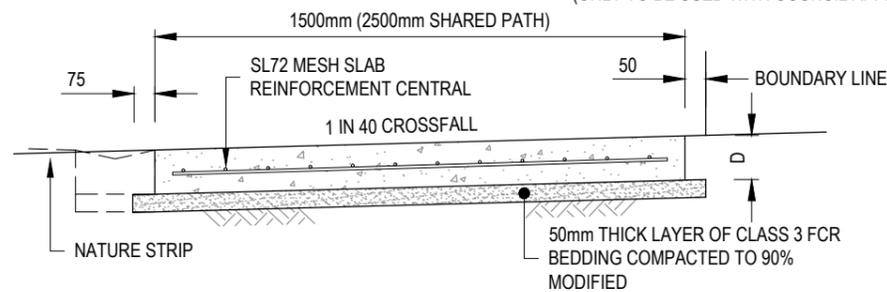


Item:	Concrete Footpath
Location:	CBD & Waring Gardens
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 150mm depth (25MPa) Concrete.</li> <li>– 50mm depth Class 3 crushed rock base.</li> </ul>
Finish:	Light broom finish
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– Install as per Council's development manual</li> <li>– Detail not to scale, Indicative only.</li> </ul>

Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>
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TYPICAL 125mm & 150mm FOOTPATH SECTION  
(ONLY TO BE USED WITH COUNCIL APPROVAL)



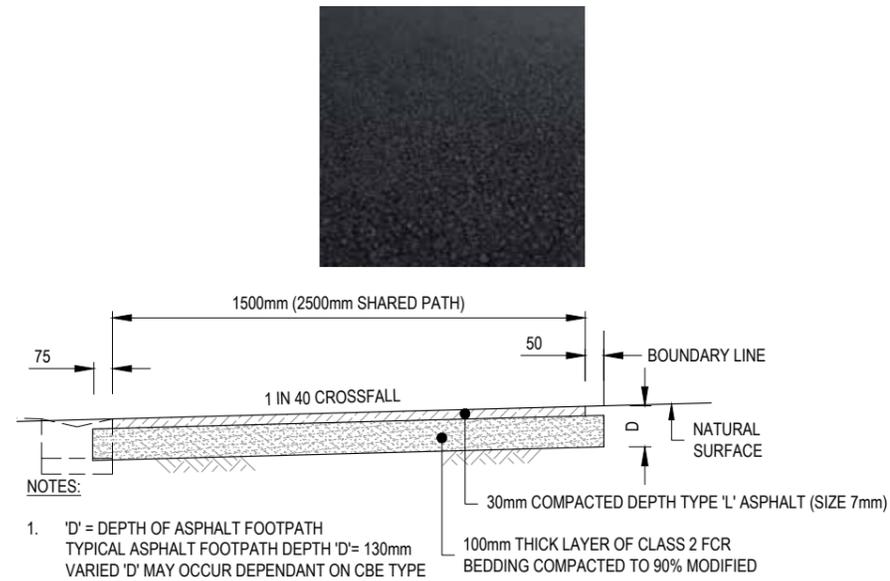
TYPICAL 125mm & 150mm FOOTPATH SECTION  
(ONLY TO BE USED WITH COUNCIL APPROVAL)

LEGEND:

EXPANSION JOINT (REFER SD210)

TOOLED JOINTS @ 1200mm CRS.

### 2.3.5 ASPHALT FOOTPATH



TYPICAL 130mm ASPHALT FOOTPATH SECTION

Item:	Asphalt Footpath
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– Primer &amp; 40mm Type L Hotmix Asphalt</li> <li>– 100mm minimum compacted thickness class 3 crushed rock base course compacted to not less than 98% mean density ratio, modified compaction test</li> <li>– Geo-fabric underlay (Bidim A44)</li> <li>– Sub-grade to be exposed as directed and proof rolled prior to placement of sub-base course</li> </ul>
Finish:	– Smooth continuous asphalt finish with minimal joints
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– Install as per Infrastructure Design Manual (IDM) Standard Drawings Version 5.01- SD 206.</li> <li>– Detail not to scale, Indicative only.</li> </ul>

Location:

-  Deniliquin CBD
-  Waring Gardens
-  Riverfront and Lagoon

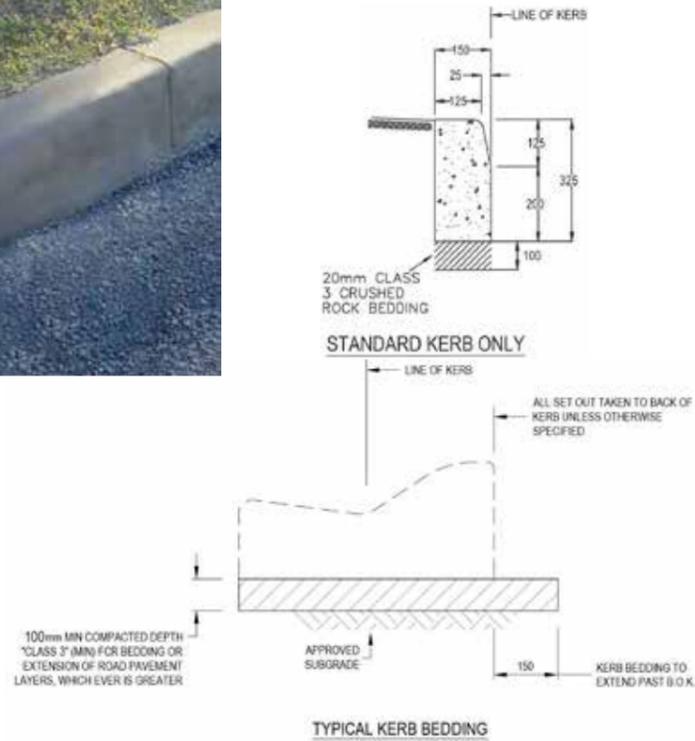
### 2.3.6 GRANITIC GRAVEL WITH TIMBER EDGE FOOTPATH



Item:	Granitic Gravel Footpath
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 75mm depth stabilised granitic gravel.</li> <li>– 75mm depth Class 3 FCR</li> <li>– 38 x 75mm treated pine timber edge on both sides of path</li> </ul>
Finish:	<ul style="list-style-type: none"> <li>– Gravel to finish flushed with timber edges.</li> <li>– Treated timber edges flushed with adjacent surfaces to avoid tripping hazards.</li> <li>– Ensure no depression or rutting in gravel surfaces.</li> </ul>
Notes:	Nom. 1:100 crowned crossfall draining towards edges
Location:	<ul style="list-style-type: none"> <li> Waring Gardens</li> <li> Riverfront and Lagoon</li> </ul>

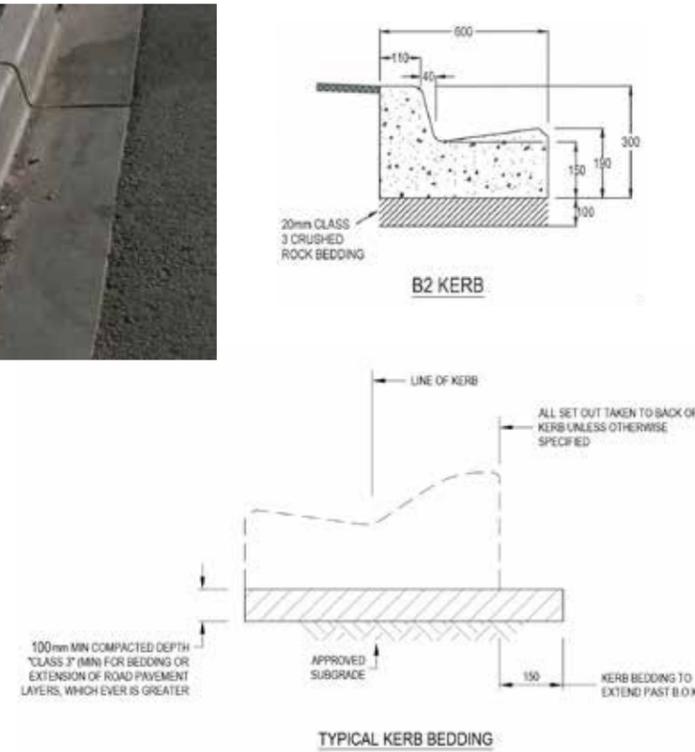
## 2.4 KERB & THRESHOLDS

### 2.4.1 CONCRETE BARRIER KERB



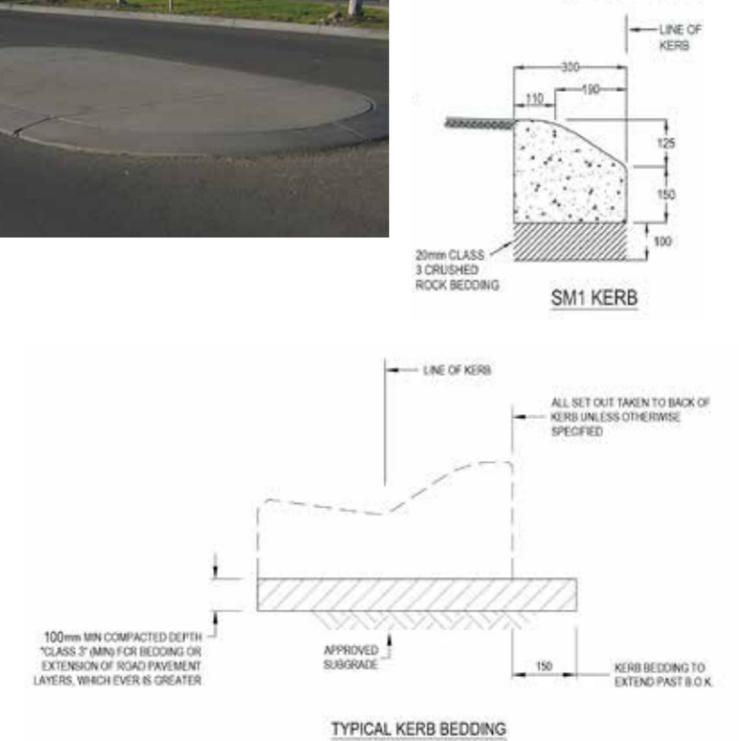
Item:	Concrete Barrier Kerb
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 325mm depth (32MPa) Concrete.</li> <li>– 100mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Finish:	Trowelled concrete finish
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– To be Designed and Installed insitu or approved similar. as per Edward River Council Engineering Guidelines</li> <li>– Detail not to scale, Indicative only.</li> <li>– Note: Where practical, subsoil drainage to be installed behind kerb and gutter</li> </ul>
Location:	 Deniliquin CBD

### 2.4.2 CONCRETE KERB & CHANNEL



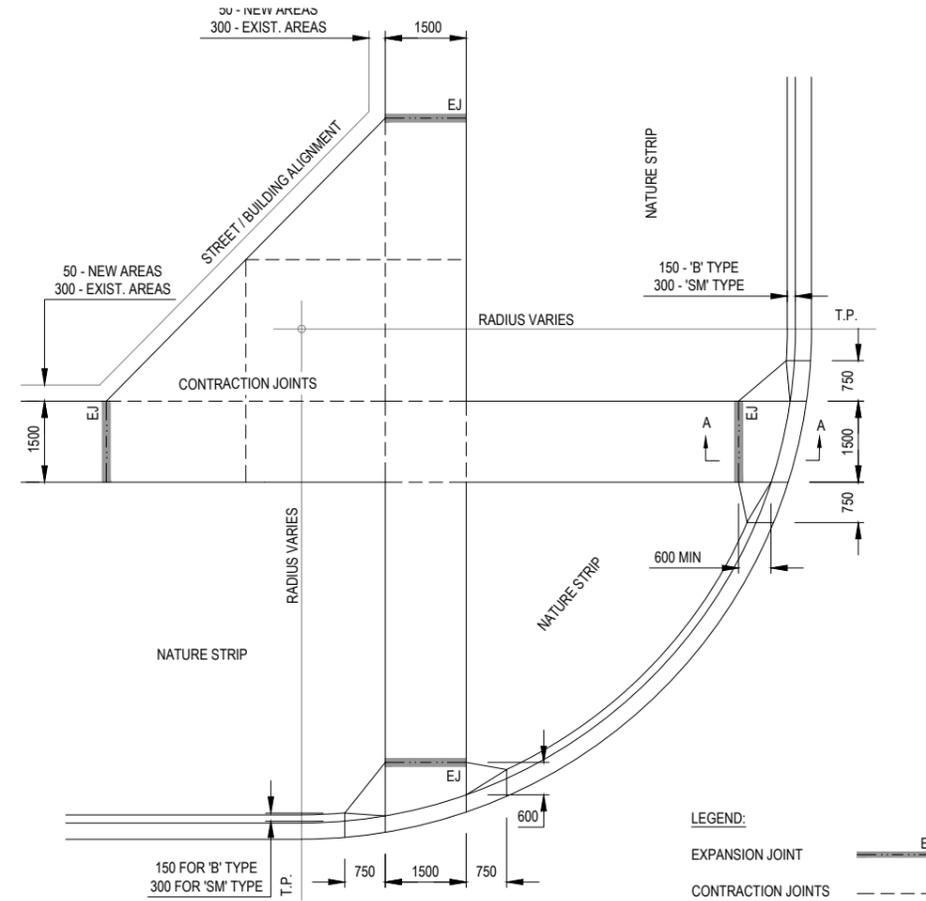
Item:	Concrete Kerb & Channel
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 300mm depth (32MPa) Concrete.</li> <li>– 100mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Finish:	Trowelled concrete finish
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– To be Designed and Installed insitu or approved similar. as per Edward River Council Engineering Guidelines</li> <li>– Detail not to scale, Indicative only.</li> <li>– Note: Where practical, subsoil drainage to be installed behind kerb and gutter</li> </ul>
Location:	 Deniliquin CBD

### 2.4.3 SEMI-MOUNTABLE KERB

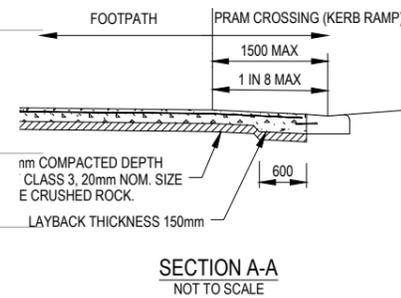


Item:	Concrete Semi-Mountable Kerb
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 275mm depth (32MPa) Concrete.</li> <li>– 100mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Finish:	Trowelled concrete finish
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar.</li> <li>– To be Designed and Installed insitu or approved similar. as per Edward River Council Engineering Guidelines</li> <li>– Detail not to scale, Indicative only.</li> <li>– Note: Where practical, subsoil drainage to be installed behind kerb and gutter</li> </ul>
Location:	 Deniliquin CBD

## 2.4.4 PEDESTRIAN CROSSING



TYPICAL ARRANGEMENT PLAN



### NOTES:

1. LOCATION OF CROSSINGS TO BE CASE BY CASE & TO BE APPROVED BY COUNCIL.
2. CROSSING GENERALLY TO BE LOCATED AT TANGENT POINTS.
3. CONCRETE TO BE SMOOTH TROWELLED FINISH ON TRAY.
4. CONCRETE TO BE FINE SOFT HAIR BROOM FINISH ON LAYBACK.
5. MINIMUM CONCRETE STRENGTH TO BE 25 MPA.
6. BEDDING TO BE COMPACTED CLASS 3 (OR BETTER) F.C.R. SUPPLIED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED.
7. IF SPLAY IS NOT REQUIRED FOOTPATH IS TO CONTINUE THROUGH TO LAYBACKS.
8. TGI'S (TILES), WHERE REQUIRED, ARE TO BE TO BE INSTALLED TO AS1428.4
9. WHERE ANY NEW CONCRETE ABUTS EXISTING CONCRETE INSTALL R140 DOWELS IN 125mm THICK CONCRETE OR R100 DOWELS IN 75mm THICK CONCRETE DOWELS @ MAX 600 CTS

ALL MEASUREMENTS IN MILLIMETRES

Item:	Pedestrian Crossing
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>- 150mm depth (Min. 25MPa) Concrete.</li> <li>- 50mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Finish:	Brushed concrete transition, trowelled concrete to extension of kerb
Notes:	<ul style="list-style-type: none"> <li>- Installed insitu or approved similar.</li> <li>- Install as per Edward River Council Engineering Manual and AS1428</li> <li>- Detail not to scale, Indicative only.</li> </ul>

Locations:

- Deniliquin CBD
- Waring Gardens
- Riverfront and Lagoon

## 2.4.5 CONCRETE EDGE



Item:	Concrete Edge to garden beds
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>- 150mm wide and 150mm depth (32MPa) concrete slab.</li> <li>- 150mm depth Class 3 crushed tock base.</li> <li>- Reinforced edge beam with 1 no. N12 reinforcing bars 75mm cover and centrally positioned.</li> </ul>
Dimensions:	150 wide x 150mm depth
Finish:	<ul style="list-style-type: none"> <li>- Finish flush with surrounding surfaces.</li> <li>- Saw cuts required at each joint or change in direction</li> <li>- 25mm radius chamfer to edge facing garden bed.</li> </ul>
Notes:	<ul style="list-style-type: none"> <li>- Concrete edge between garden beds and asphalt paving.</li> <li>- Colour to match concrete unit paving bands.</li> </ul>

Location:

- Deniliquin CBD
- Waring Gardens

10. REFER TO AS 1428 FOR CONSTRUCTION

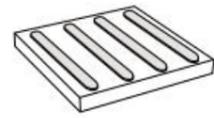
### 2.4.6A TACTILE INDICATOR



Gunmetal Shotblast

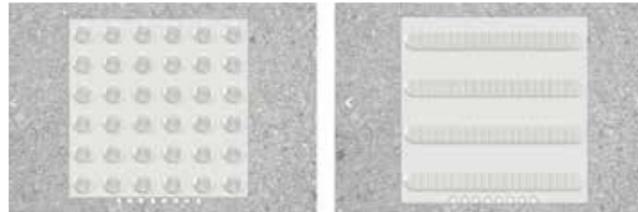
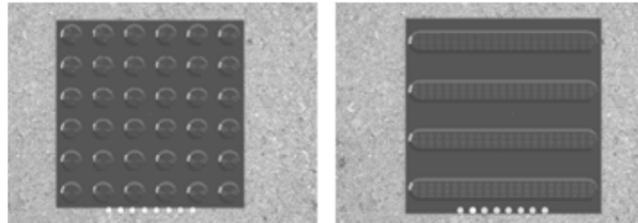


Fleece Shotblast



Item:	TGSI or similar approved - Tactile Unit Paver (Includes both Waring and Directional unit)
Supplier:	Urban Stone (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– ‘Gunmetal’ or approved similar colour to concret paving/concrete unit paver area</li> <li>– ‘Fleece’ or approved similar colour to asphalt paving area</li> <li>– Shotblast or approved similar finishes</li> <li>– Min. luminance contrast of 45% between the tactile indicator and surrounding substrate</li> </ul>
Dimensions:	400 x 400 x 40mm
Notes:	<ul style="list-style-type: none"> <li>– Installation as per manufacturers detail or approved similar.</li> <li>– Install to achieve compliance with AS1428.4.1 Design for access and mobility.</li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

### 2.4.6B TACTILE INDICATOR



Item:	TGSI or similar approved- Tactile Tile (Includes both Waring and Directional unit)
Supplier:	Korb (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– ‘Charcoal Polymer’ or approved similar colour to concrete paving/concrete unit paver area</li> <li>– ‘White Polymer’ or approved similar colour to asphalt paving area</li> <li>– Min. luminance contrast of 45% between the tactile indicator and surrounding substrate</li> </ul>
Dimensions:	300 x 300mm
Notes:	<ul style="list-style-type: none"> <li>– ‘Drill and Fix’ or approved similar.</li> <li>– Install to achieve compliance with AS1428.4.1 Design for access and mobility.</li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

### 2.4.7 VEHICULAR THRESHOLD EXPOSED AGGREGATE CONCRETE PAVING



Item:	Exposed Aggregate Concrete Vehicular Threshold
Supplier:	Mawson’s Concrete (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– 230mm depth (32MPa) Exposed Aggregate Concrete:</li> <li>– Recommended colour ‘Council Yarra Mix’ or approved similar, with additional dark aggregates</li> <li>– 100mm depth Class 3 crushed rock base.</li> </ul>
Finish:	– Non glare finish.
Notes:	<ul style="list-style-type: none"> <li>– Installed insitu or approved similar, with expansion and control joints as per Edward River Council Engineering requirements</li> <li>– Sealed with an approved concrete sealant.</li> <li>– Website reference: <a href="http://www.mawsons.com.au/products-and-services/decorative/ovens">http://www.mawsons.com.au/products-and-services/decorative/ovens</a></li> </ul>
Location:	<span style="color: yellow;">●</span> Deniliquin CBD

## 2.5 FURNITURE

### 2.5.1 STEEL BOLLARDS



Item:	Stainless Steel Bollard
Supplier:	Furphy Foundry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>– 304 Grade Stainless Steel Pipe.</li> <li>– 50mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Finish:	304 Stainless Steel
Dimensions:	140 dia. x 980mm high
Notes:	<ul style="list-style-type: none"> <li>– Installation as per manufacturers detail or approved similar.</li> <li>– Bolt down or in ground attachment (Removable option available)</li> <li>– Website reference: <a href="https://www.furphyfoundry.com.au/the-products/bollards/item/barrier-bollard-2#">https://www.furphyfoundry.com.au/the-products/bollards/item/barrier-bollard-2#</a></li> </ul>

Location:

 Deniliquin CBD

### 2.5.2 TIMBER BOLLARDS



Item:	Timber Bollard
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– Dressed all round hardwood timber.</li> <li>– Pyramid top with 18mm Square Collar or approved similar.</li> <li>– 400mm dia x 525mm depth 25MPa Concrete footing. Concrete to finish 50mm beneath finished surface approved or similar.</li> </ul>
Finish:	<ul style="list-style-type: none"> <li>– Bituminous coating to base</li> <li>– Reinstate disturbed areas of grass (or gravel) to achieve consistent finish</li> </ul>
Dimensions:	150mm x 150mm x 900mm high
Notes:	<ul style="list-style-type: none"> <li>– Cross reference with site layout drawings. All queries should be clarified with Council prior to commencing works.</li> </ul>

Location:

 Waring Gardens

### 2.5.3 BIKE RACKS- F03



Item:	Single Bike Rack
Supplier:	Furphy Foundry (or similar approved)
Description:	– 50.8mm dia. Stainless Steel Tube
Finish:	304 Stainless Steel
Dimensions:	1000 x 900mm high
Notes:	<ul style="list-style-type: none"> <li>– Installation as per manufacturers detail or approved similar.</li> <li>– Cored installation option in concrete pavement areas, approx. 200mm dia. core with high strength grout infill.</li> <li>– Bolt down installation if required to suit application and location only. Flanged Footing</li> <li>– When being installed in existing pavements neatly saw cut and make good paving following installation with 25mm of asphalt cover, on concrete or granitic gravel.</li> <li>– Website reference: <a href="https://furphyfoundry.com.au/the-products/bike-racks/item/single-bike-rack">https://furphyfoundry.com.au/the-products/bike-racks/item/single-bike-rack</a></li> </ul>

Location:

 Deniliquin CBD  
 Waring Gardens

### 2.5.4 BANNERS



Item:	Rota-Top Euro Banner Poles
Supplier:	Abel (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- Banner pole with rotating banner arm to ensure maximum visual impact even in still wind conditions.</li> <li>- Materials: 6063T6 Structural Grade High Tensile Aluminium</li> <li>- Height: 6M (12M option available)</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> </ul>

### 2.5.5 BINS & CIGARETTE BUTT CONTAINER- F02



Item:	Avenue Litter receptacle
Supplier:	Furphy Foundry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- Capacity: 120L (240L option available )</li> <li>- Materials: Mild steel frame with hard wood timber slats.</li> <li>- Height: 1150mm</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> </ul>

### 2.5.6 DRINKING FOUNTAIN AND BUBBLERS



Item:	Prospect Drinking Fountain
Location:	TBC
Supplier:	Botton + Gardiner (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- All abilities drinking fountain with optional dog bowl and bottle tap.</li> <li>- Materials: 316 grade stainless steel with bright polish and cast aluminium grate.</li> <li>- Fixing: Subsurface fixed</li> <li>- Height: 880mm AS1428 compliant</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: green;">●</span> Waring Gardens</li> </ul>

### 2.5.7 PARK BENCHES



### 2.5.8 PARK SEATING- F01



### 2.5.9 PICNIC SETTING

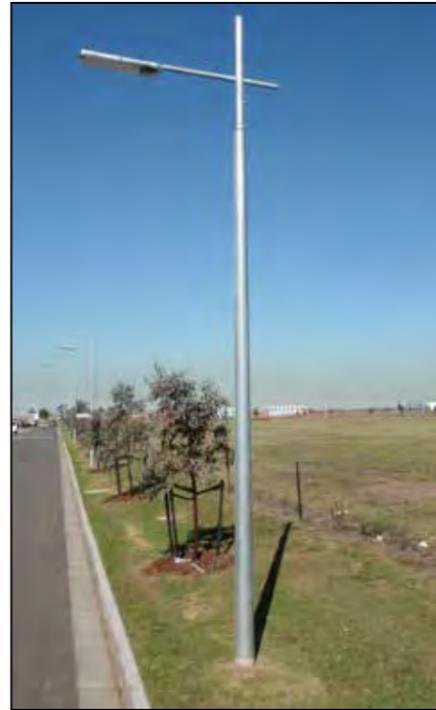
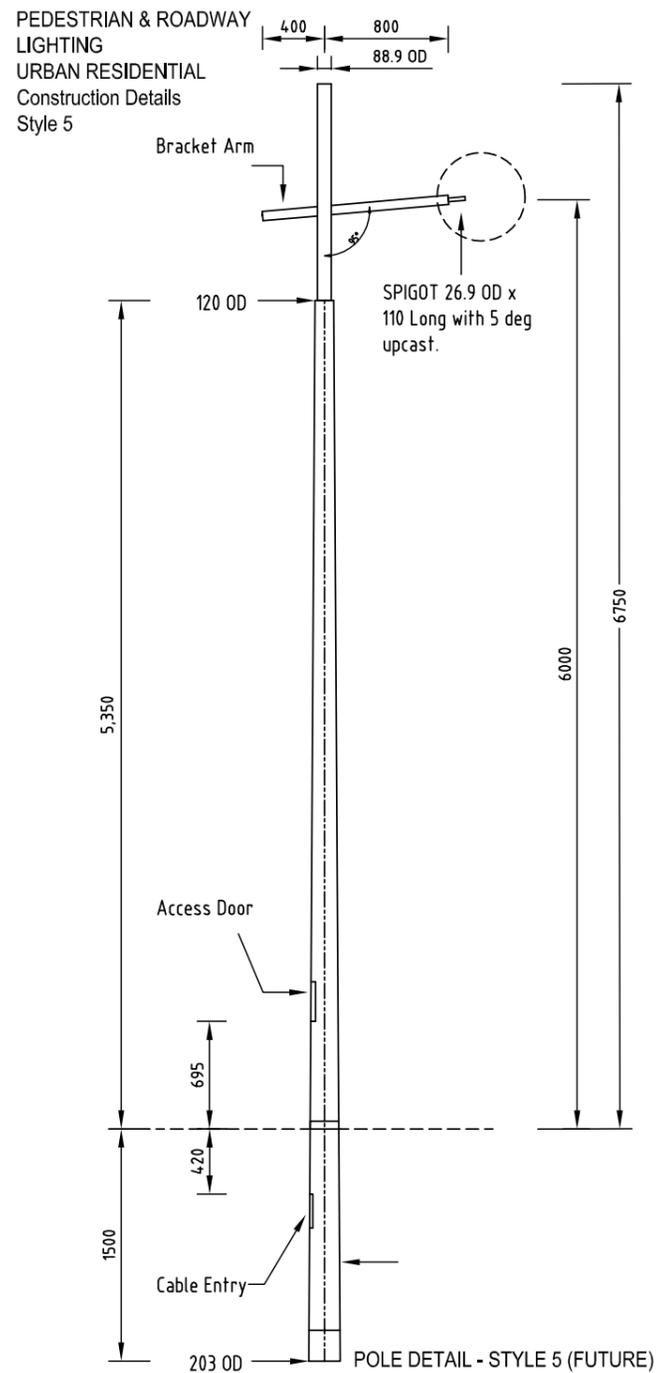


Item:	'Promenade' Bench
Supplier:	Furphy Foundry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- Materials: Cast Aluminium</li> <li>- 304 Grade Stainless Steel Legs</li> <li>- Hardwood Timber Slats</li> <li>- Length: 1800mm</li> <li>- Fixing: Bolt down or in ground attachment</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

Item:	'Promenade' Seat
Supplier:	Furphy Foundry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- Materials: Cast Aluminium</li> <li>- 304 Grade Stainless Steel Legs</li> <li>- Hardwood Timber Slats</li> <li>- Length: 1800mm</li> <li>- Fixing: Bolt down or in ground attachment</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

Item:	'Promenade' Picnic Setting
Supplier:	Furphy Foundry (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- Materials: Cast Aluminium</li> <li>- 304 Grade Stainless Steel Legs</li> <li>- Hardwood Timber Slats</li> <li>- Length: 1800mm</li> <li>- Fixing: Bolt down or in ground attachment</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	<ul style="list-style-type: none"> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

## 2.5.10 STREET LIGHT POLE & LIGHT LUMINIARE



Item:	Street Light Pole
Supplier:	Saferoads (or similar approved)
Description:	- 'Powercor' Standard Decorative Light Pole
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	 Deniliquin CBD

### NOTES: -

1. LOCATION AND SIZE OF ANY POWER SUPPLY CONDUIT TO LIGHT POLE THROUGH THE FOOTING IS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. LIGHT POLE, BASE PLATE, RAG BOLT ASSEMBLY AS SPECIFIED BY LIGHT POLE MANUFACTURER.
3. IF THE SURFACE IS A CONCRETE FINISH THEN THE CONCRETE ENCASEMENT WHICH IF TAKEN TO SURFACE LEVEL THEN MATCH THE COLOUR TO THE EXISTING PAVEMENT.
4. USE 32MPa CONCRETE.



Item:	Street Light Luminaire
Supplier:	Pierlite (or similar approved)
Description:	- Pierlite 'Greenstreet' 2x14W / 2 x 24W Luminaire or approved similar.
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	 Deniliquin CBD

**NOTE ; LIGHTING SUBJECT TO OUTCOMES OF CRESSY STREET PROJECT**

2.5.11 LIGHT POLE & LIGHT LUMINIARE - WARING GARDEN



1. LOCATION AND SIZE OF ANY POWER SUPPLY CONDUIT TO LIGHT POLE THROUGH THE FOOTING IS TO BE CONFIRMED PRIOR TO CONSTRUCTION.
2. LIGHT POLE, BASE PLATE, RAG BOLT ASSEMBLY AS SPECIFIED BY LIGHT POLE MANUFACTURER.
3. IF THE SURFACE IS A CONCRETE FINISH THEN THE CONCRETE ENCASEMENT WHICH IF TAKEN TO SURFACE LEVEL THEN MATCH THE COLOUR TO THE EXISTING PAVEMENT.
4. USE 32MPa CONCRETE.



Item:	Park Light Pole
Supplier:	We-ef (or similar approved)
Description:	<ul style="list-style-type: none"> <li>- 'AMF-C' series Light Pole</li> <li>- Hot dipped galvanised tubular steel</li> <li>- Includes surface door</li> <li>- Powdercoat finish in black (RAL9004) or similar approved</li> </ul>
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	 Waring Gardens
Note:	Location and spacing subject to lighting design and Council requirement.

Item:	Park Light Luminaire
Supplier:	Cree (or similar approved)
Description:	- Cree Contemporary LED Lantern or approved similar.
Notes:	- Installation as per manufacturers detail or approved similar.
Location:	 Waring Gardens
Note:	Location and spacing subject to lighting design and Council requirement.

### 2.5.12 TIMBER FENCE



Item:	Riverfront Timber Fence
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 50 x 20 x 1500mm hardwood (Class 1) timber palings fixed to rails.</li> <li>– 100 x 38mm top and bottom hardwood (Class 1) rails notched into post at equal spacings.</li> <li>– 150 x 150 x 2100mm hardwood (Class 1) or H4 treated pine post with dome top set into concrete.</li> <li>– 50mm dia. mild steel round handrail with wall mount to timber post.</li> </ul>
Notes:	<ul style="list-style-type: none"> <li>– Details to match existing riverfront timber fencing.</li> <li>– Installation as per Councils detail or approved similar.</li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

### 2.5.13 COLOURED STEEL FENCE BARRIER



Item:	Coloured Steel Fence Barrier
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– 75 x75 1200mm steel square post with pyramid cap set into concrete or bolt down.</li> <li>– 100 x 100 x 35mm top and bottom steel rails.</li> </ul>
Finish:	– Powercoated finish
Notes:	<ul style="list-style-type: none"> <li>– Details to match existing coloured steel barrier fencing.</li> <li>– Installation as per Councils detail or approved similar.</li> </ul>
Location:	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Deniliquin CBD</li> <li><span style="color: green;">●</span> Waring Gardens</li> <li><span style="color: blue;">●</span> Riverfront and Lagoon</li> </ul>

## 2.6 TREES

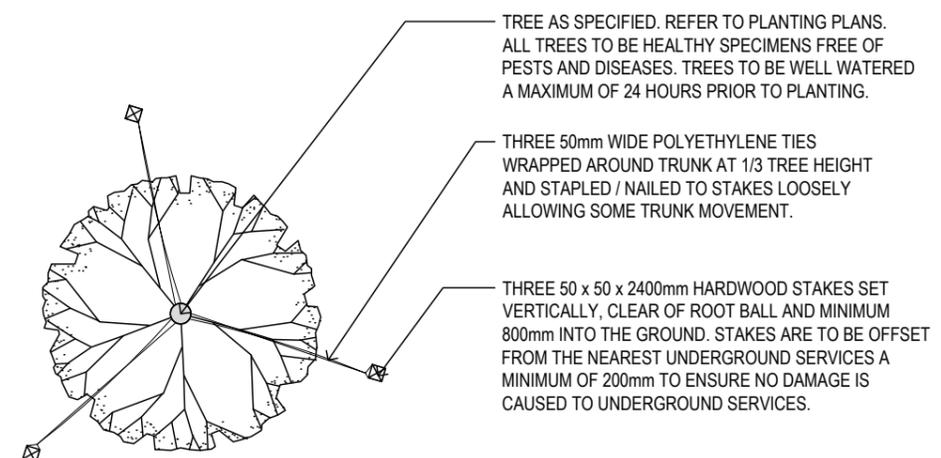
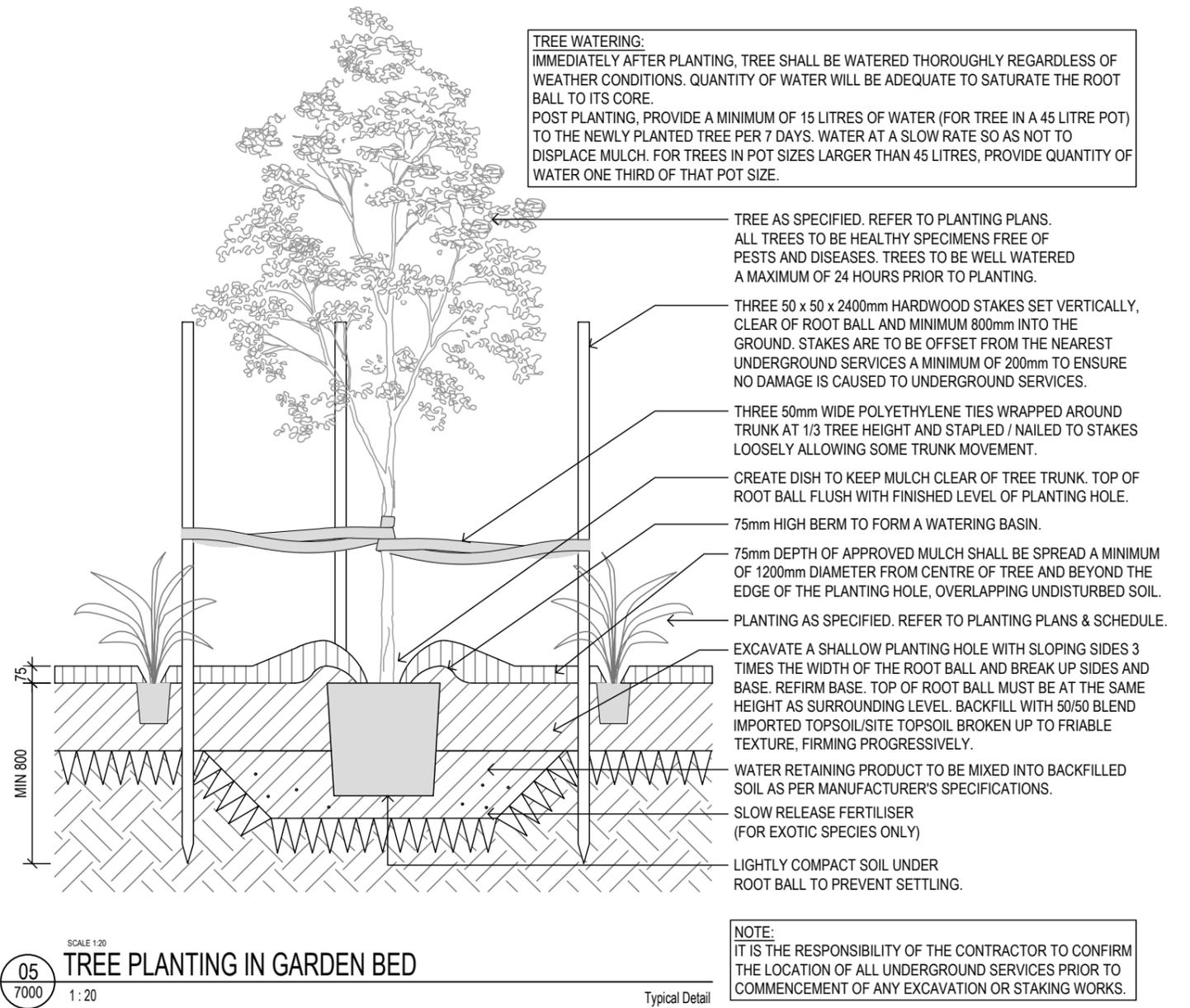
### 2.6.1 TREE IN GARDEN BED



Item:	Tree in Garden Bed
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– Selected Tree as specified.</li> <li>– 50 x 50mm Hardwood Timber Stakes.</li> <li>– Timber Mulch as specified.</li> <li>– 50mm Polyethylene Ties.</li> <li>– Imported topsoil and soil ameliorants as specified.</li> </ul>
Notes:	Refer to Tree Details.
Location:	

- Deniliquin CBD
- Waring Gardens
- Riverfront and Lagoon

- Notes:
- Beware of overhead and underground services
  - Set out of tree planting to take into consideration of the location of any existing overhead and underground services, as well as surrounding buildings.
  - All tree holes are to be hand excavated; it is the responsibility of the landscape contractor to check location and depth of services before digging.



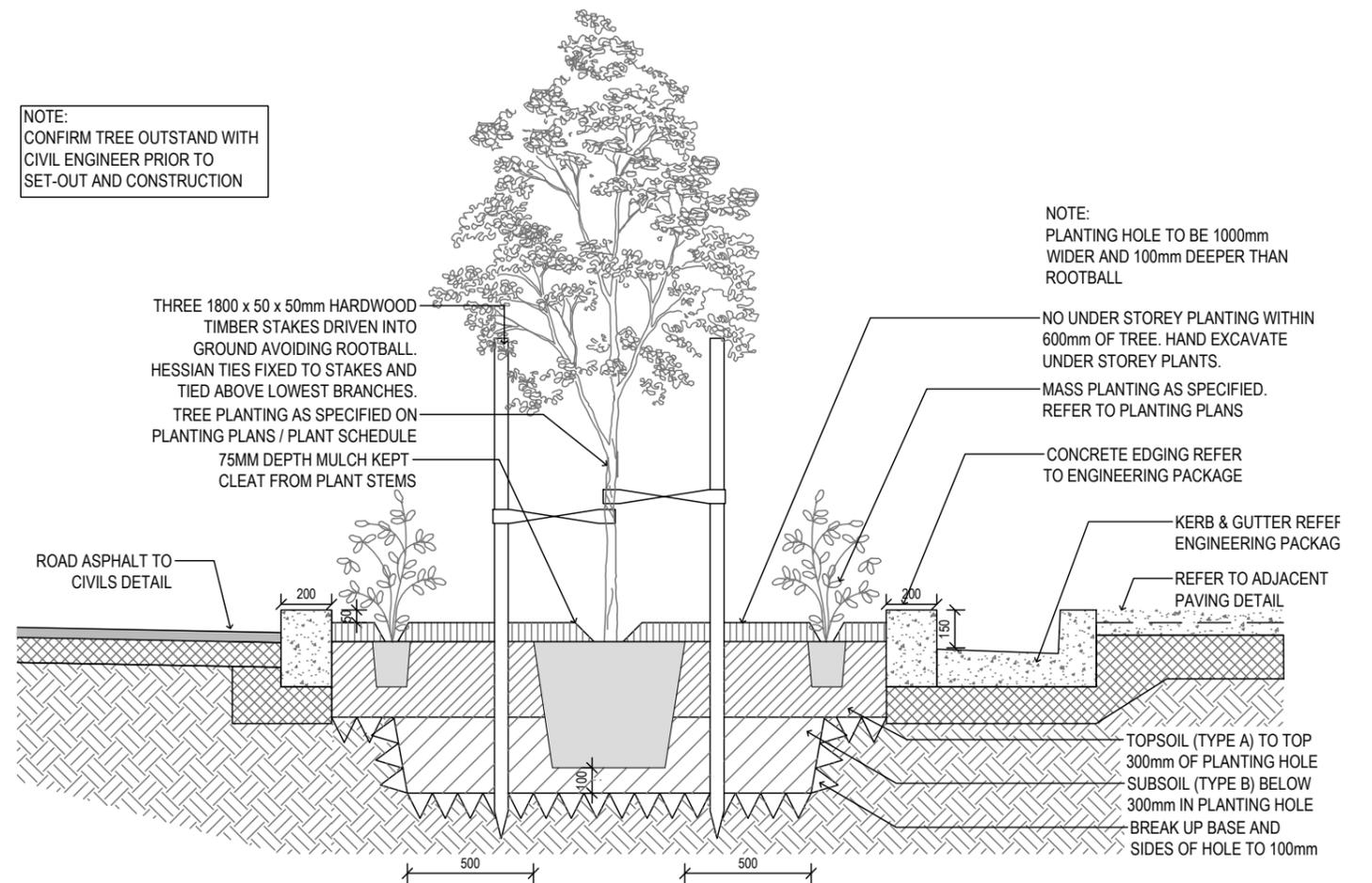
## 2.6.2 STREET TREE IN KERB OUTSTAND (TO CBD AND ENTRY ROADS)



Item:	Street Tree in Kerb Outstand
Supplier:	Various
Description:	<ul style="list-style-type: none"> <li>– Selected Tree as specified.</li> <li>– 50 x 50mm Hardwood Timber Stakes.</li> <li>– Timber Mulch as specified.</li> <li>– 50mm Polyethylene Ties.</li> <li>– Imported topsoil and soil ameliorants as specified.</li> <li>– 300mm depth (32MPa) Concrete kerb with openings/ kerb inlet.</li> <li>– 75mm min. compacted depth Class 3 crushed rock base.</li> </ul>
Notes:	Refer to Tree Details.
Location:	

 Deniliquin CBD (and entry roads to Deniliquin)

- Notes:
- Beware of overhead and underground services
  - Set out of tree planting to take into consideration of the location of any existing overhead and underground services, as well as surrounding buildings.
  - All tree holes are to be hand excavated; it is the responsibility of the landscape contractor to check location and depth of services before digging.



**04** TREE IN KERB OUTSTANDING  
7001 1:20

Typical Section



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