06 Special Areas: A. St Leonards

St Leonards is a busy urban centre servicing both local and regional populations with a diverse range of living, employment, recreation & social opportunities.

LEGEND

Special Area - St Leonards

Special Area - St Leonards Footpath

06 - 1 Special Areas: A. St Leonards

St Leonards is located 5 km north west of the city on the boundary of the North Sydney LGA; bordering the Municipality of Lane Cove and Willoughby Councils.

St Leonards is linked to North Sydney Centre by train and the Pacific Highway. St Leonards is fringed by the village of Crows Nest to the east and south, and the Pacific Highway to the west. Royal North Shore Hospital is located to the North generating a large employment source for the people of St Leonards and surrounding areas.

St Leonards is a significant commercial centre that supports high rise office towers. Many large companies are based in St Leonards.

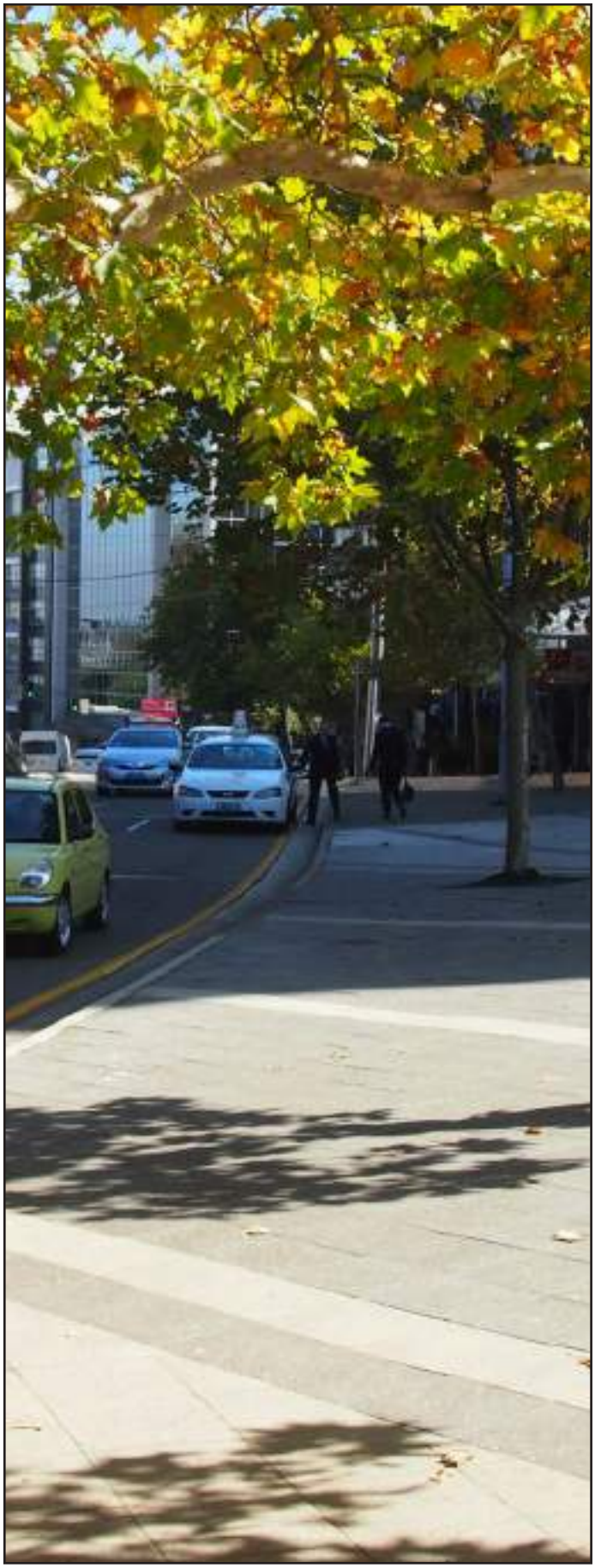
The Forum over St Leonards railway station is the largest plaza within St Leonards and is home to a mix of commercial and residential uses. Nearby Sergeants Lane is an ideal opportunity site for further improvements in the area.

A strong streetscape aesthetic has been adopted for Atchison Street consisting of grey and cream pavers. This street will act as a catalyst for improvements throughout the rest of St Leonards.

St Leonards is undergoing a period of change with many high rise developments proposed. This will increase the scale of St Leonards and will impact the character of it's streets. While the scale of built form will increase in St Leonards it will still be a secondary centre to North Sydney Centre.

It is important that St Leonards has a distinct, unique look that differs from North Sydney Centre and the nearby village of Crows Nest. St Leonards shall have an urban aesthetic to reflect its zoning and scale.

There are few parks within St Leonards. Therefore green, tree lined streets are critical to improving the amenity of the area. In addition streets will have to provide what is missing due to the lack of parks in St leonards. Streets will provide gathering spaces and seating opportunities so that workers and residents have nearby passive recreation space where they can recharge.



6.1.1 Materials palette objectives

The St Leonards public domain materials palette should respond to the mixed use character of St Leonards. The palette should fall between the North Sydney Centre and the Villages palettes both in terms of scale of paving and type of furniture and fixtures.

The palette should build on the established grey and cream pavements throughout St Leonards.

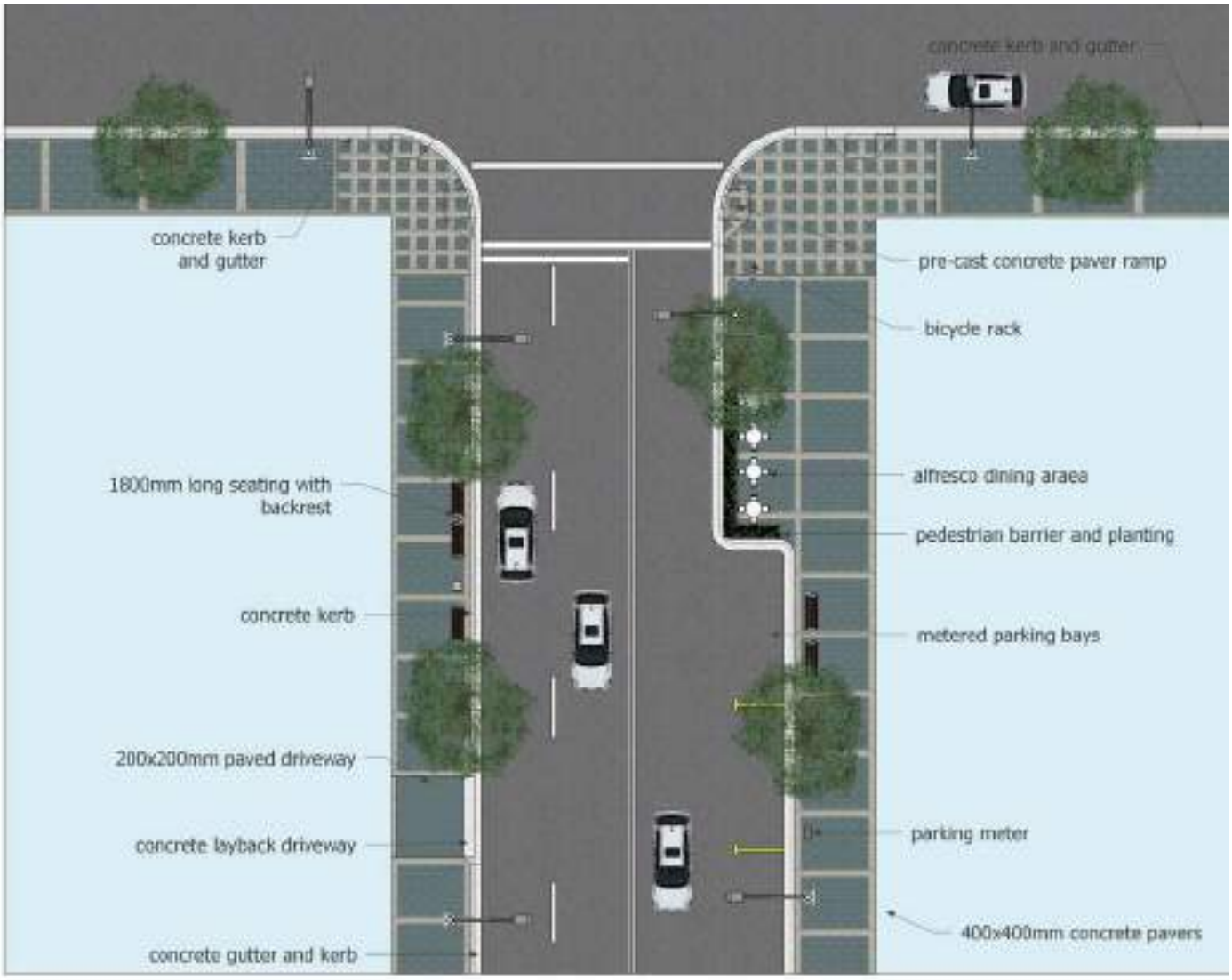
A recognisable visual identity for St Leonards should be established that has a strong urban character.

Contents

06 Special Areas: A. St Leonards

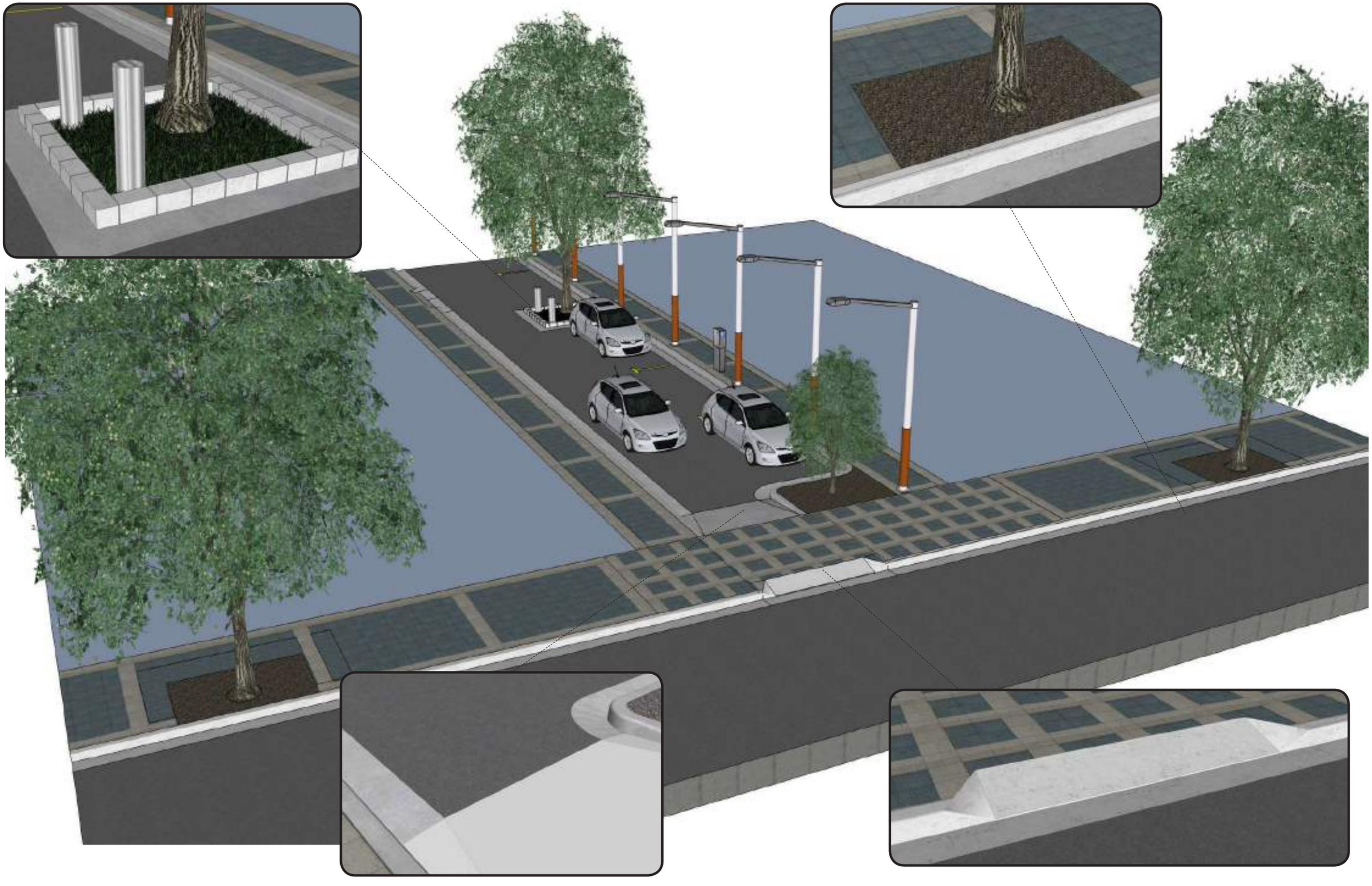
6.1.2 Main streets - perspective view

6.1.3 Main streets - plan and section view

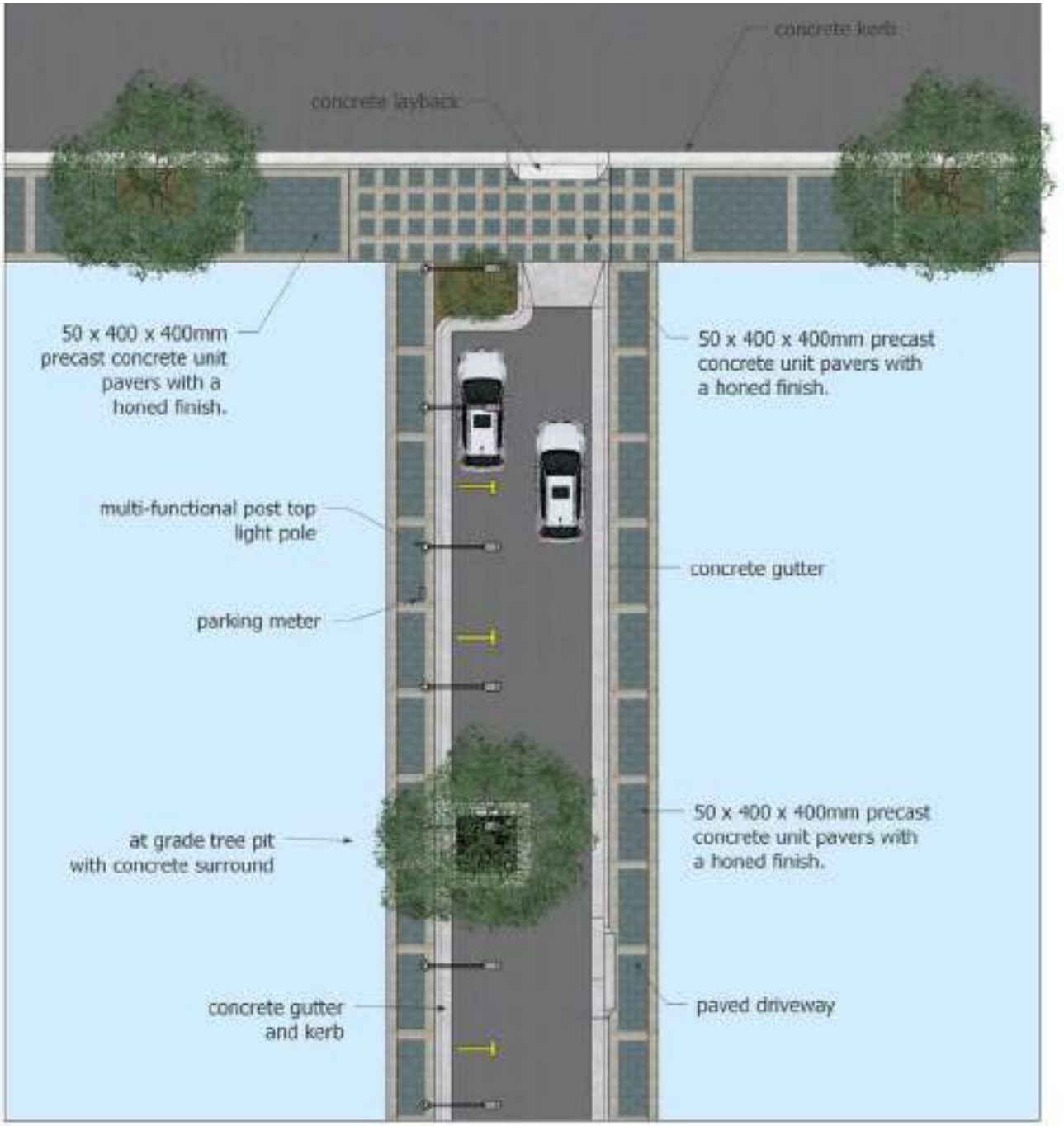


06 Special Areas: A. St Leonards

6.1.4 Laneways - perspective view



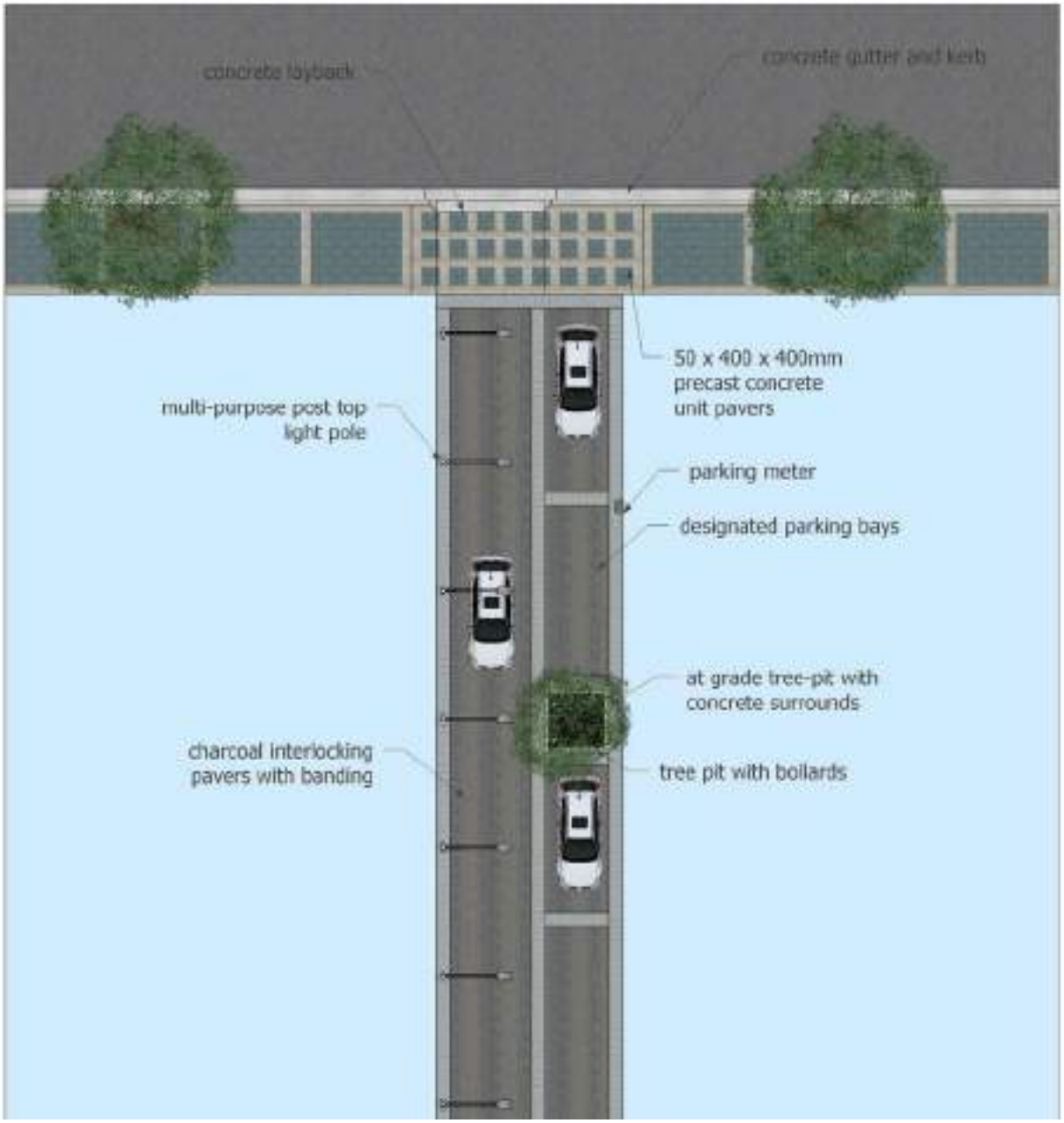
6.1.5 Laneways - plan and section view



06 Special Areas: A. St Leonards

6.1.6 Shared zone - perspective view

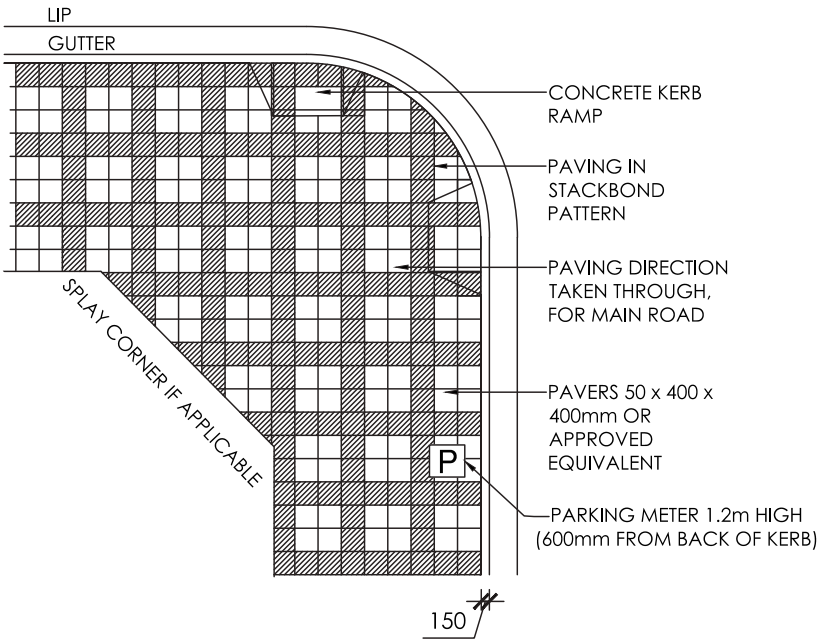
6.1.7 Shared zone - plan and section view

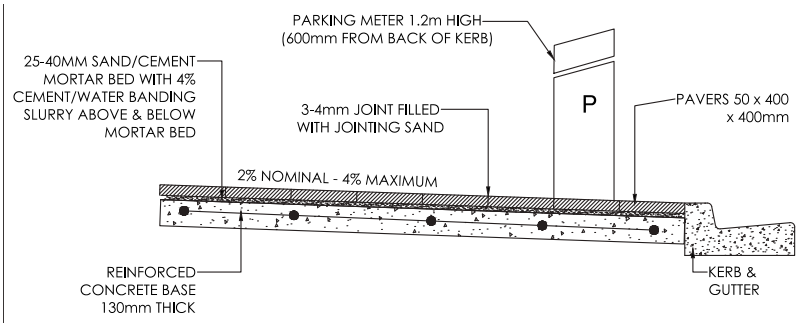


6.1.8 Indicative Materials and Furniture

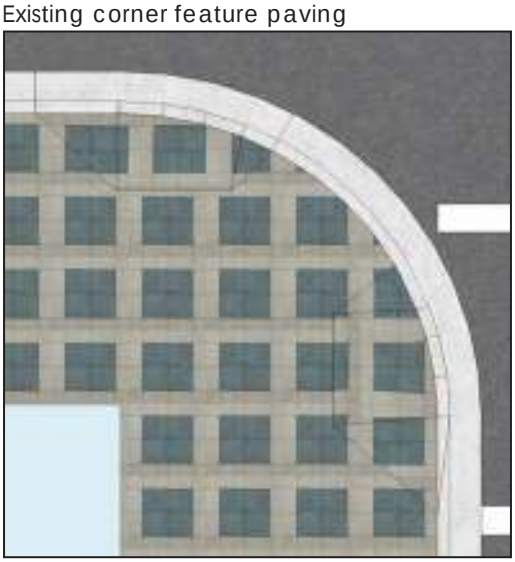
Main Street

Typical footpath paving pattern plan and cross-section





Existing corner feature paving



Kerb ramps align with boundary line

Stainless Steel Tactile Ground Surface Indicators

Notes

1. 50 x 400 x 400mm precast concrete unit pavers with a honed finish. Laid in butt jointed, stackbond pattern with a header along the kerb line. (Corner detail shown).

2. Dark grey (Golden Gunmetal) (body paver) and cream (Albany Beige) (banding) highlight precast concrete pavers to maintain consistency with existing paving in the area. Banding to run across path at a regular intervals at approximately every ten courses.

3. Concrete base or Novomesh 950 equvilent.

4. Kerb ramp located in alignment with boundary.

5. Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428

6. Corner detail extends approx. 1m past play corner.

7. All existing service pits shall be replaced with infill paver lids. Applicable paving shall be laid in the pit lid on a mortar bed (paving thickness may require modification to suit depth of infill pit lid.

8. Where finished footpath surface levels do not match existing, contact Council's parking meter services division for further details about footing requirements and repositioning of meter stem.

9. All sign stems (50mm NB) shall be installed using V-Loc + wedge system (galvanised). Footpath pavement shall be neatly core drilled 200mm DIA.

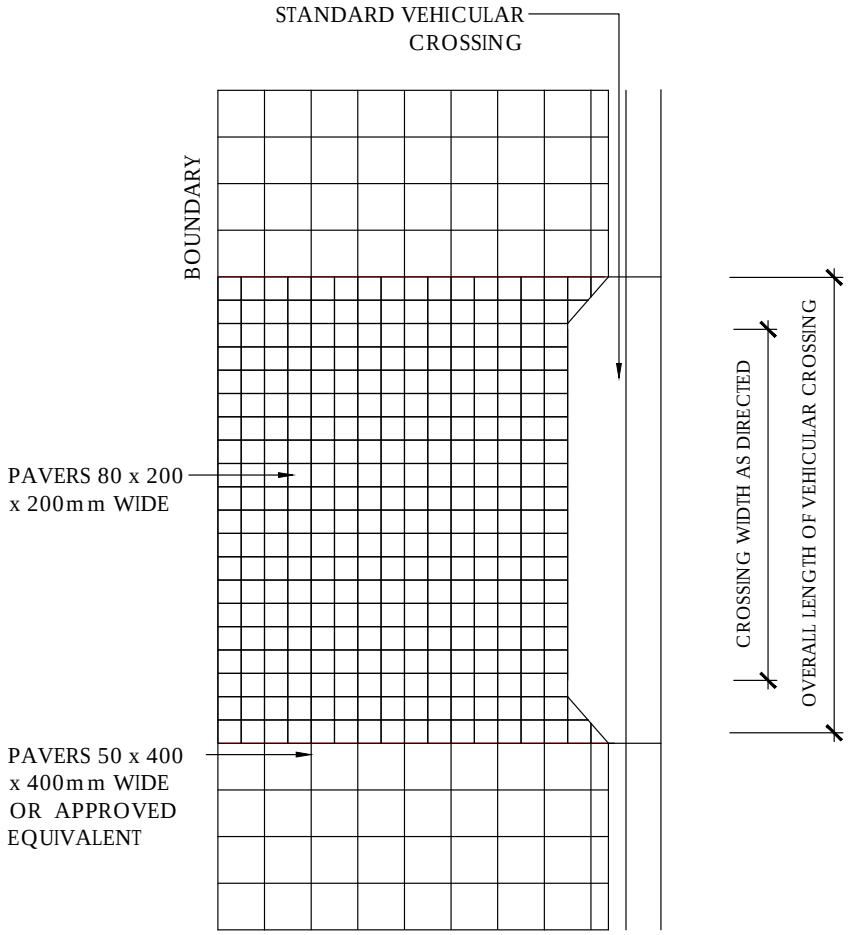
10. All open joints shall be sealed with Bostik "Seal 'N' Flex 1" in accordance with the manufacturer's recommendations - this includes boundaries, back of kerb and lintels, utility pits, construction joints etc

Existing kerb ramps in St Leonards

Precast concrete units in stackbond pattern

Main Street

Typical driveway paving

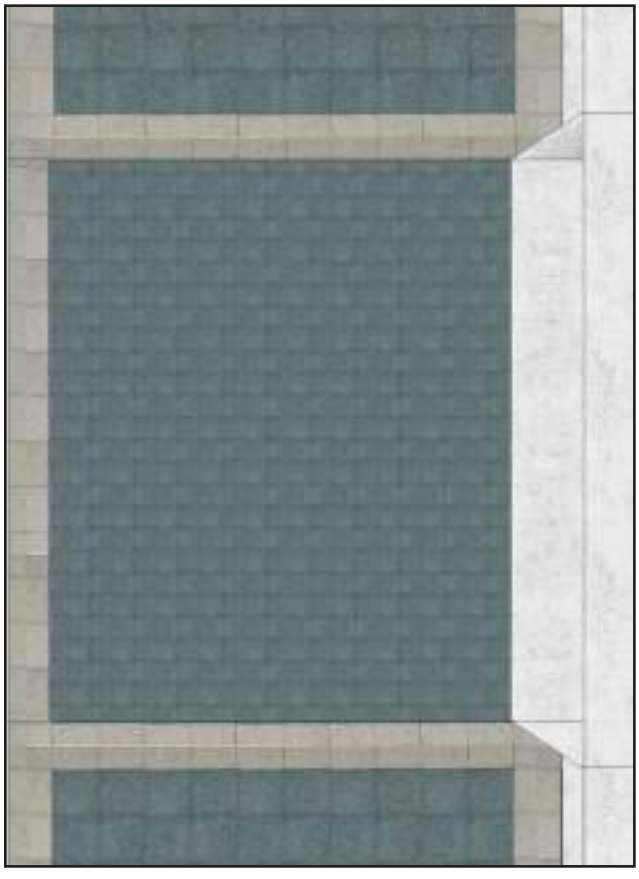


Notes

1. 80 x 200 x 200mm units with a milled finish.

2. To be laid on a rigid base 130mm thick reinforced concrete (32MPa) with SL82 central mesh

3. To be laid on Parex Streetscape System mortar bed and joining to manufacturer's specification.

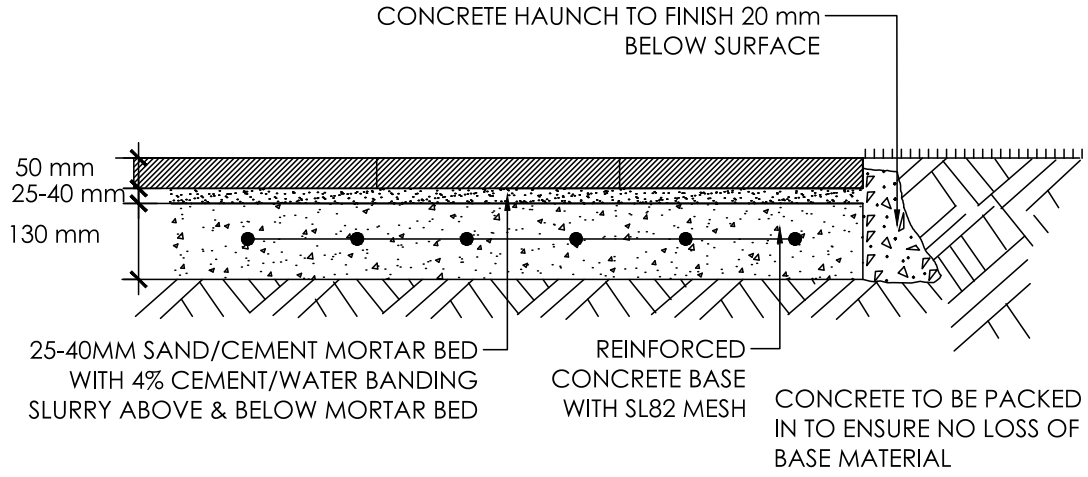


Indicative driveway treatment

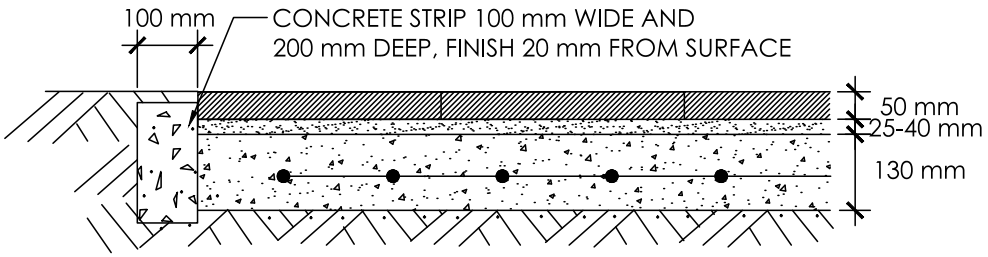
Main Street

Typical precast concrete paving edge restraint - concrete haunch, concrete strip, steel edge

Concrete haunch

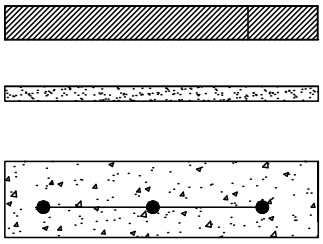


Concrete Strip



Steel Edge

LEGEND



400 x 400 x 50mm PRECAST CONCRETE PAVERS

25-40MM SAND/CEMENT MORTAR BED WITH 4% CEMENT/WATER BANDING SLURRY ABOVE & BELOW MORTAR BED

130 mm THICK REINFORCED CONCRETE SLAB

Banding (Lighter paver to be banding)

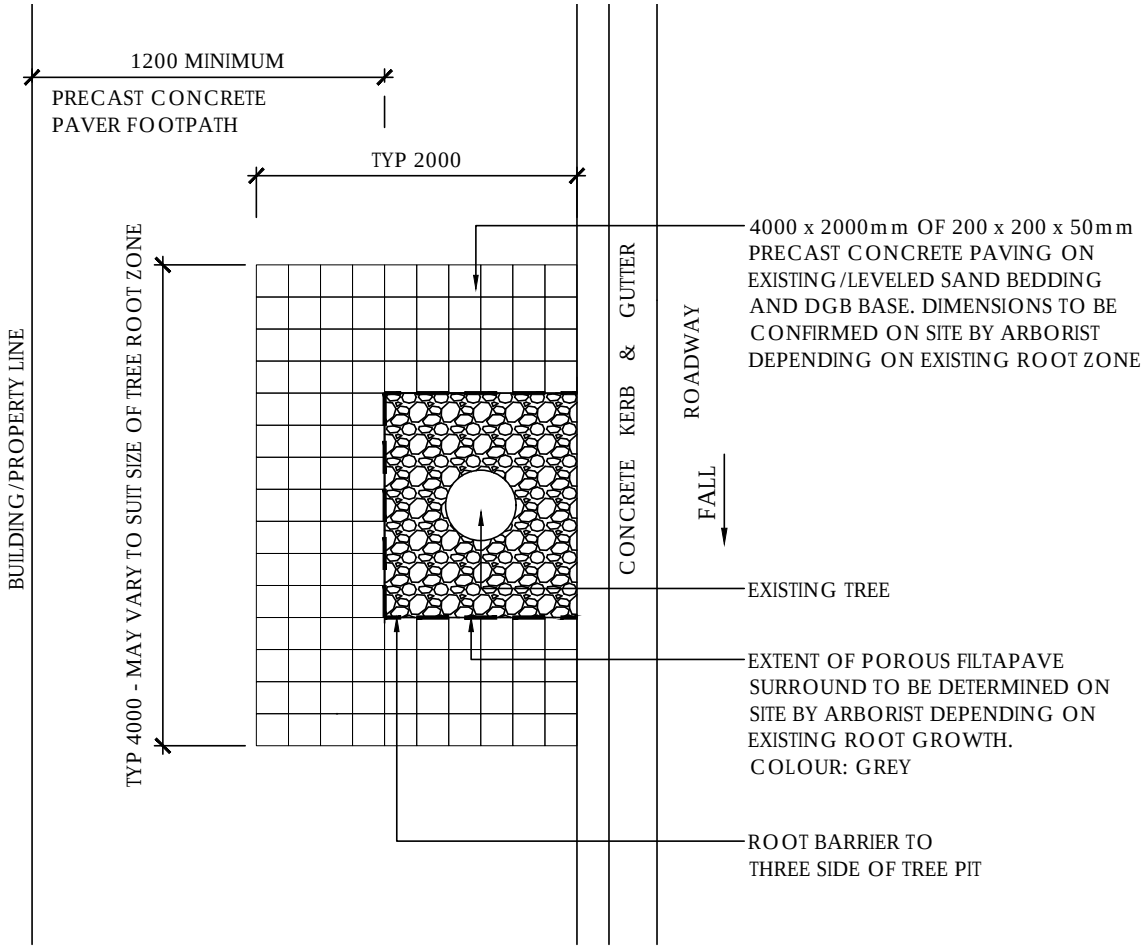
Existing corner feature paving

Notes

1. 50mm thick precast concrete unit paving.
2. 25-40mm mortar bed.
3. Rigid base - reinforced concrete slab.

Main Street

Typical existing tree site porous rubber surround



Notes

1. Existing tree site with porous FiltaPave surround.

2. Colour: Grey

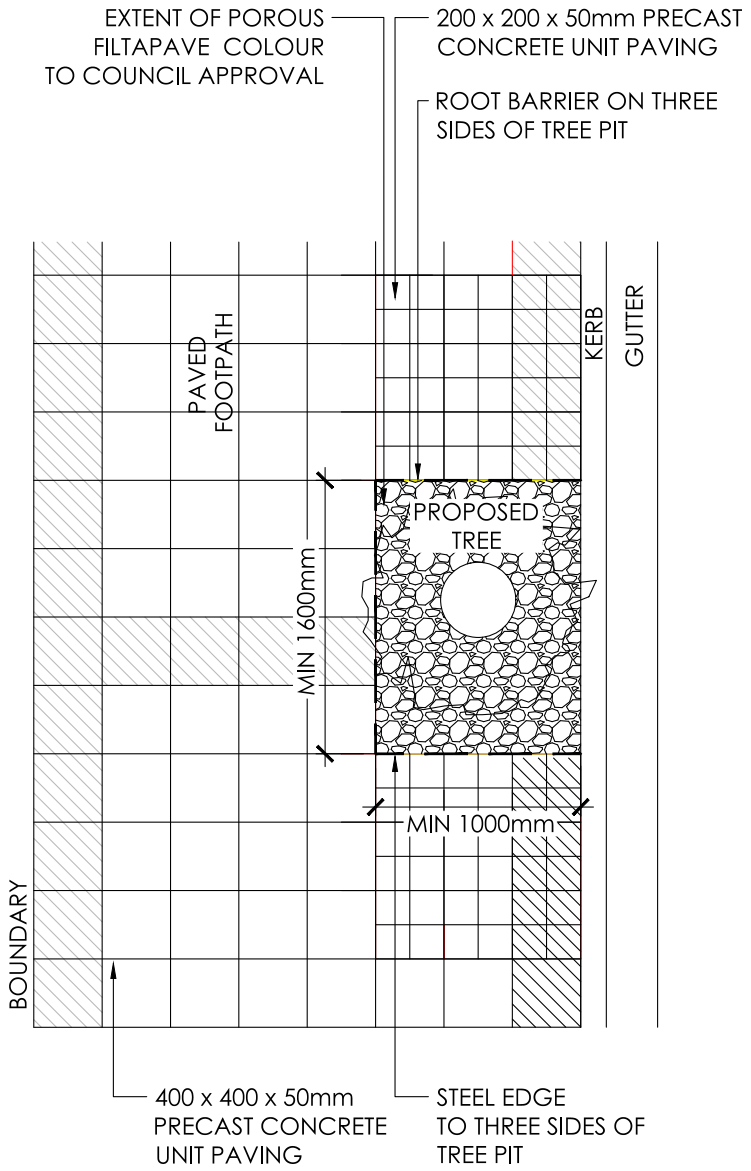
3. 50 x 200 x 200mm precast concrete unit paver with a honed finish, laid in a butt jointed, stackbond pattern to the extent shown on the detail.

4. Existing base or flexible base to paving surround.

Recycled rubber surfacing to tree pit

Main Street

Typical tree site formation



Notes

1. Tree site formed in laying pattern.

2. Steel edge restraint and root barrier - refer to Section 18 of Council's Infrastructure Specification'.

3. All dimensions are in millimeters.

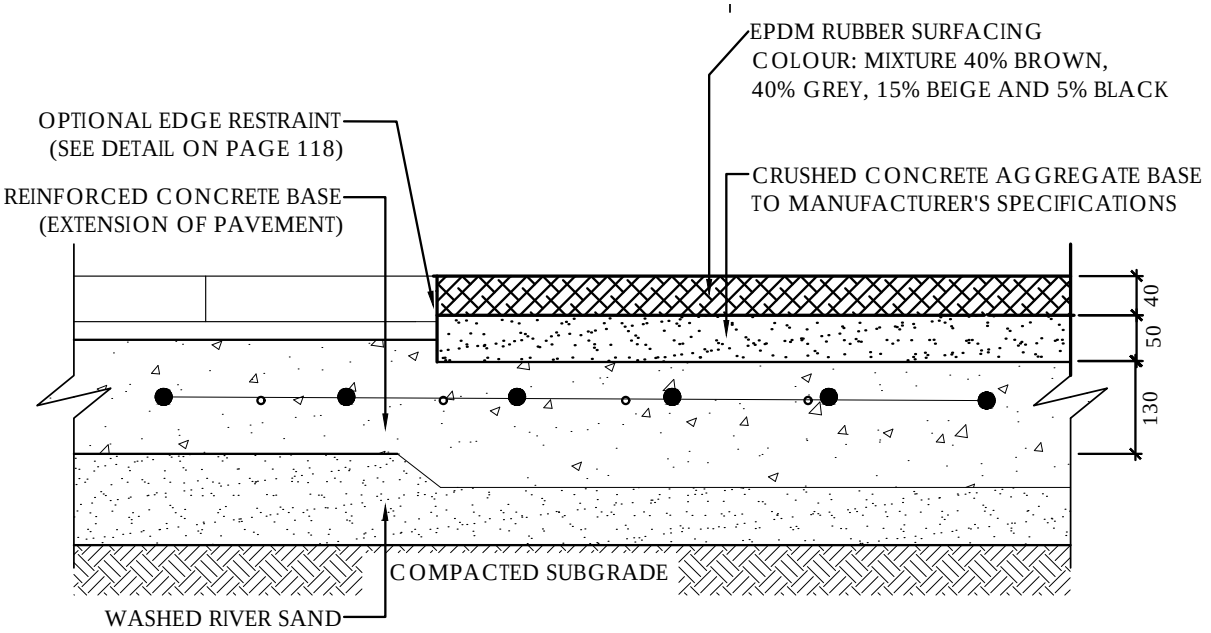
4. 50 x 200 x 200mm precast concrete unit paver surround with a honed finish, laid in a butt jointed, stackbond pattern on a flexible base. To extent illustrated. Banding to extend through tree pit paving units.

5. Tree pit min 1m x 1.6m with FiltaPave porous rubber surfacing with grey colour.

Recycled rubber surfacing to tree pit

Main Street

Typical rubber paver at “hotel” loading zones



Notes

1. EPDM rubber surfacing.
Colour: 40% brown, 40% grey, 15% beige and 5% black

2. Base to be 50mm crushed concrete aggregate.

3. Rigid base - Reinforced concrete slab.

Recycled rubber surfacing

Main Street

Typical kerb ramp

Existing kerb ramps in St Leonards

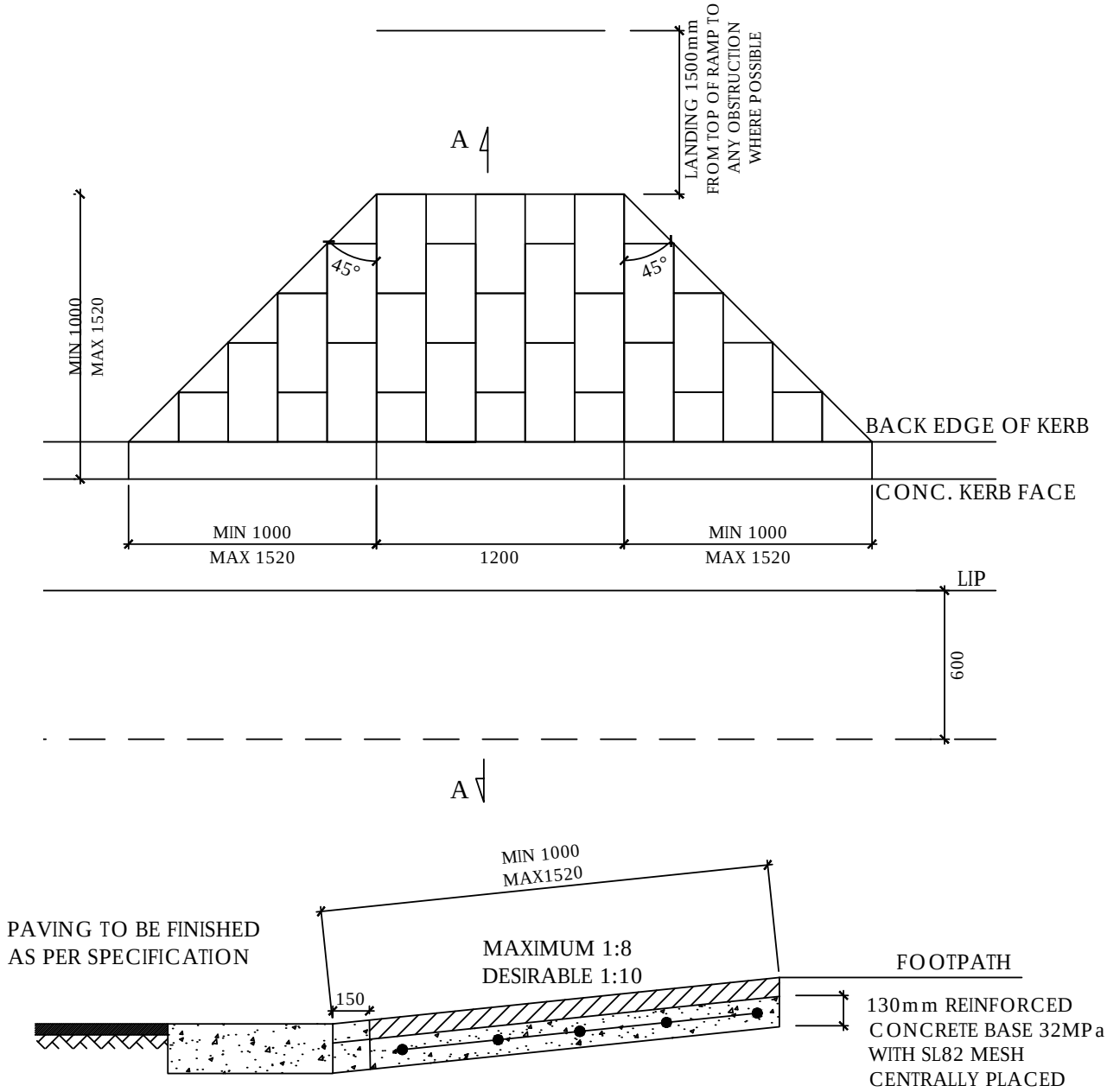
Stainless Steel Tactile Ground Surface Indicators

Notes

1. All kerb ramps shall be constructed with precast concrete pavers.

2. For ramps greater than 1520mm, maximum grade is 1 in 14. Typically 1:10 grade, max. 1:8.

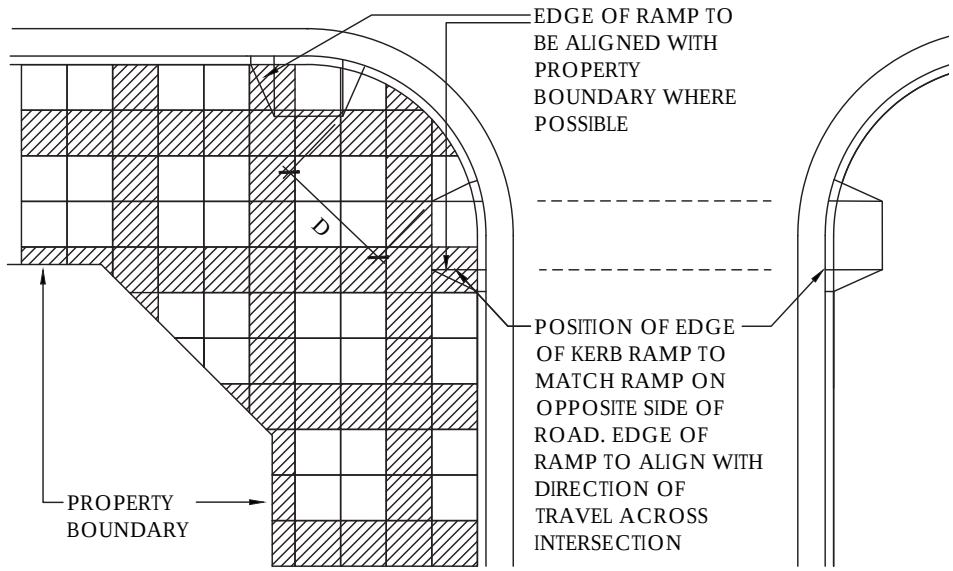
3. Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428



SECTION A-A

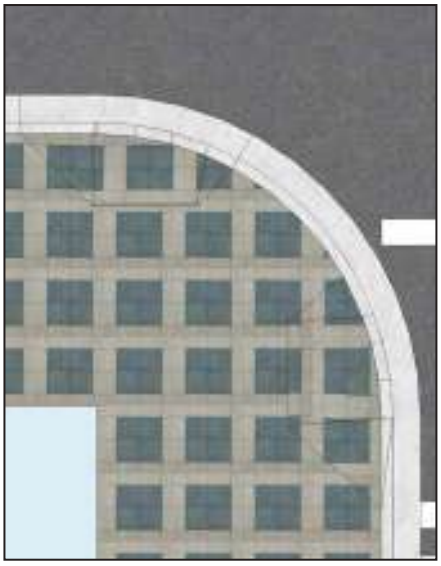
Main Street

Typical kerb ramp configuration

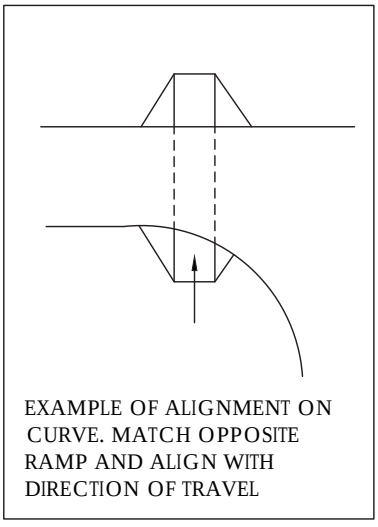


PLAN

Existing kerb ramps in St Leonards



Typical plan



Stainless Steel Tactile Ground Surface Indicators

Notes

1. This drawing is to be read in conjunction with 'Typical Kerb Ramp' detail.

2. Path through ramps.

3. Wood float finish.

4. Dummy joints line up with opposite kerb ramp.

5. Kerb ramps align with property boundaries.

6. 1330mm landings at the top of any kerb ramp where possible.

7. Top to bottom of kerb ramp 1:8 maximum.

8. Kerb ramp to finish flush with adjacent paving.

9. Kerb ramps to comply with AS1428.1.

10. Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428

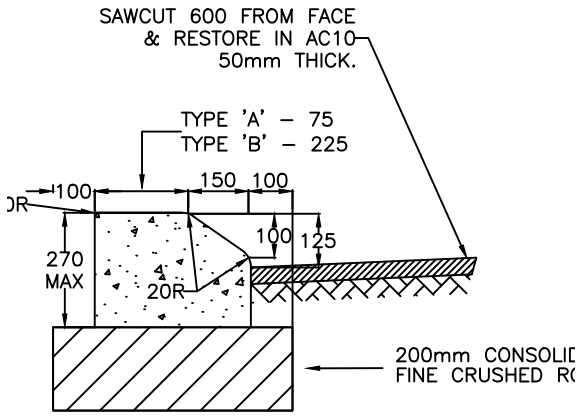
11. Feature paving on corners and banding as illustrated.

Main Street

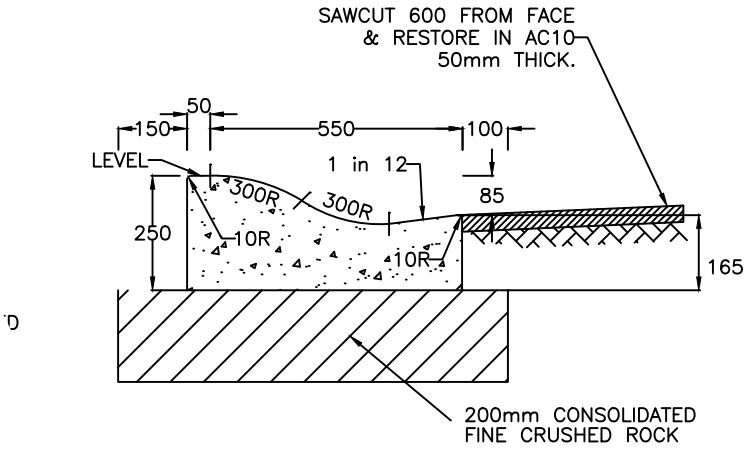
Typical kerb and gutter

Kerb and gutter treatment

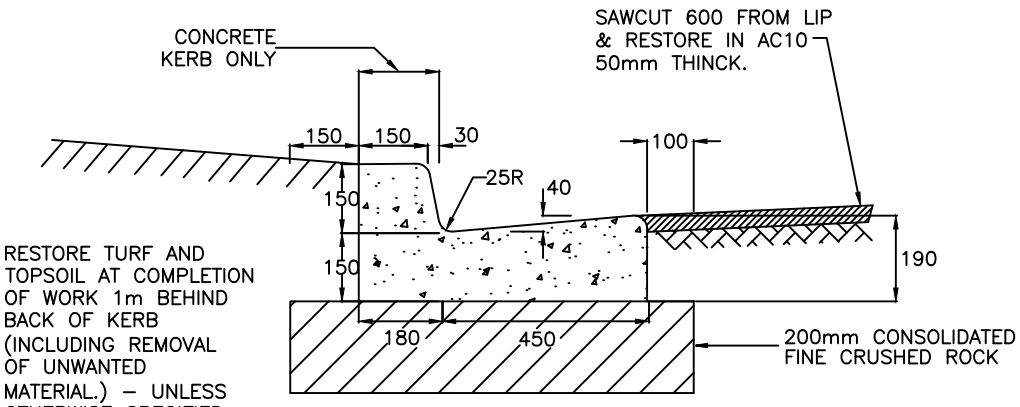
St Leonards existing kerb and gutter treatment



MOUNTABLE KERB



ROLL KERB



BARRIER KERB

Notes

1. Base course: Consolidated fine crushed rock to councils specification.

2. Concrete finish

A. All edges shall be tool finished with 12mm rad. 50mm wide edging tool.

B. Gutter and layback shall be finished with a steel trowel.

C. Driveway slab to be finished with wood float.

3. Expansion joints: Expansion joints shall be placed at 6m intervals.

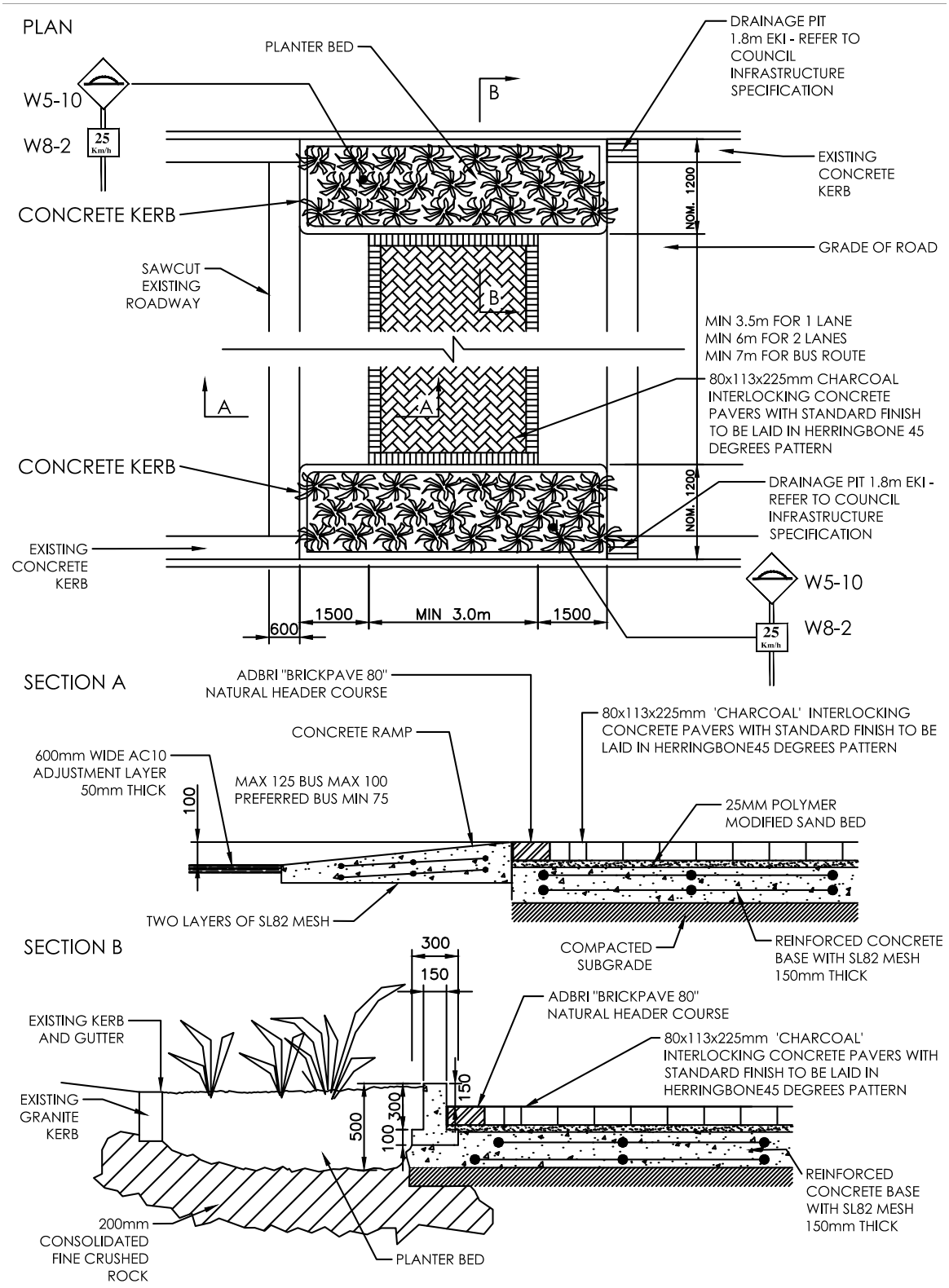
4. Dummy joints: Dummy joints shall be placed at 6m intervals staggered inbetween expansion joints

5. All plan dimensions are in millimetres. Unless otherwise noted.

6. AC10mm adjustment: Provide 600mm wide AC10 correction course layer 50mm thick as shown.

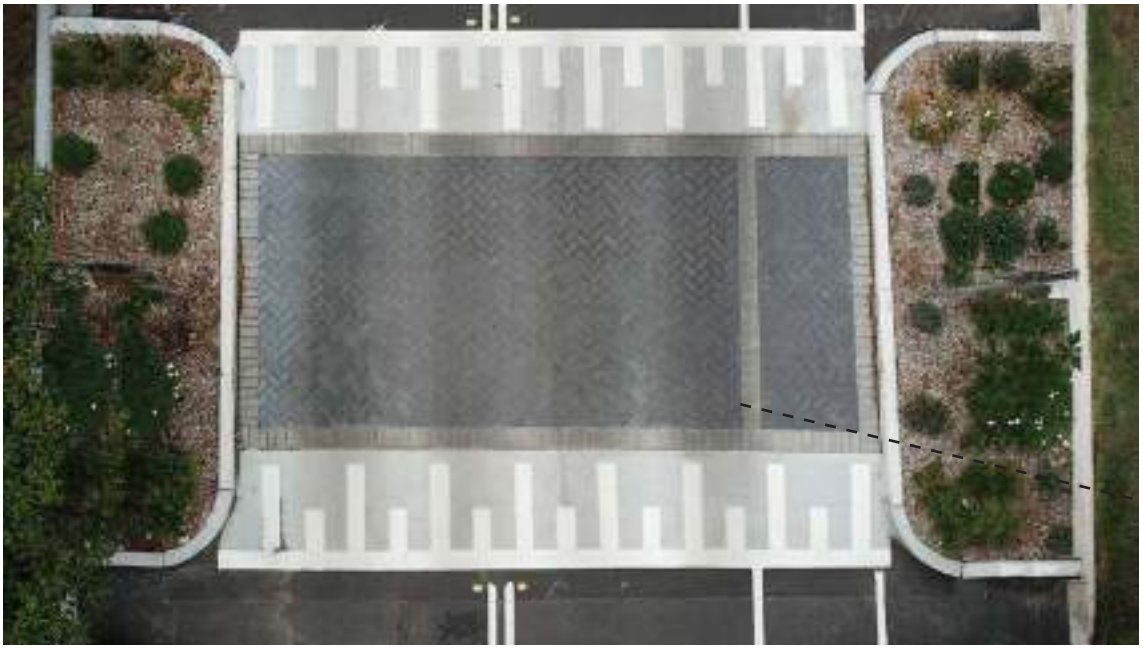
Main Street

Typical threshold with concrete ramps and interlocking charcoal pavers

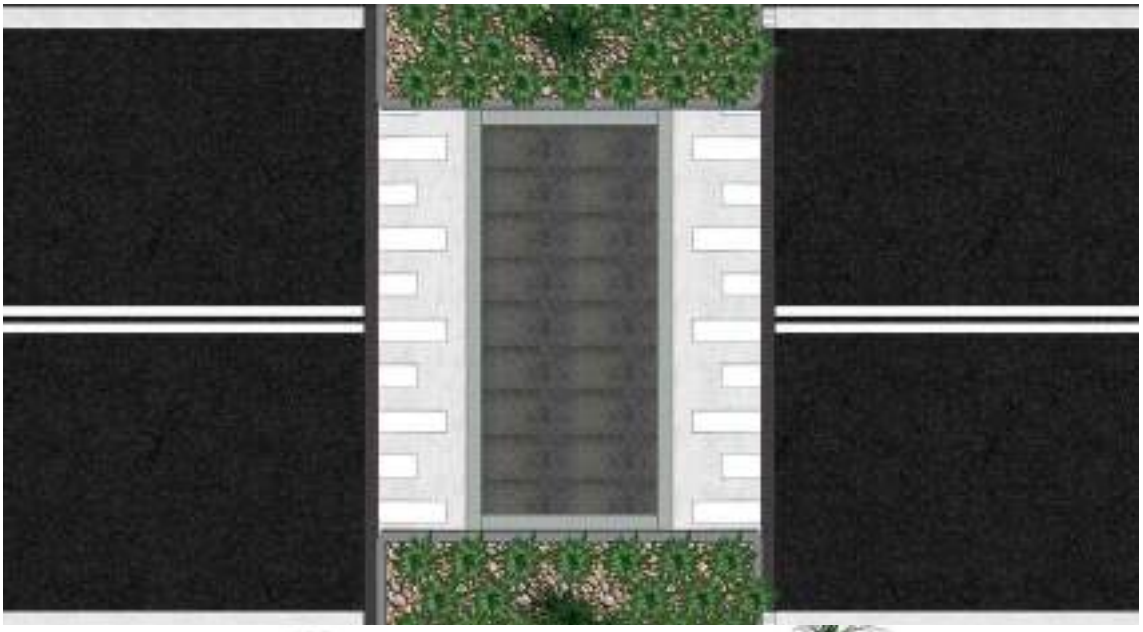


Main Street

Typical threshold with concrete ramps and interlocking charcoal pavers

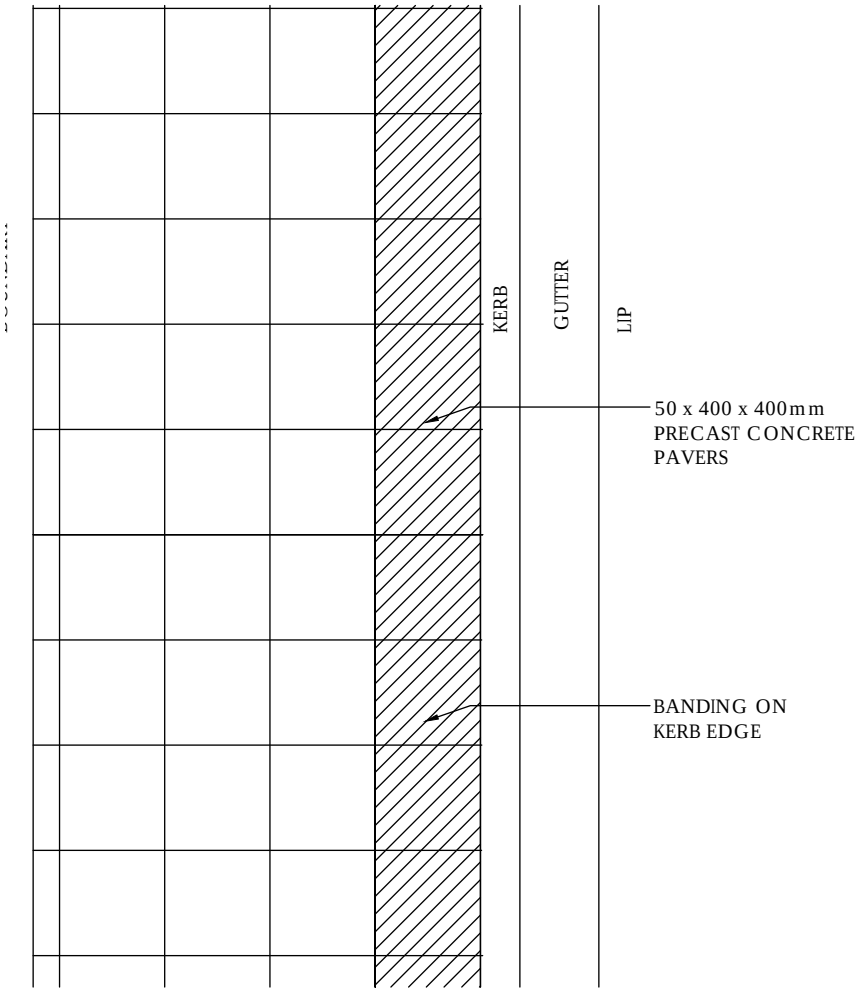


Additional banding for optional cycleway shown



Laneway

Typical footpath paving in laneways



Notes

1. 50 x 400 x 400mm precast concrete unit pavers with a honed finish. Laid in butt jointed, stackbond pattern with a header along the kerb line.

2. Dark grey (Golden Gunmetal) and cream (Albany Beige) highlight precast concrete pavers to maintain consistency with existing paving in the area.

3. Rigid base.

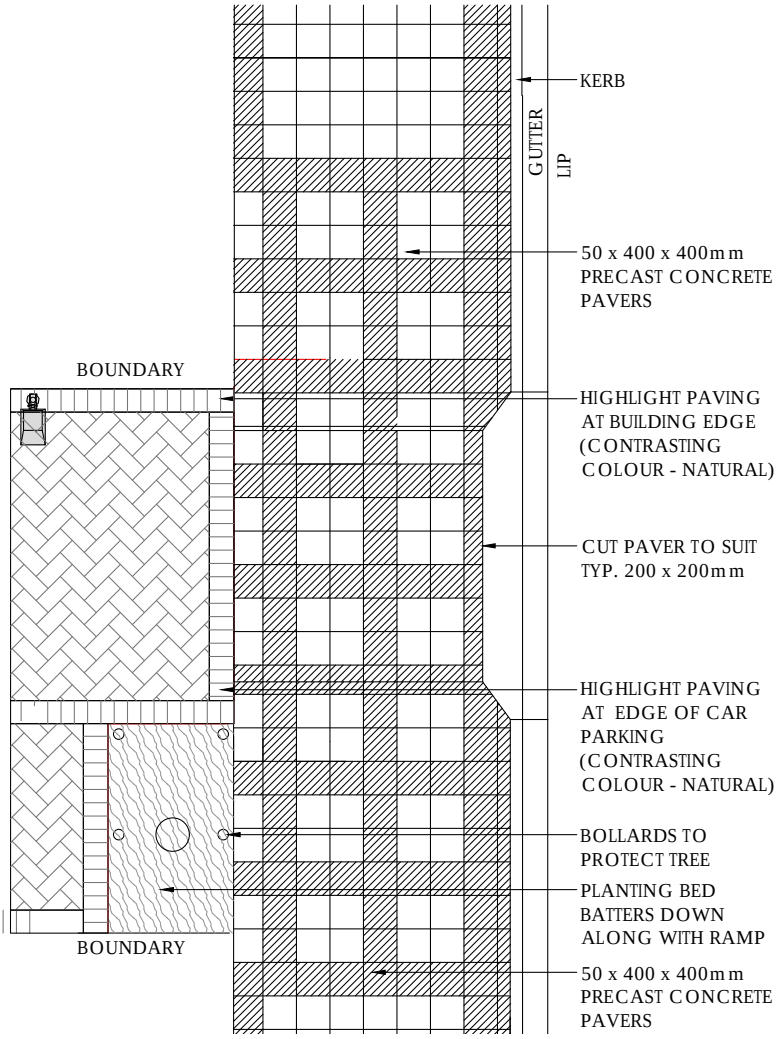
Existing corner feature paving

Banding

Precast concrete units in stackbond pattern corner detail

Shared zone

Typical raised crossing at entry to laneway and shared zone



Notes

1. 50 x 400 x 400mm precast concrete unit pavers with a honed finish. Laid in butt jointed, stackbond pattern with a header along the kerb line.

2. Dark grey (Golden Gunmetal) and cream (Albany Beige) highlight precast concrete pavers to maintain consistency with existing paving in the area.

3. Rigid base to pavement.

4. Feature paving on corners and adjacent to vehicle crossings as illustrated. banding as illustrated. Feature paving extends approx. 2.5m on either side of crossing.

5. Vehicle cross over to match adjacent pedestrian paving treatment. Shared zone and laneway to be paved with interlocking concrete paver.

6. To be laid on Parex Streetscape System mortar bed and joining to manufacturer's specification.

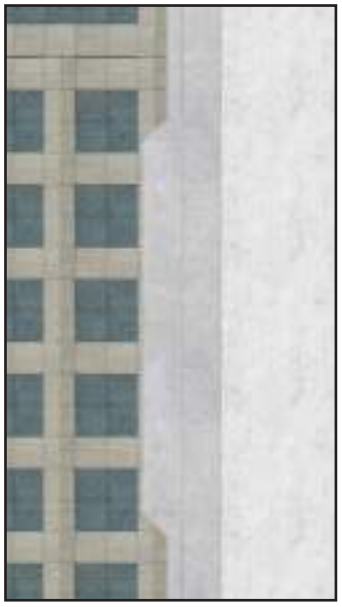
7. All sign stems (50mm NB) shall be installed using V-Loc + wedge system (galvanised). Footpath pavement shall be neatly core drilled 200mm DIA.

8. All open joints shall be sealed with Bostik "Seal 'N' Flex 1" in accordance with the manufacturer's recommendations - this includes boundaries, back of kerb and lintels, utility pits, construction joints etc

Existing corner feature paving

Banding

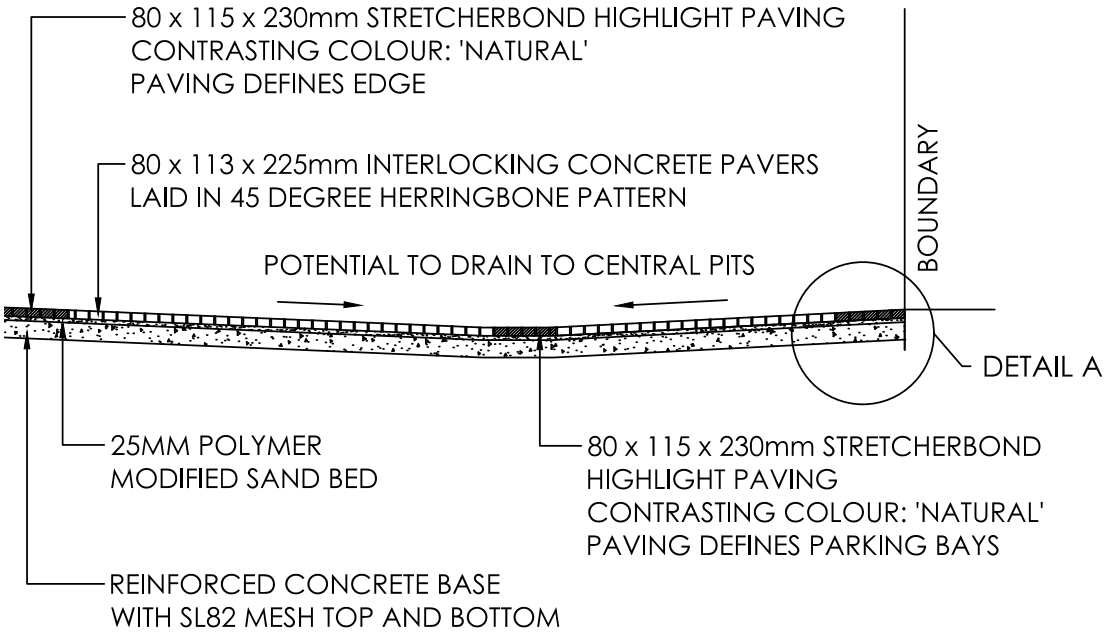
Precast concrete units in stackbond pattern corner detail

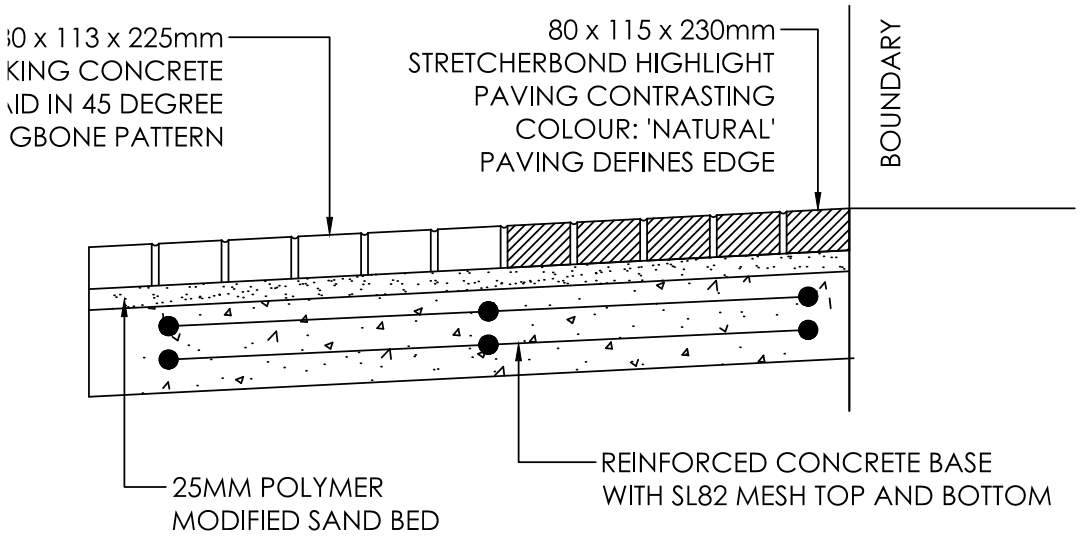


Driveway treatment

Shared zone

Typical shared zone section

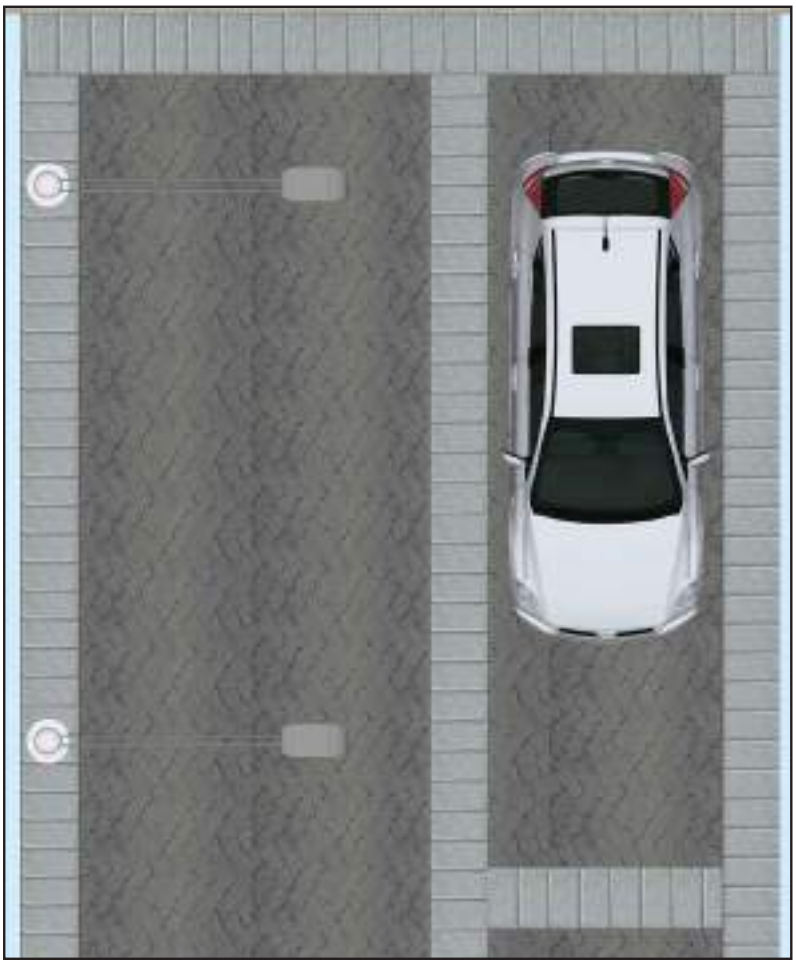




DETAIL A

Shared zone

Typical shared zone section



Shared Zone treatment

Notes

1. 80x113x225mm 'Charcoal' (dark grey) coloured interlocking concrete pavers with standard finish. To be laid in herringbone 45 degrees pattern

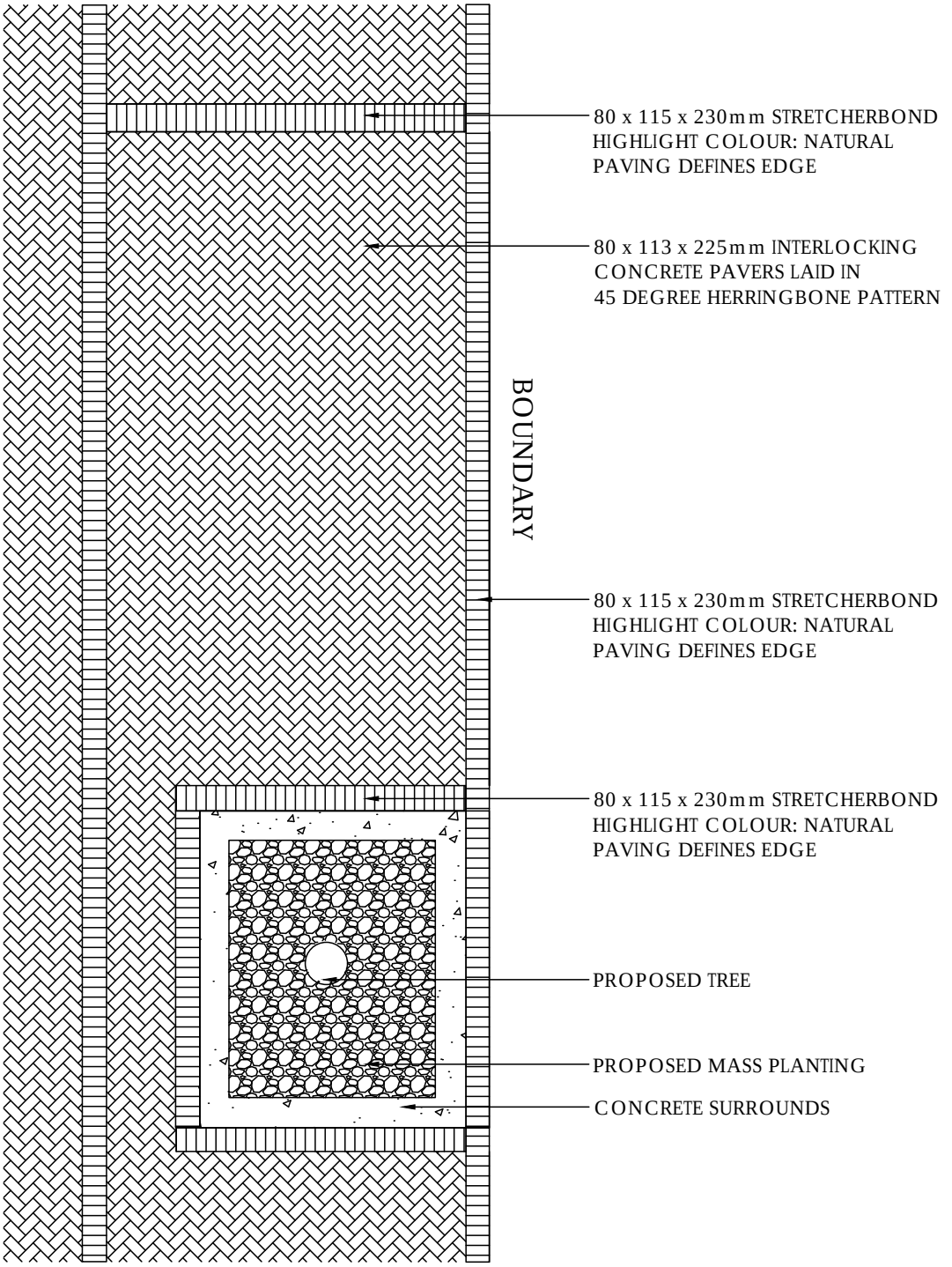
2. To be laid on a rigid base 200mm thick reinforced concrete 32MPa with SL82 mesh top and bottom.

3. Sand bedding: nominal 30mm thick.

'Charcoal' (dark grey) coloured interlocking concrete pavers

Shared zone

Typical parking demarcation in interlocking concrete pavers



'Charcoal' (dark grey) coloured interlocking concrete pavers

Shared Zone treatment

Notes

1. 80x113x225mm 'Charcoal' (dark grey) coloured interlocking concrete pavers with standard finish.

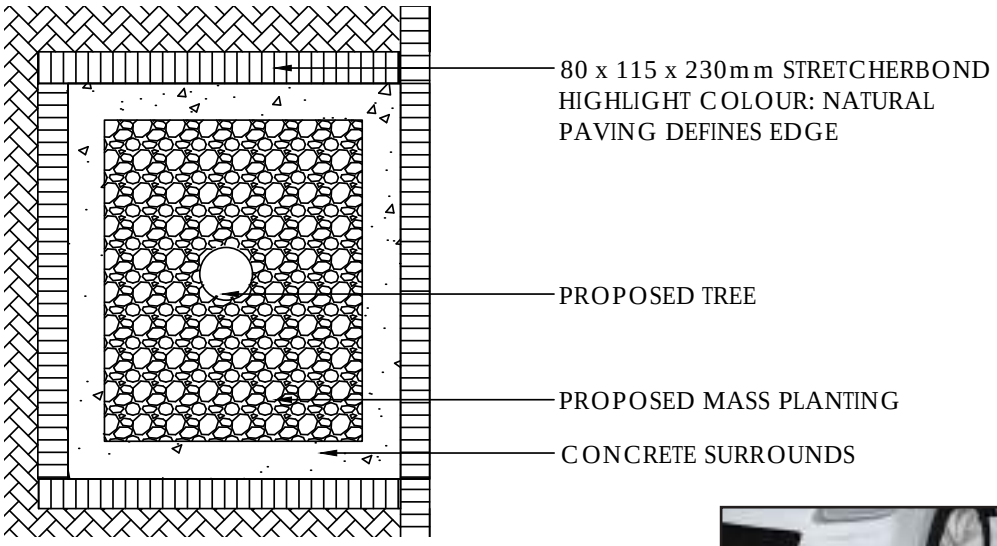
2. To be laid in herringbone 45 degrees pattern.

3. To be laid on a rigid base to prevent rutting.

3. 80 x 115 x 230mm strecherbond highlight paving of contrasting colour: 'Natural' defines boundary

Shared zone

Typical tree pit at grade in Shared zone - plan and section

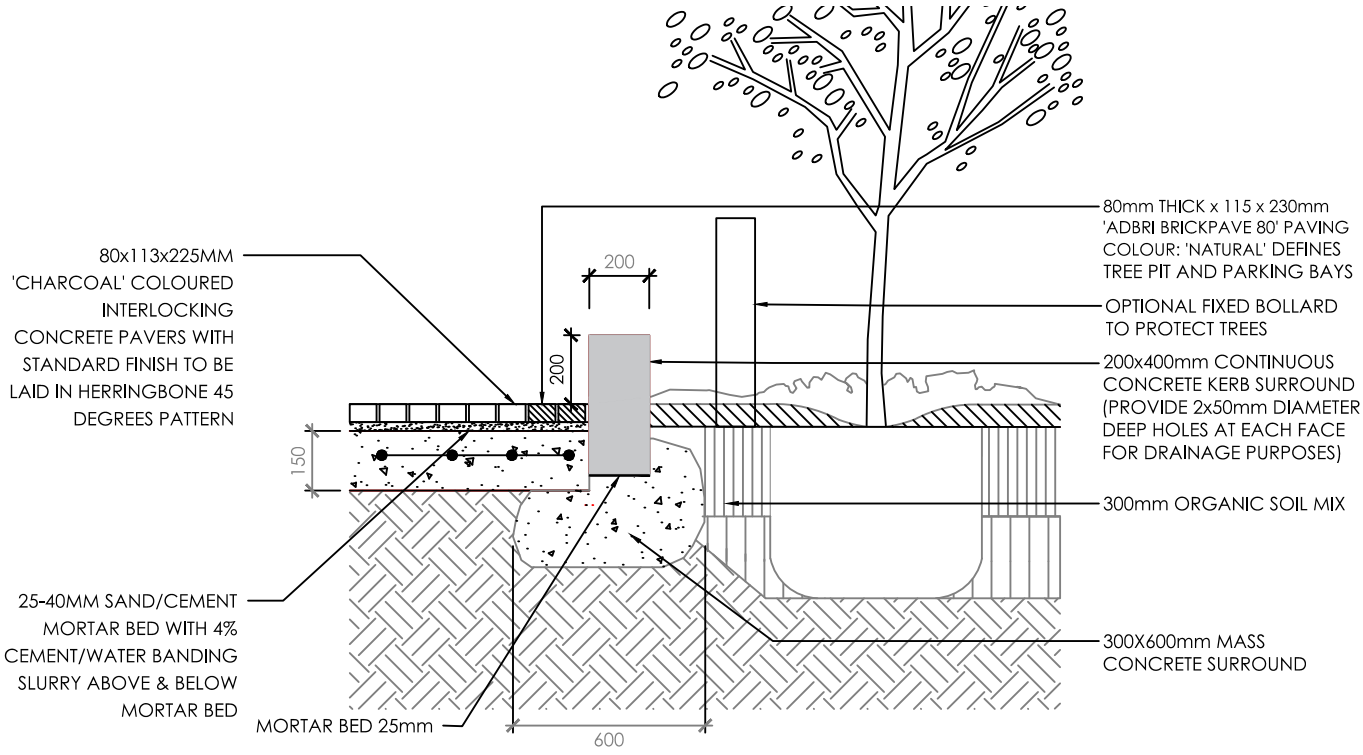


'Charcoal' (dark grey) coloured interlocking concrete pavers

Notes

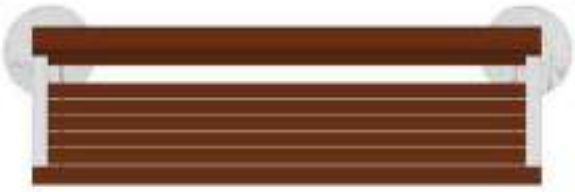
1. 80x113x225mm 'Charcoal' (dark grey) coloured interlocking concrete pavers with standard finish. To be laid in herringbone 45 degrees pattern

Tree Pit



Furniture and Fixtures

Typical seat with back



Notes

1. Timber battens with hidden fixings.

2. Stainless steel frame.

3. Angular, contemporary form.

4. Seat with back and arm rests.

5. Three person seats approximately 1850mm long.

6. To be sub-surface fixed where possible.

7. Stainless steel anti-tamper fixings.

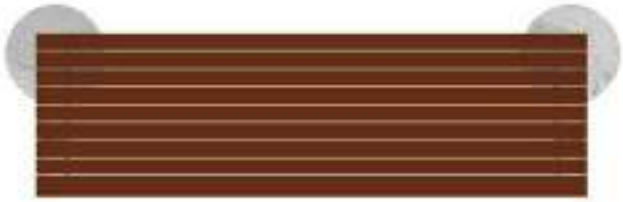
8. Seat to be Rondo seat by StraBe or equal and approved. Image and details indicative of style only.

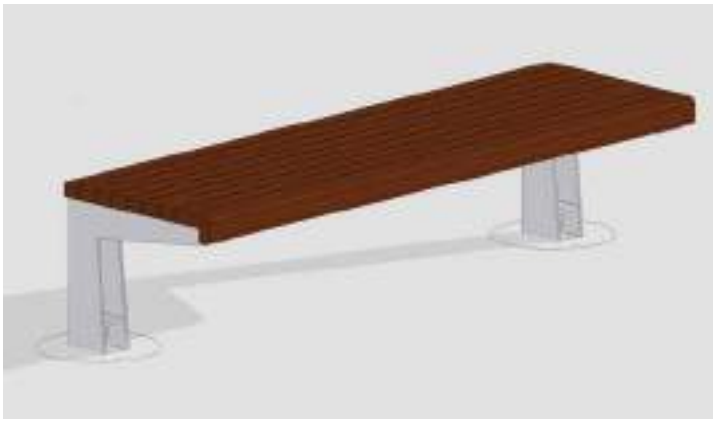
9. Timber to be weathered for 6 months and treated prior to installation.

10. Maximum grade at which seats can be installed 8.6%. Min seat height 380mm; max seat height 540mm.

Furniture and Fixtures

Typical bench seat





Notes

1. Timber battens with hidden fixings.

2. Stainless steel frame.

3. Angular, contemporary form.

4. Seat with back and arm rests.

5. Three person seats approximately 1850mm long.

6. To be sub-surface fixed where possible.

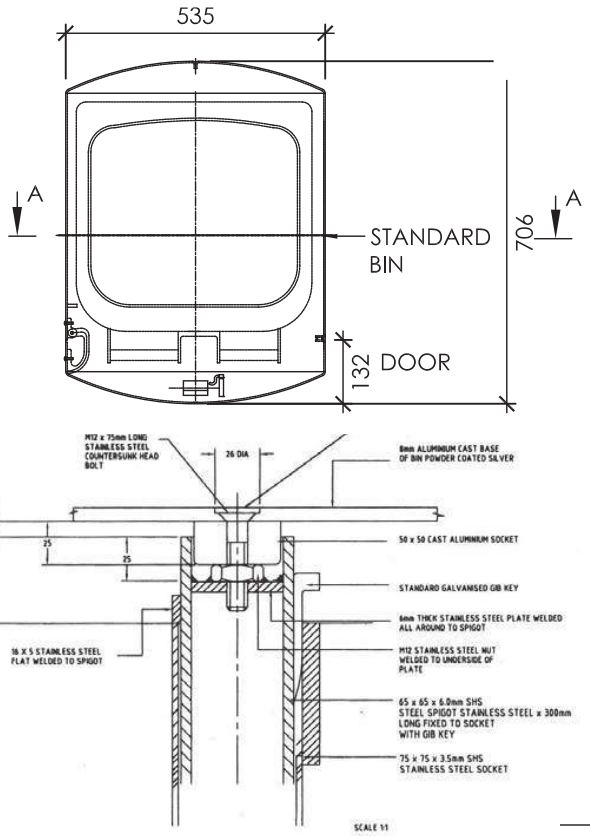
7. Stainless steel anti-tamper fixings.

8. Seat to be Rondo seat by StraBe or equal and approved. Image and details indicative of style only.

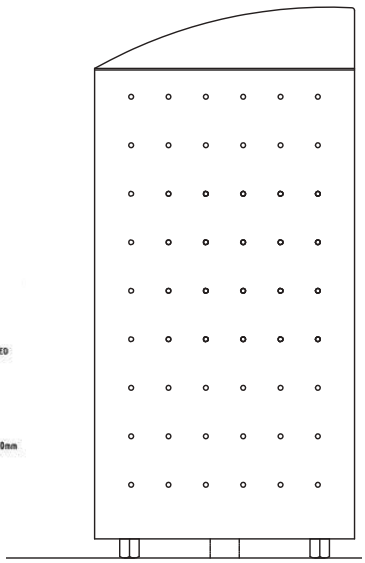
9. Timber to be weathered for 6 months and treated prior to installation.

10. Maximum grade at which seats can be installed 8.6%. Min seat height 380mm; max seat height 540mm.

Typical metal bin installation detail



SPIGOT CONNECTION DETAIL



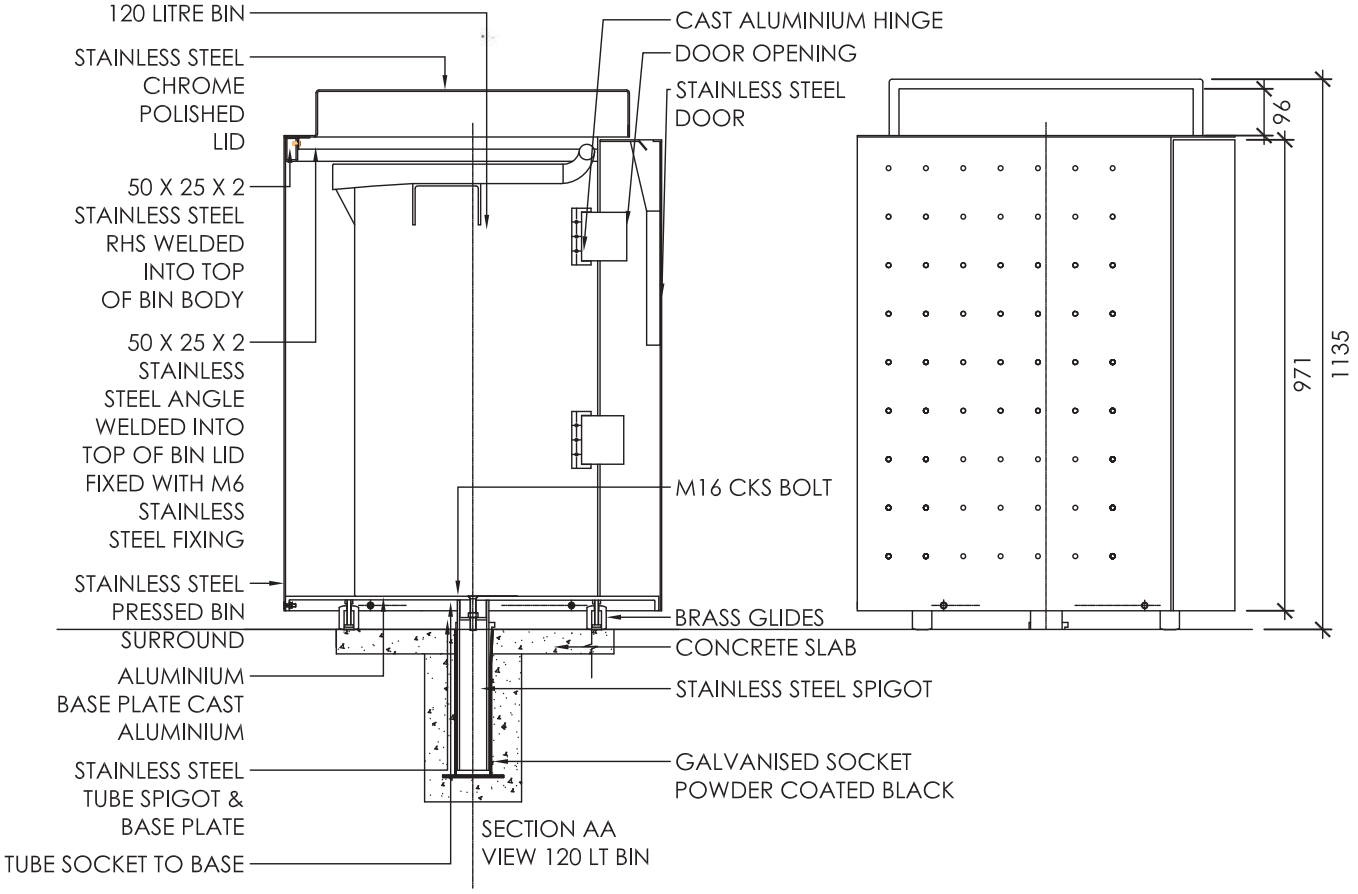
SECTION VIEW 120 LT BIN

Notes

1. All dimensions in mm.

2. Stainless steel finish.

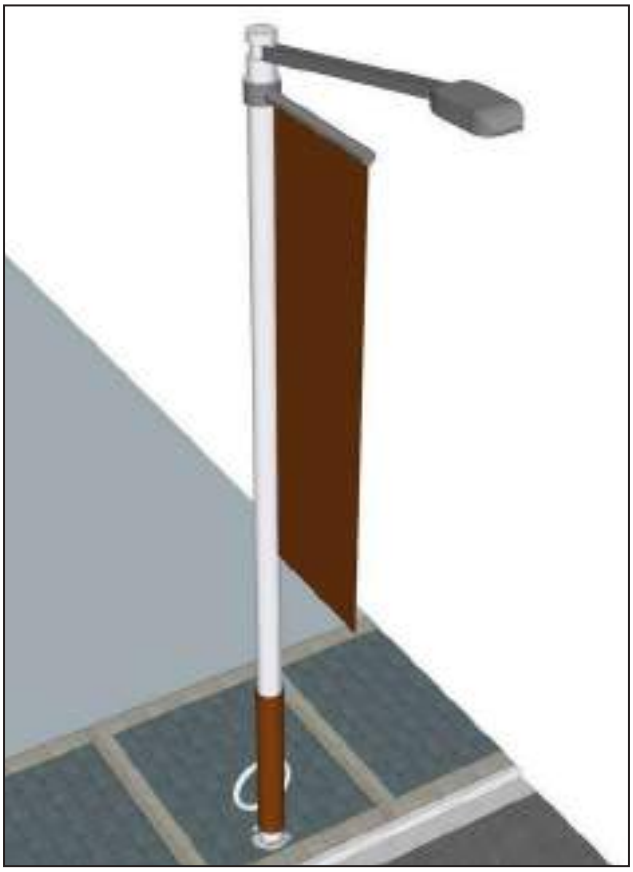
3. Bins are to be sub-surface mounted.

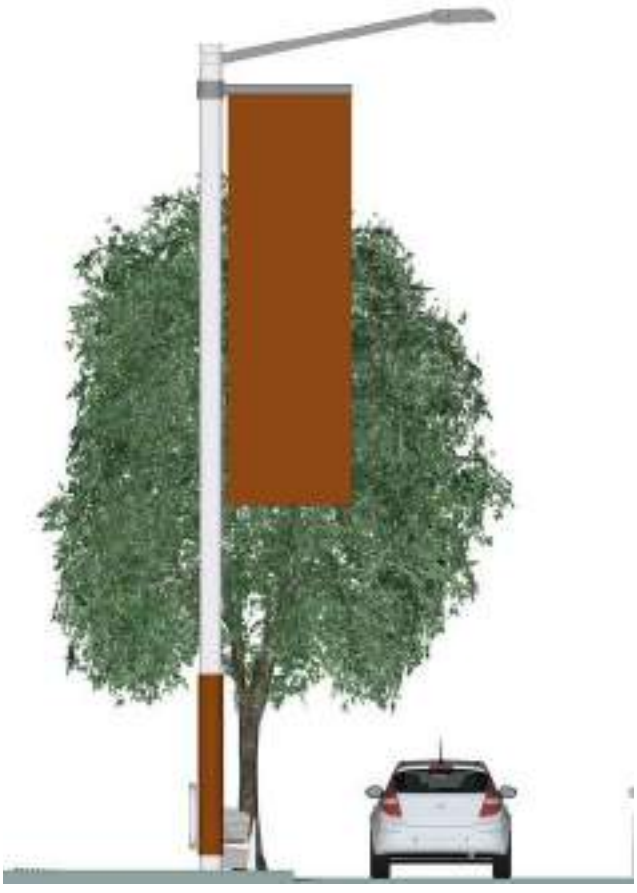


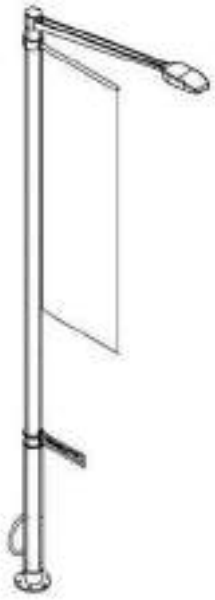
SECTION AA
VIEW 120 LT BIN

Furniture and Fixtures

Typical post top light (Main Street)



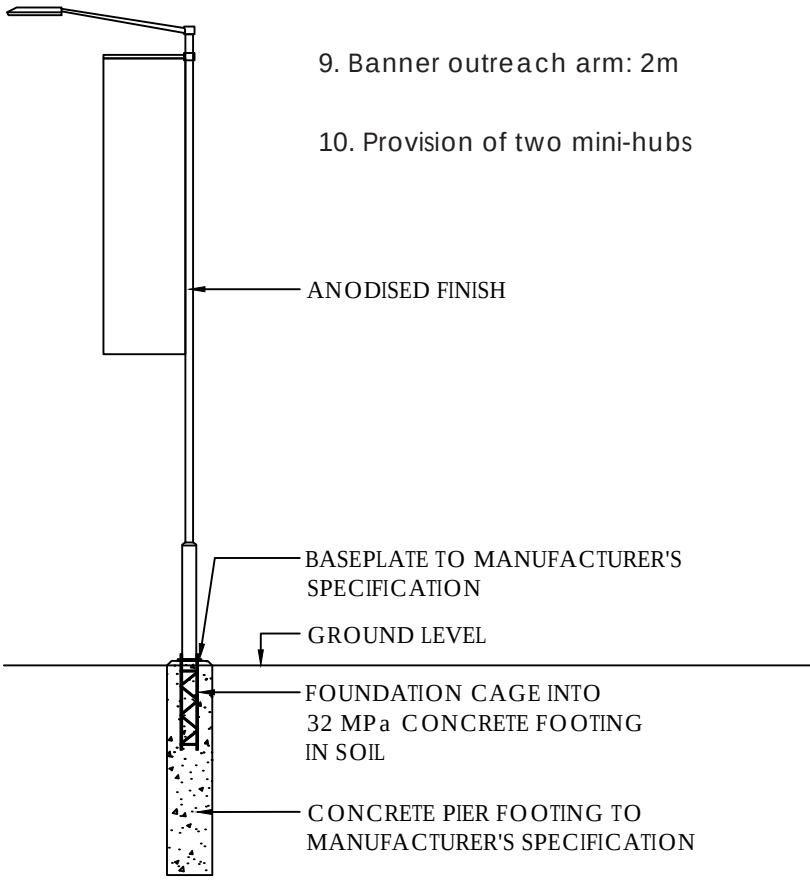




Multi-functional post top light pole

Notes

1. LED Luminaire with P.E. cells
2. Lighting design to comply with Australian Standards.
3. Anodised finish.
4. Foundation cage cast into 32 MPa concrete footing in subgrade.
5. Poles are to be assembled and erected in accordance with manufacturers specifications.
6. Pole Height: 9.5m
7. Luminaire outreach arm: 3m
8. Spacing of poles to be determined by lighting design.
9. Banner outreach arm: 2m
10. Provision of two mini-hubs



Furniture and Fixtures

Typical post top light - default option 1 (Laneways and shared zones)

Multi-functional post top light pole

Notes

1. LED Luminaire with P.E. cells

2. Lighting design to comply with Australian Standards.

3. Anodised finish.

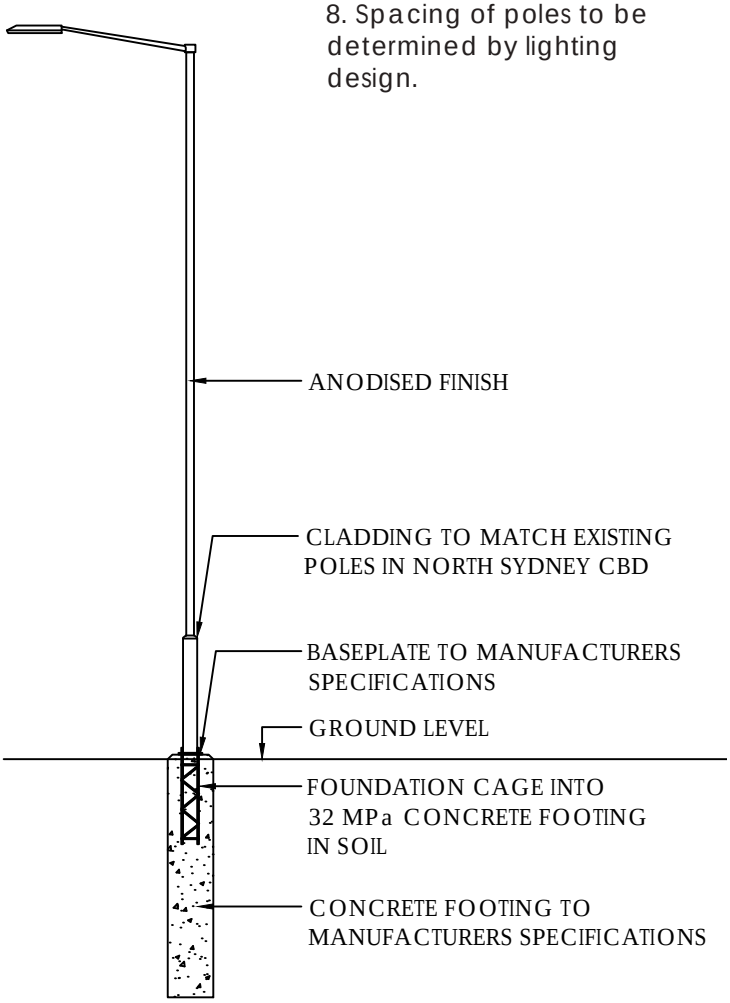
4. Foundation cage cast into 32 MPa concrete footing in subgrade.

5. Poles are to be assembled and erected in accordance with manufacturers specifications.

6. Pole Height: 7m

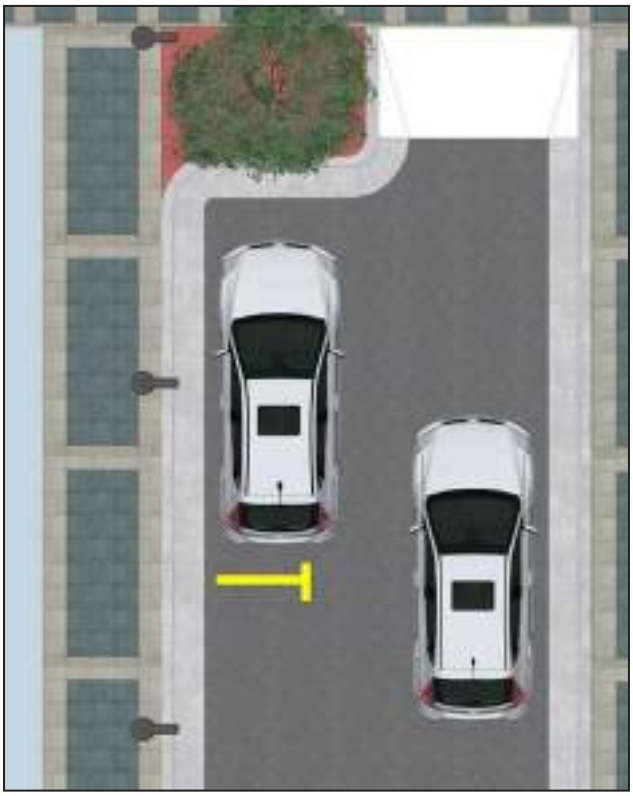
7. Luminaire outreach arm: 2m

8. Spacing of poles to be determined by lighting design.



Furniture and Fixtures

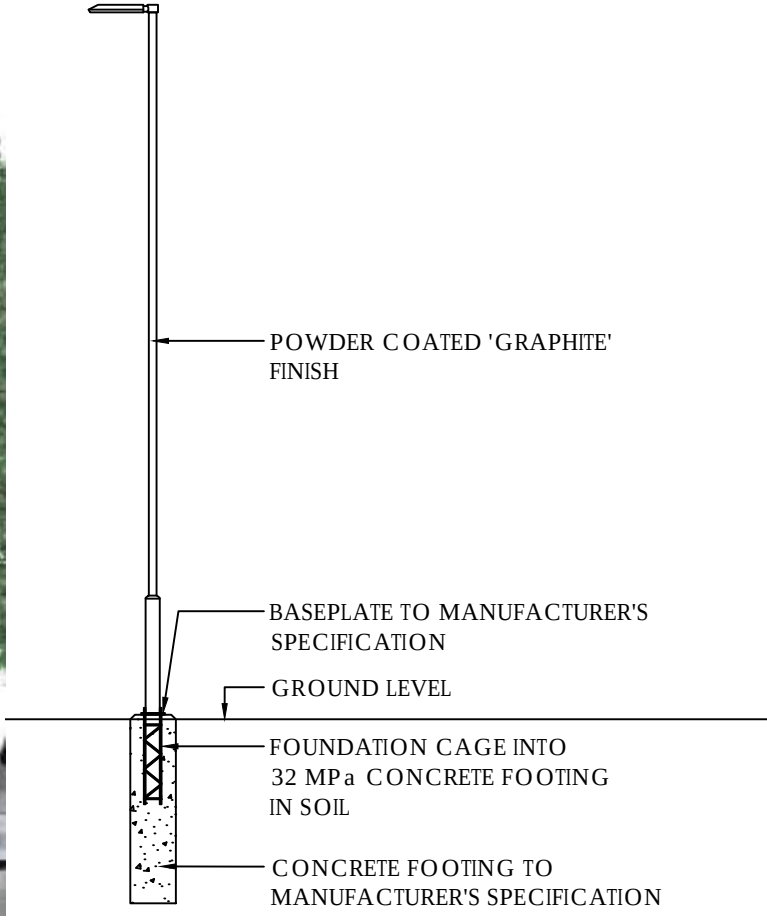
Typical post top light - option 2 (Laneways and shared zones)



Post top light pole

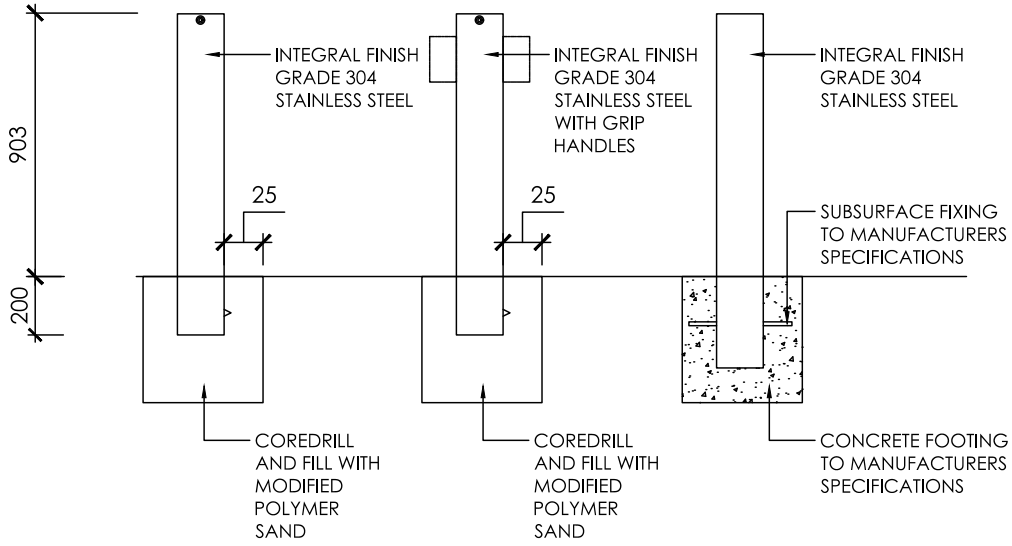
Notes

1. LED Luminaire with P.E. cells
2. Lighting design to comply with Australian Standards.
3. Powder coated 'Graphite' finish.
4. Foundation cage cast into 32 MPa concrete footing in subgrade.
5. Poles are to be assembled and erected in accordance with manufacturers specifications.
6. Pole Height: 7m
7. Spacing of poles to be determined by lighting design.



Furniture and Fixtures

Typical 125mm and 150mm bollard - Fixed and removable



Locking and removable bollard

Locking and removable bollard with grip handles

Fixed insitu bollard

Notes

1. Integral finish grade 304 stainless steel.
2. Bollards are to be subsurface fixed.
3. Finish: Linished.
4. Optional reflective tape.

Locking and removable bollard / Fixed insitu bollard (With optional grip handles)

Typical parking meter

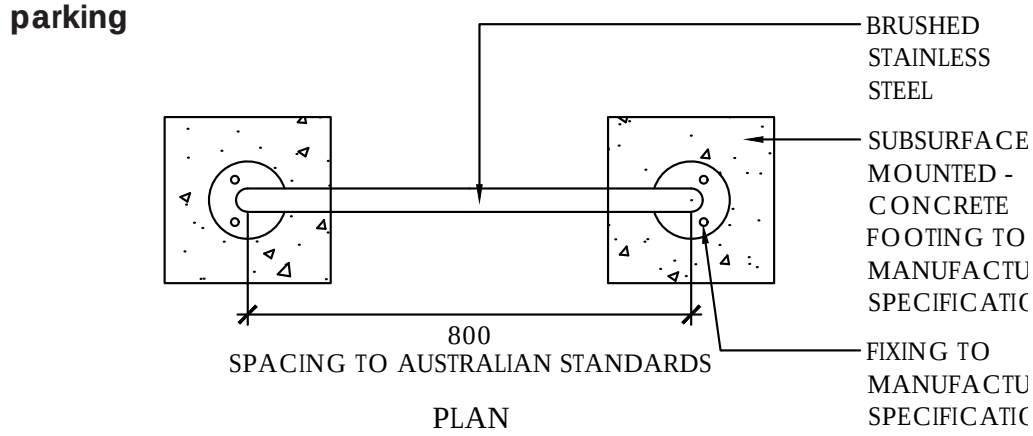
Parking meter

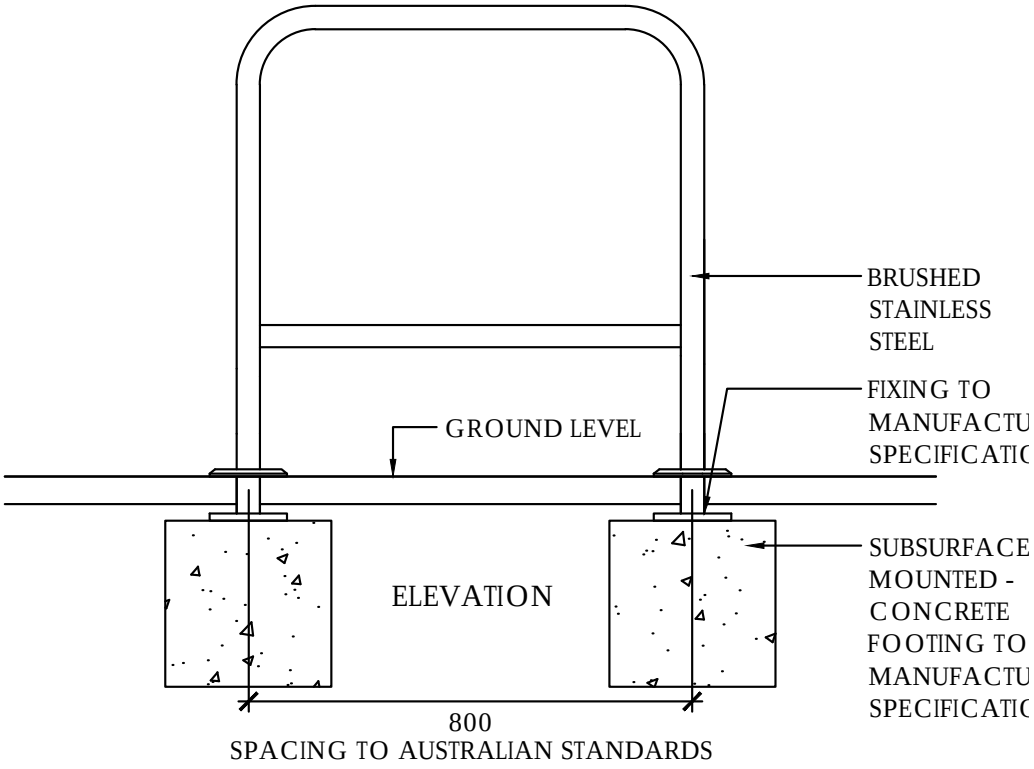
Notes

1. Parking meter 1.2m high
2. Situated 600mm from back of kerb
3. Where finished footpath surface levels do not match existing, contact Council's parking meter services division for further details about footing requirements and repositioning of meter stem.

Furniture and Fixtures

Typical bicycle parking





Notes

1. Subsurface mounted where possible.

2. Brushed stainless steel (brushed finish).

3. Ideally bike racks shall be located in areas where footpaths are widened. Bike racks should also be located where there is a change in transport type - for instance at ferry terminals, bus stops and train stations. They should also be located along cycleways and at cycle destinations.

Stainless steel bike racks

Furniture and Fixtures

Typical bus shelter

Notes

1. Urban / Contemporary bus shelter.

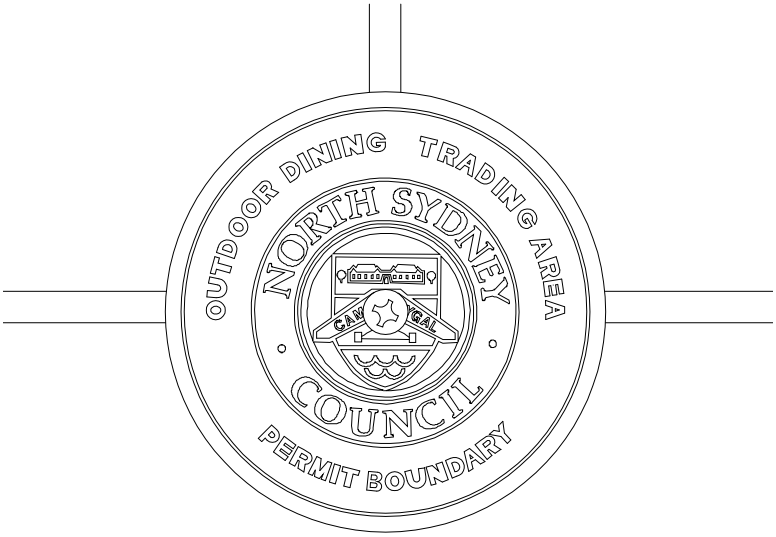
2. Bus shelter to incorporate advertising material and information panels.

3. Size to vary to suit location and demand.

4. Bus shelters are to be installed as per the specification from North Sydney Council's future bus shelter supplier.

Furniture and Fixtures

Typical alfresco demarcation line



Notes

1. Alfresco demarcation plaques are to be nailed to the pavement along the extent of licenced outdoor dining trading area.

2. Plaques are to be nailed into joints between pavers if possible.

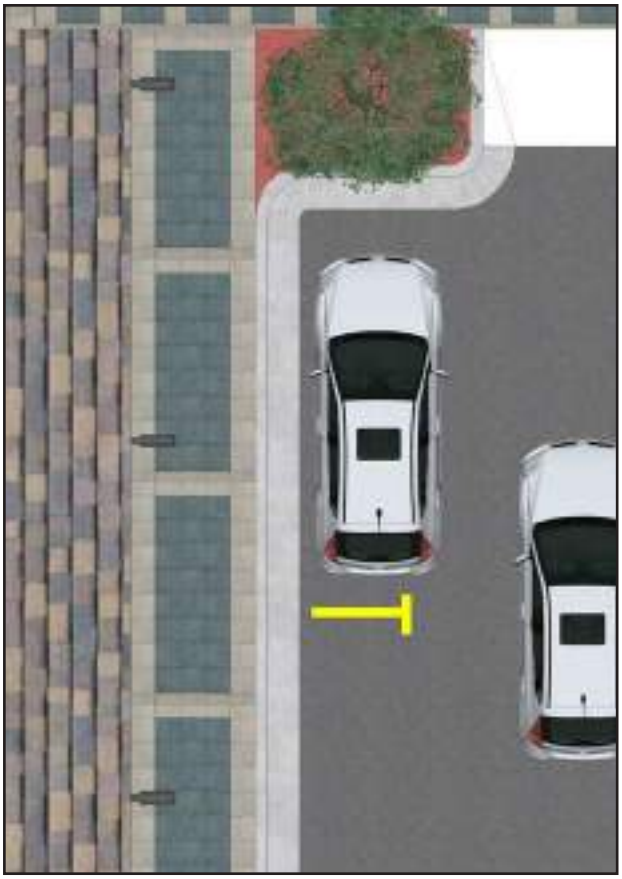
3. Plaques are to be located in a consistent line at an interval appropriate to the scale of the space.

4. Plaques are to be supplied by council and are to have the North Sydney logo.

5. Plaques are brass and are epoxy fixed along with a central pin.

Furniture and Fixtures

Typical wall mounted light (Laneways and shared zones)



Notes

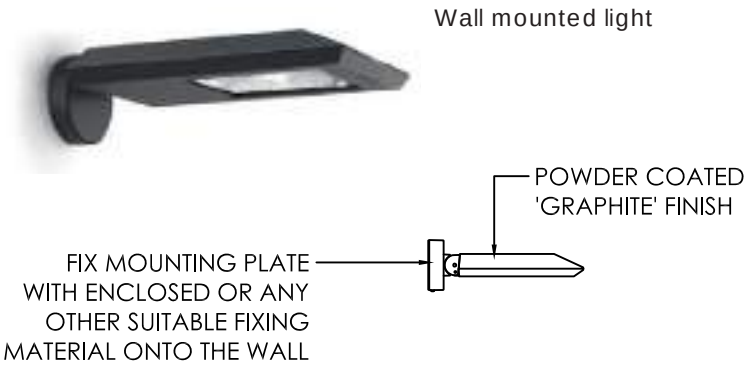
1. A consistent light colour warmth across fittings.

2. A consistent palette of light fittings for different applications.

3. Powdercoated 'Graphite'.

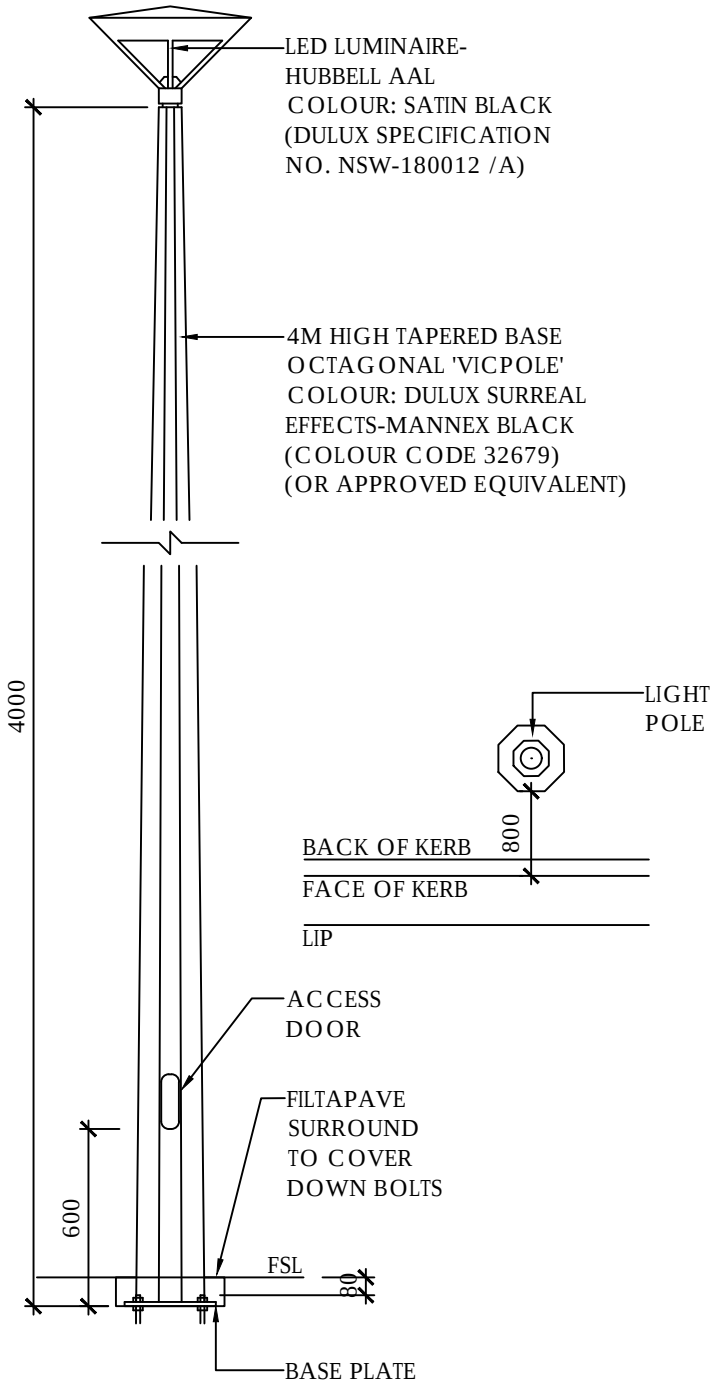
4. Lead mains supply cable through the cable entry of the mounting plate.

5. Fix the mounting plate with enclosed or any other suitable fixing material onto the mounting surface.

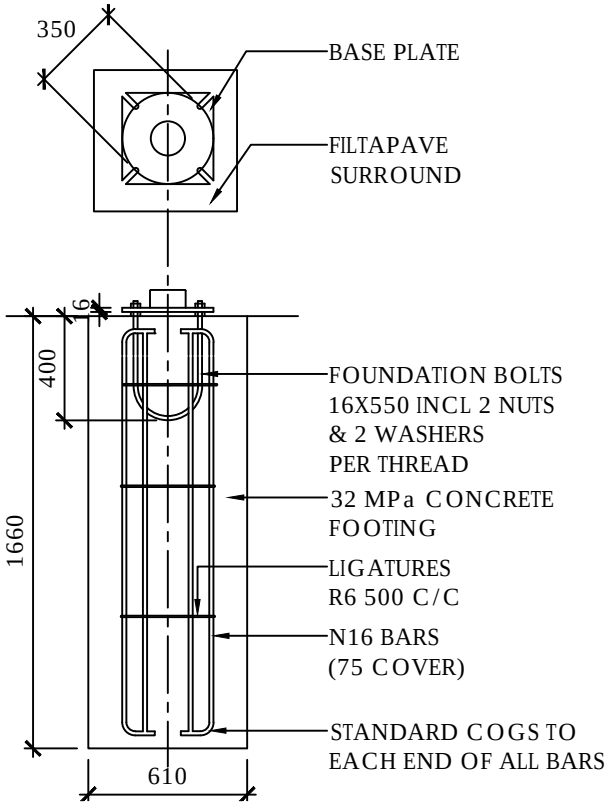


Furniture and Fixtures

Typical octagonal light pole (Public plazas and spaces)



Post top light (Parks and Plazas)



Notes

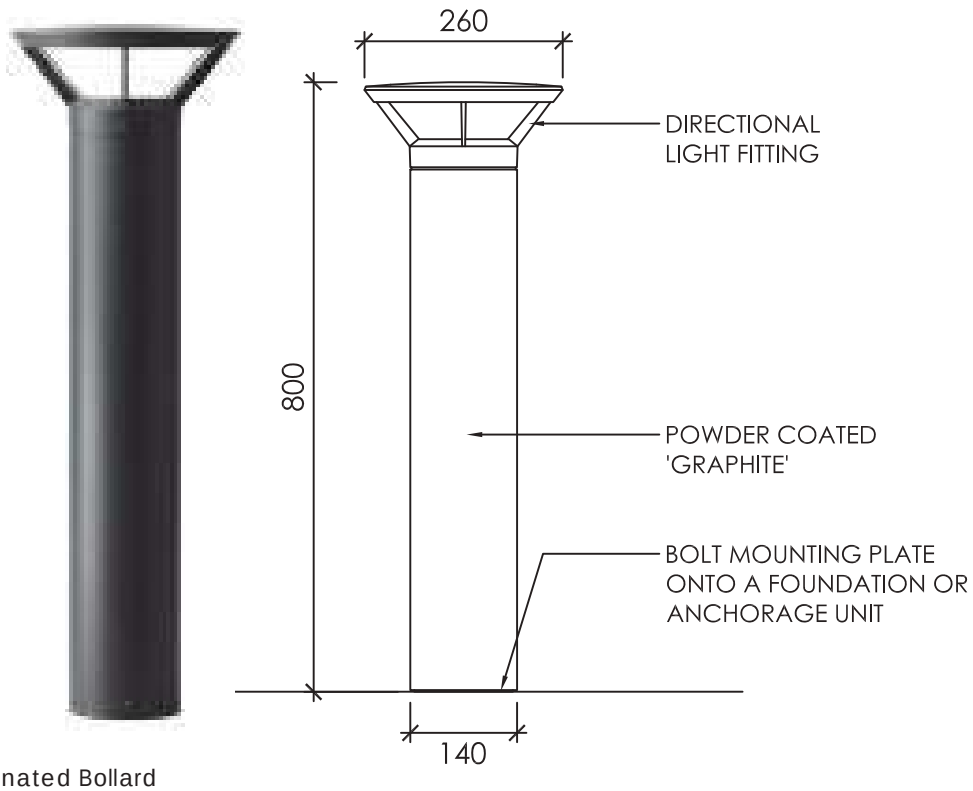
1. For installation detail. Refer to manufacturer's specification.

2. Allow for grout packing between the concrete footing and the base plate of the light pole to achieve a vertical alignment when erecting the pole. The grout pack shall have a minimum strength of 32MPa at 7 days. The maximum tolerance for vertical misalignment will be 30mm from the vertical.

3. Light colour warmth to match other fittings.

Furniture and Fixtures

Typical illuminated Bollard



Illuminated Bollard

Notes

1. Fixing: Bolted with a mounting plate onto a foundation.

2. Light fittings shall be directional.

3. Powder coated 'Graphite'.

4. Fitting to match post top (parks and plazas) luminaire range.

5. Bolt mounting plate onto foundation or anchorage unit to manufacturers specifications.

Furniture and Fixtures

Typical handrail lighting

Notes

1. Lighting to be housed within a stainless steel handrail.

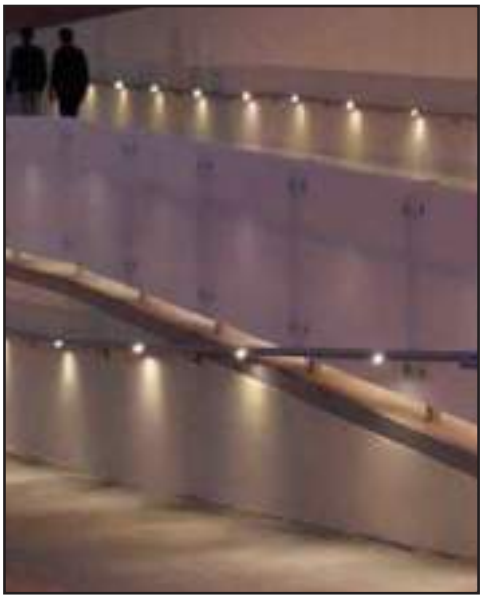
2. Point source lighting at a regular interval directed to the adjacent path of travel.

3. Light fittings to be easy to replace over time and to not be on a single circuit.

4. Light fitting must not protrude from handrail.

5. Stainless Steel fixture.

6. Lighting to be installed as per specification from Planet Lighting.

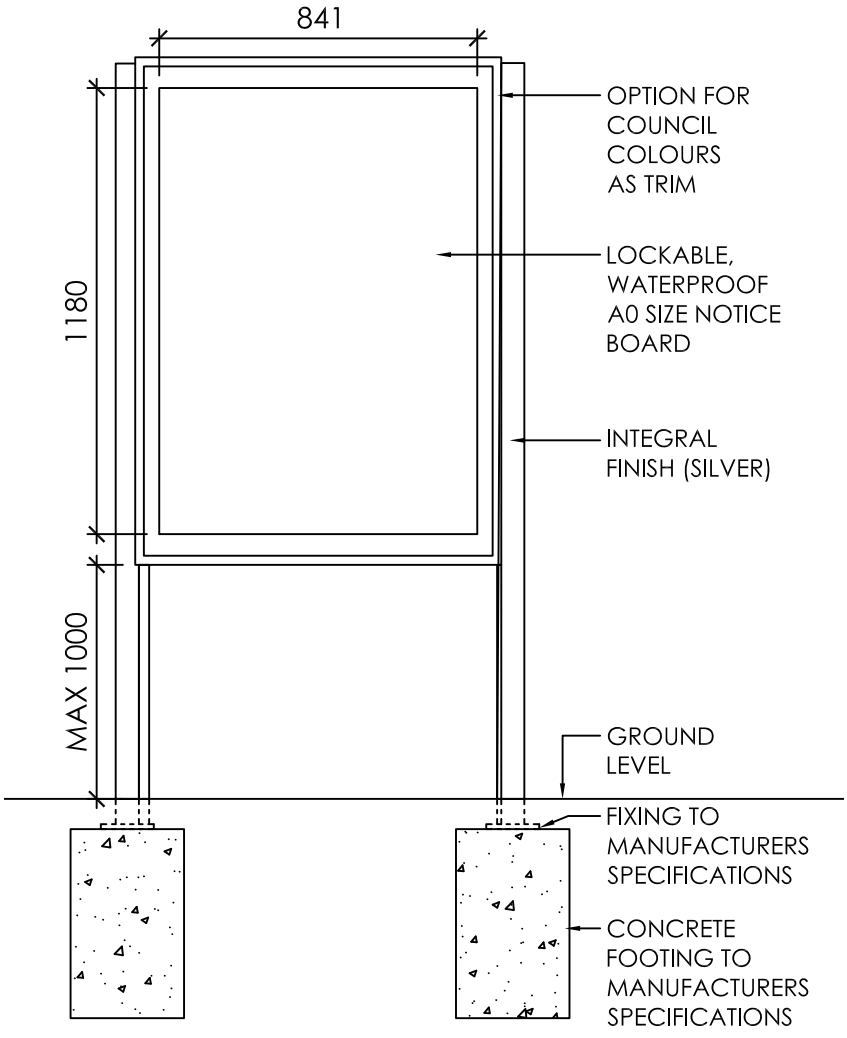


Indicative handrail lighting

Furniture and Fixtures

Typical community notice board - free standing

Indicative illustration of free standing community noticeboard



Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Weather proof seals.

9. Stainless steel hinges incorporated into the swing door.

10. Manual or gas struts door stays.

11. 3mm poly carbonate or acrylic cover.

12. Optional anti-graffiti film applied to cover.

13. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Furniture and Fixtures

Typical community noticeboard - wall mounted

Indicative illustration of wall mounted noticeboard in village bus stop (portrait)

Example of A0 noticeboard (landscape)

Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Wall mounted.

9. Weather proof seals.

10. Stainless steel hinges incorporated into the swing door.

11. Manual or gas struts door stays.

12. All fixings to be concealed.

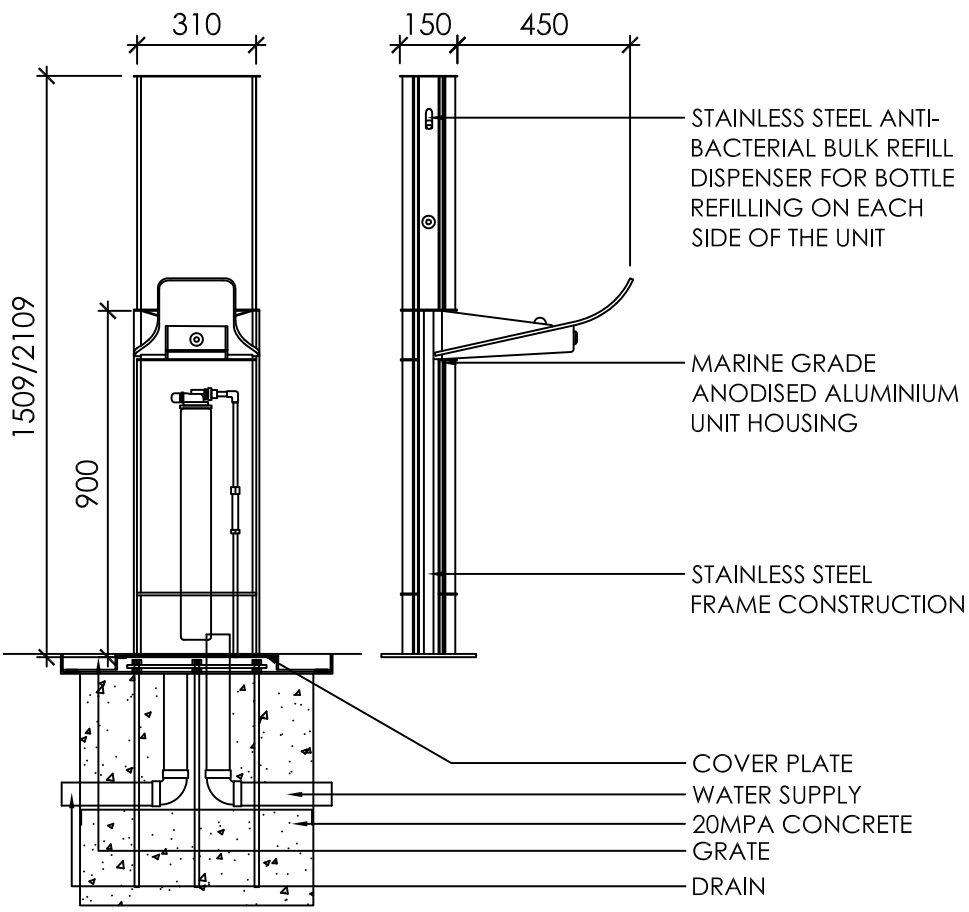
12. 3mm Poly carbonate or Acrylic cover.

13. Optional anti-graffiti film applied to cover.

14. Sign frame finishes range from anodised Matt Silver to standard powder coat colours.

Furniture and Fixtures

Typical bottle refill station with drinking fountain



Bottle refilling station with drinking fountain

Bottle refilling station with drinking fountain

Notes

1. Wheelchair accessible drinking fountain.
2. 1500mm high refill station.
3. Stainless steel bulk refill dispenser for bottle refilling each side of the unit.
4. Stainless steel frame construction.
5. Marine grade anodised aluminium unit housing.
6. Optional filtered water unit.
7. Multiple bottle refill points.
8. Excavate a hole 440 x 730 x 500mm.
9. Footing cage and drainage tray installed with the top of the drainage tray flush with ground level.
10. Connect plumbing for drainage and water supply.

Furniture and Fixtures

Typical modified RMS pedestrian fences - barriers

Planting adjacent to fence line

Suburb logo in fence (Crows Nest)

Pedestrian barrier (Cammeray)

Notes

1. North Sydney standard pedestrian barrier.

2. Suburb logo to be incorporated in village pedestrian fences.

3. Painted to match existing.

Suburb logo in fence (Neutral Bay)

6.1.9 Materials palette

(Approved equal alternative product may also be used)

SPECIAL AREAS: A. ST LEONARDS MATERIALS PALETTE			
ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FOOTPATH AND ROAD WORKS DRAWINGS			
KERB AND GUTTER	Material: Concrete Finish: Finished with a steel trowel	Material: Concrete Finish: Finished with a steel trowel	Material: Concrete. If kerbing is approved within a shared zone Finish: Finished with a steel trowel
PAVING - FOOTPATH	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Feature paving on corners and banding as illustrated. Equal or equivalent to Urbanstone	Material: Precast concrete unit paver Finish: Honed Size: 50 x 200 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Banding along kerb as illustrated. Equal or equivalent to Urbanstone	Not Applicable
PAVING - FOOTPATH TACTILES	Material: Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428 Size: Individual tactile studs Pattern: As per AS1428.4.1 Colour: Black top silver sides Fixing: Drill and pressure fit or drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316)	Material: Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428 Size: Individual tactile studs Pattern: As per AS1428.4.1 Colour: Black top silver sides Fixing: Drill and pressure fit or drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316)	Material: Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428 Size: Individual tactile studs Pattern: As per AS1428.4.1 Colour: Black top silver sides Fixing: Drill and pressure fit or drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316)

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FOOTPATH AND ROAD WORKS DRAWINGS / PAVING DRAWINGS			
PAVING - VEHICULAR CROSS OVER / SHARED ZONE PAVING	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Feature paving on corners and banding as illustrated. Equal or equivalent to Urbanstone	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Feature paving on corners and banding as illustrated. Equal or equivalent to Urbanstone	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Feature paving on corners and banding as illustrated. Equal or equivalent to Urbanstone
KERB RAMPS	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Equal or equivalent to Urbanstone	Material: Precast concrete unit paver Finish: Honed Size: 50 x 400 x 400mm Pattern: Stackbond Colour: Albany beige (Cream), Golden Gunmetal (Dark Grey) Base: Rigid - reinforced concrete slab Equal or equivalent to Urbanstone	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PARKING DRAWINGS			
PARKING METERS	North Sydney standard electronic parking meter Yellow line markings	North Sydney standard electronic parking meter Yellow line markings	North Sydney standard electronic parking meter. Contrasting Brickpave line markings Material: Brickpave precast concrete unit. Size: Overall dimension 80 x 115 x 230mm Pattern: 45 degrees herringbone Colour: Natural
PAVING - RECYCLED RUBBER SURFACING AT HOTEL LOADING ZONES	Material: EPDM rubber surfacing Base: 50mm crushed concrete aggregate. Colour Mixture: Grey Base: Rigid base - Reinforced concrete slab	Material: EPDM rubber surfacing Base: 50mm crushed concrete aggregate. Colour Mixture: Grey Base: Rigid base - Reinforced concrete slab	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PAVING DRAWINGS / LANDSCAPE DRAWINGS			
LANDSCAPE DRAWINGS			
TREE PIT BASE TREATMENTS - EXISTING TREE	Existing tree site with porous paving surround Material: FiltaPave porous paving Colour: Grey Material: Precast concrete unit paver Finish: Honed Size: 50 x 200 x 200mm Pattern: Stackbond Colour: Golden Gunmetal, (Dark Grey) Albany Beige (Cream) Equal or equivalent to Urbanstone Base: Rigid base Edge: Steel edge with root barrier	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PAVING DRAWINGS / LANDSCAPE DRAWINGS			
TREE PIT BASE TREATMENTS - PROPOSED TREE	Tree pit with steel edge and banding. Tree pit min. 1m x1.6m tree pit. Material: FiltaPave porous paving Colour: Grey Material: Precast concrete unit paver Finish: Honed Size: 50 x 200 x 200mm Pattern: Stackbond Colour: Golden Gunmetal (Dark Grey), Albany Beige (Cream) Equal or equivalent to Urbanstone Base: Rigid base Edge: Steel edge with root barrier	Not applicable	Tree pit in road level concrete kerb blister surrounds - refer to detail on page 216
FIXTURES - FURNITURE			
SEATING	Timber seat approx. 1850 mm long with back rest. Bench seat approx. 1800mm long. Stainless steel legs/frame. Spotted gum battens weathered for 6 months prior to installation. Fixing: Seats and benches are to be subsurface fixed. Stainless steel anti-tamper fixing Equal or equivalent to Rondo seat by StraBe	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
RUBBISH BINS	North Sydney standard bin Fixing: Bins are to be subsurface fixed. Spigot and socket mounted Equal or equivalent bin designed by Ian Dryden of Dryden Crute Design Victoria.	Not Applicable	Not Applicable
125mm or 150mm BOLLARDS - FIXED INSITU AND REMOVEABLE	(Fixed or removable) 900mm high stainless steel bollard Finish: Linished Removable Bollard: Socket and cap for when bollard is removed Fixed Bollard Fixing: Bollards are to be subsurface fixed with mass concrete footings. 125mm or 150mm equal or equivalent to Leda Slimline bollard (Fixed or removable (Locking and removable))	Not Applicable	(Removable only) 900mm high stainless steel bollard Finish: Linished Fixed Bollard Removable Bollard: Socket and cap for when bollard is removed 125mm or 150mm equal or equivalent to Leda Slimline bollard (removable (Locking and removable))
BICYCLE RACKS	Material: Stainless steel Fixing: Bicycle stands are to be subsurface fixed with mass concrete footings. Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage	Material: Stainless steel Fixing: Bicycle stands are to be subsurface fixed with mass concrete footings. Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage	Material: Stainless steel Fixing: Bicycle stands are to be subsurface fixed with mass concrete footings. Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage
BUS SHELTER	Contemporary bus shelter. Glass awning Advertising and signage panels Approx. 1800mm long timber seating with backrest Equal or equivalent to JCDecaux bus shelter	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PAVING - ALFRESCO DINING AREAS	Outdoor dining - trading area permit boundary markers with North Sydney logo Material: Brass Fixing: Epoxy fix with central pin	Not Applicable	Not Applicable
STREET LIGHTING	Post Top LED with P.E cell Luminaire: Gerard ATB2 (including spigot) Wattage: 215W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core Steel core – 220mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 9.5m with single 3.0m light outreach arm Banner arm: 2m outreach Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 9.5m (HUB-NSP-SL95-S3) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 (including spigot) Wattage: 100W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 7m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 7m (HUB-HUB-NSP-SL70) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 (including spigot) Wattage: 100W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 7m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 7m (HUB-HUB-NSP-SL70) or approved equivalent

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PEDESTRIAN LIGHTING – (OPTION 1) PREFERRED OPTION UNLESS APPROVED OTHERWISE BY NORTH SYDNEY COUNCIL)	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent
PEDESTRIAN LIGHTING - (Option 2) POST TOP LIGHT	Post top LED luminaire on octagonal Vicpole Colour: Satin Black Finish with NSCouncil custom Dulux Specification No. NSW-180012 /A Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Post top LED luminaire on octagonal Vicpole Colour: Satin Black Finish with NSCouncil custom Dulux Specification No. NSW-180012 /A Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Post top LED luminaire on octagonal Vicpole Colour: Satin Black Finish with NSCouncil custom Dulux Specification No. NSW-180012 /A Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.
PEDESTRIAN LIGHTING - WALL MOUNTED LIGHT (Laneways and Shared Zones)	Not Applicable	Wall luminaire LED Finish: Powdercoated Colour: Satin Black Finish with NSCouncil custom Dulux Specification No. NSW-180012 /A Equal or equivalent to BEGA LED Wall luminaire.	Wall luminaire LED Finish: Powdercoated Colour: Satin Black Finish with NSCouncil custom Dulux Specification No. NSW-180012 /A Equal or equivalent to BEGA LED Wall luminaire.

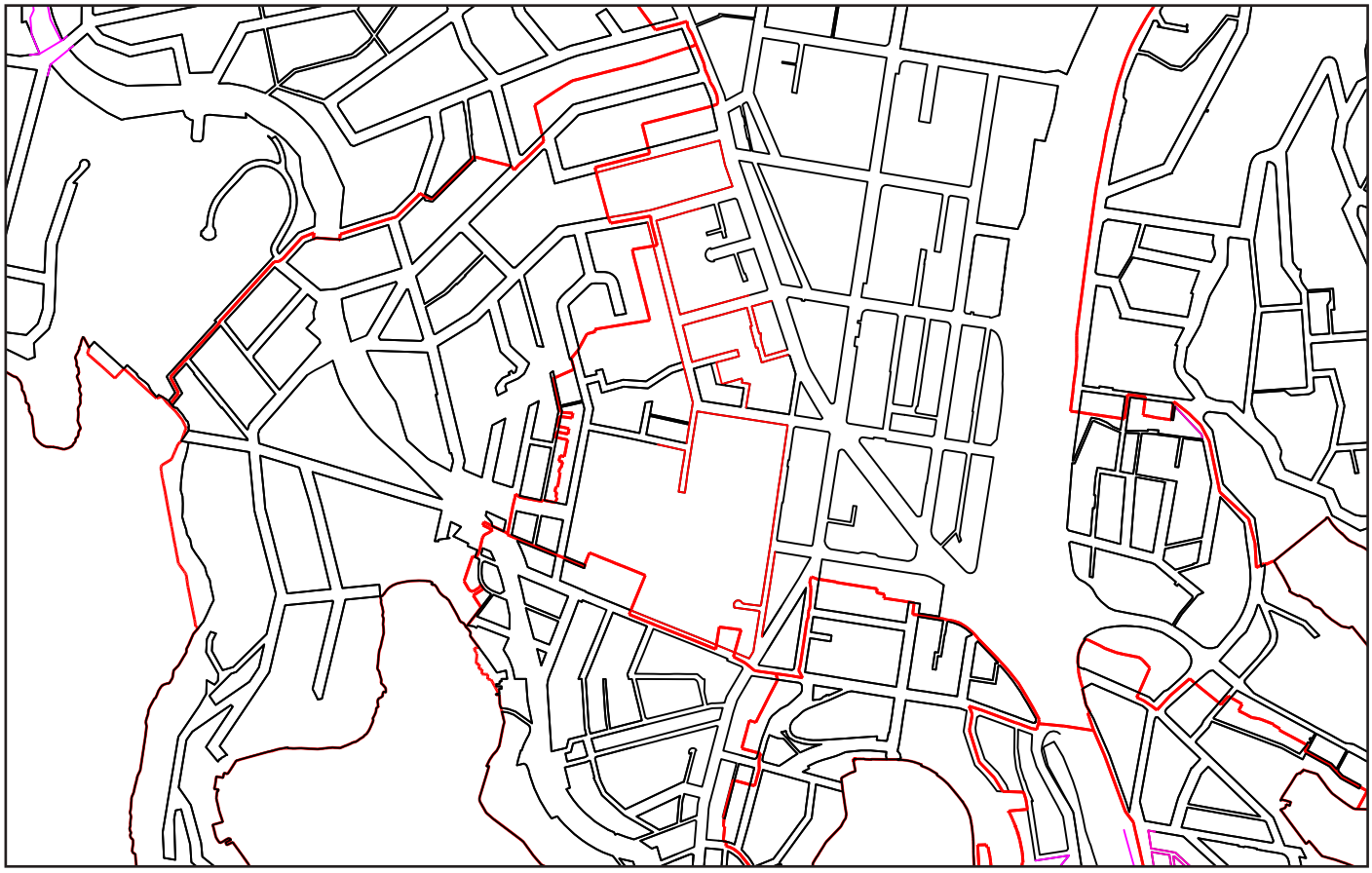
ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PEDESTRIAN LIGHTING - POST TOP LIGHT (Park / Plaza locations)	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Not Applicable	Not Applicable
PEDESTRIAN LIGHTING - ILLUMINATED BOLLARD	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED
PEDESTRIAN LIGHTING - HANDRAILS	Integrated handrail lighting system Lighting to be housed within a stainless steel handrail. Point source lighting at a regular interval. Equal or equivalent to Planet Lighting HLS GEN4 LED integrated handrail lighting system.	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
MISCELLANEOUS COMMUNITY NOTICE BOARDS Free standing community noticeboard / Outdoor wall mounted noticeboard	Colour: Silver frame with option for council colours to be incorporated as a trim Key features: Lockable Waterproof A0 (1180 x 841mm) internal dimension Portrait orientation Option for anti-graffiti film on noticeboard Poly carbonate or acrylic cover Equal or equivalent to HD1 Harsh Duty Outdoor Lockable Notice Board by Arrow Alpha Equal or equivalent to MD6 Keyless Secure Notice Board by Arrow Alpha	Not Applicable	Not Applicable
MISCELLANEOUS FIXTURES -FURNITURE Bottle refill station with drinking fountain	1500mm high refill station with drinking fountain Stainless steel bulk refill dispenser for bottle refilling each side of the unit Marine grade anodised aluminium unit housing Optional filtered water unit Multiple bottle refill points Changeable panels Stainless steel drinking bowl Stainless steel frame construction Fixing: Stainless steel base plate with drainage pit Equal or equivalent to Aquafill product Type C 1500mm high refill station with drinking fountain by Arrow-Alpha Industries	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
BANNER POLE	6063T6 Untapered high tensile aluminium Powdercoat finish Equal or equivalent to Abel Elegance range banner pole	Not Applicable	Not Applicable
PEDESTRIAN BARRIERS	North Sydney standard pedestrian barrier to match existing on Atchison Street.	Not Applicable	Not Applicable
PARKING METERS	North Sydney standard electronic parking meter Yellow line markings	North Sydney standard electronic parking meter. Yellow line markings	North Sydney standard electronic parking meter. Contrasting Brickpave markings Material: Brickpave precast concrete unit. Size: Overall dimension 80 x 115 x 230mm Pattern: 45 degrees herringbone Colour: Natural Equal or equivalent to Adbri Brickpave 80

06 - 2 Special Areas:
B. Education Precinct

The Education Precinct contains a number of major educational establishments. The terrain, tree lined streets and heritage items contribute to the strong sense of character of the area and quiet, suburban feel.



LEGEND

Special Area - Education Precinct

Special Area - Education Precinct Footpath

06 - 2 Special Areas: B. Education Precinct

The Education Precinct is located to the west of the North Sydney Centre. It has a steep incline up to Edward street which runs along a ridge line and slopes down to Bank Street on its Western edge. It is bordered on the east by the Pacific Highway. Both Berry Street and Mount Street link back into North Sydney Centre.

A significant proportion of this precinct is dedicated to Education institutions including Shore, North Sydney Demonstration School and The Australian Catholic University. The precinct houses one third of the LGA's education institutions. Both the ACU and Shore are undertaking renovations and expansion within the area.

The precinct has a well established street tree network creating pleasant green streets. Residential gardens within the precinct also contribute to the streetscape.

The eastern edge of the precinct is undergoing significant change with a number high-rise residential buildings proposed on both sides of the Pacific Highway. This will increase the number of people in the area and will demand improved services and amenity in some parts of the precinct.

The precinct includes the Priory Road, Edward Street and Union, Bank, Thomas Street Conservation areas and has therefore maintained a strong heritage aesthetic and residential scale in these areas.

The Graythwaite property is the site of further expansion by Shore. It houses significant stands of Ficus trees and bushland which contribute to the streetscape of Union street as well as providing an outlook for houses along the eastern side of Bank Street.

Capitalising on the number of Education institutions within the precinct and on the existing green character of surrounding residential areas it is intended that a campus feel and look be encouraged in this area.

This can be achieved through seating opportunities and the creation of new gathering spaces, green edges and distinctive paving that sets it apart from other areas.

The Education precinct fringes the North Sydney Centre. It should compliment North Sydney Centre but should also achieve some distinctiveness through variation in some elements from the palette of North Sydney Centre. Alternatively, the Education precinct should match the same elements as North Sydney.

6.2.1 Materials palette objectives

The Education Precinct public domain materials palette should be a variation of the North Sydney Centre palette.

It should respond to the education focus of this precinct and the varied scale and character of the buildings in this precinct.

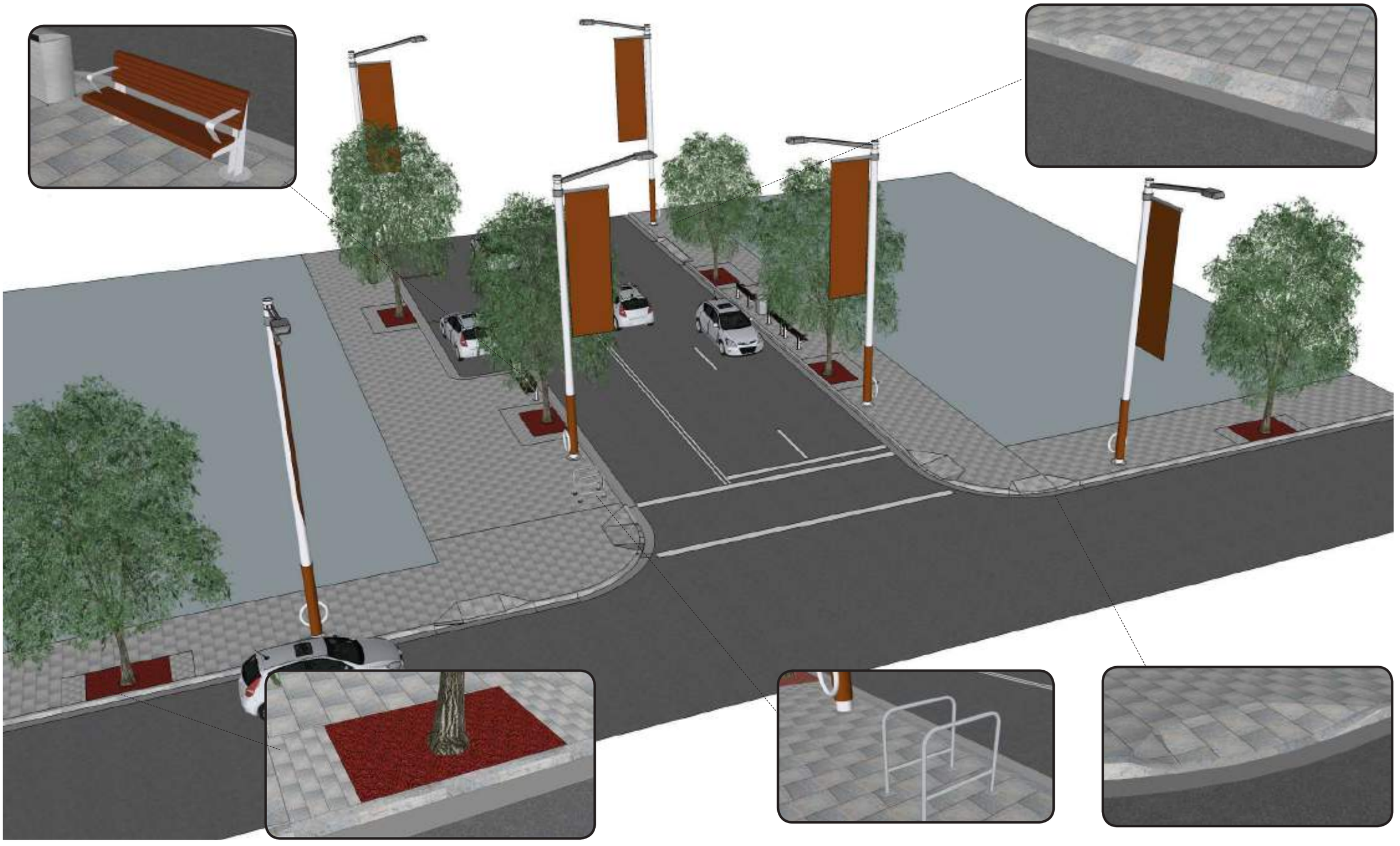
Furniture and fixtures are to match the North Sydney Centre precinct.

Paving should be smaller than what is used in the North Sydney Centre to suit the steeper terrain of the Education Precinct.

Contents

06 Special Areas: B Education Precinct

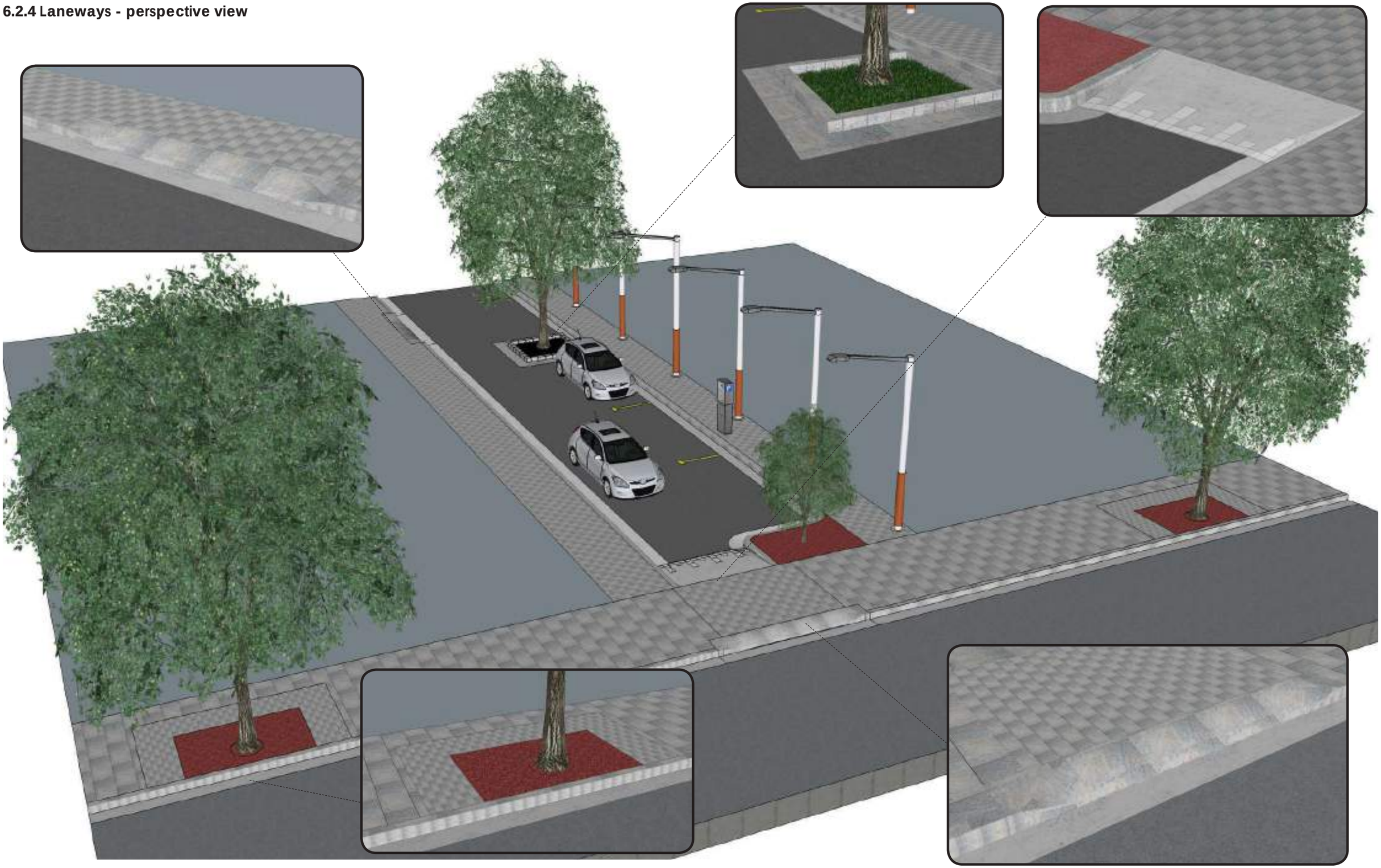
6.2.2 Main street - perspective view



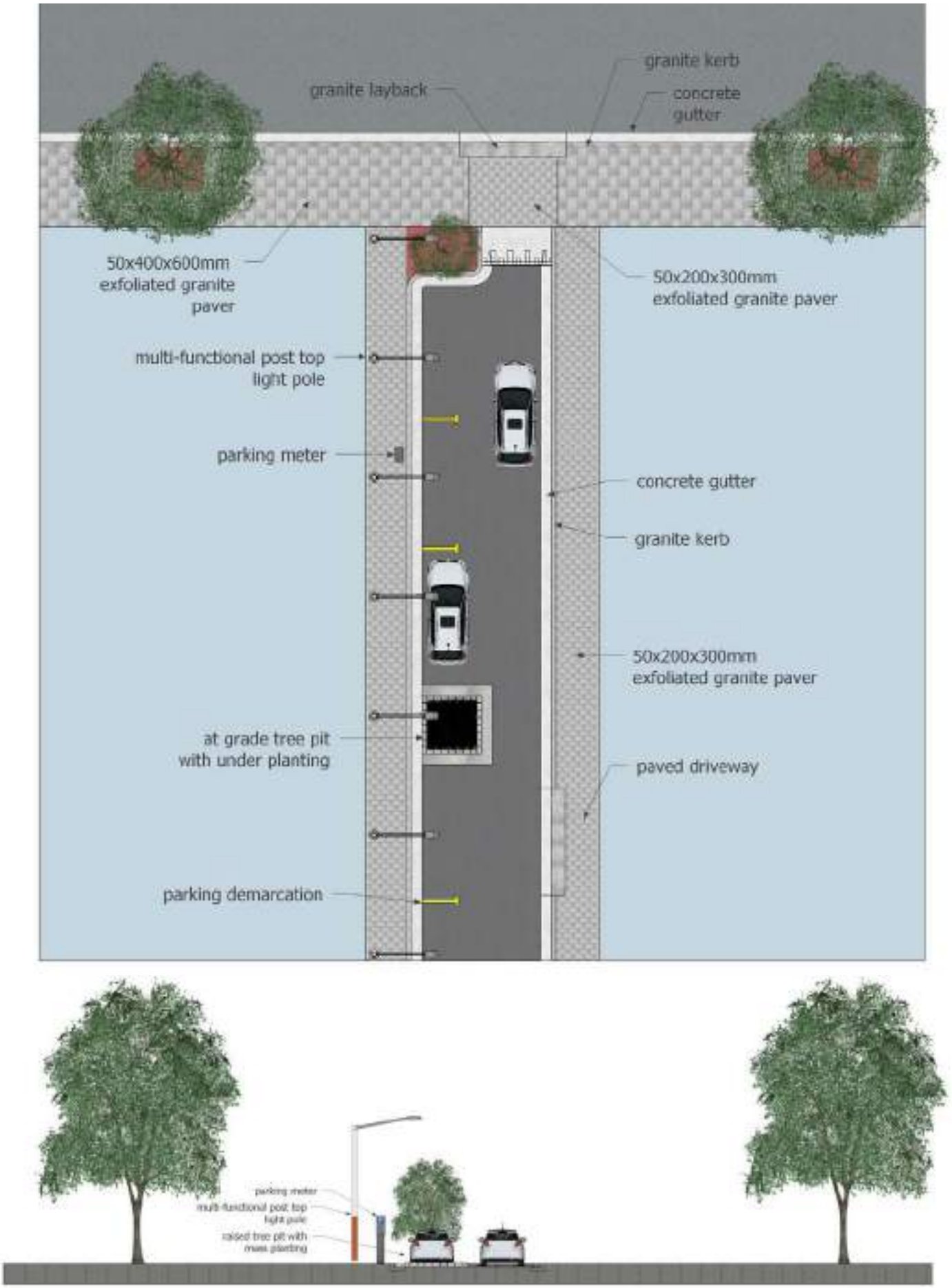
6.2.3 Main street - plan and section view

06 Special Areas: B Education Precinct

6.2.4 Laneways - perspective view

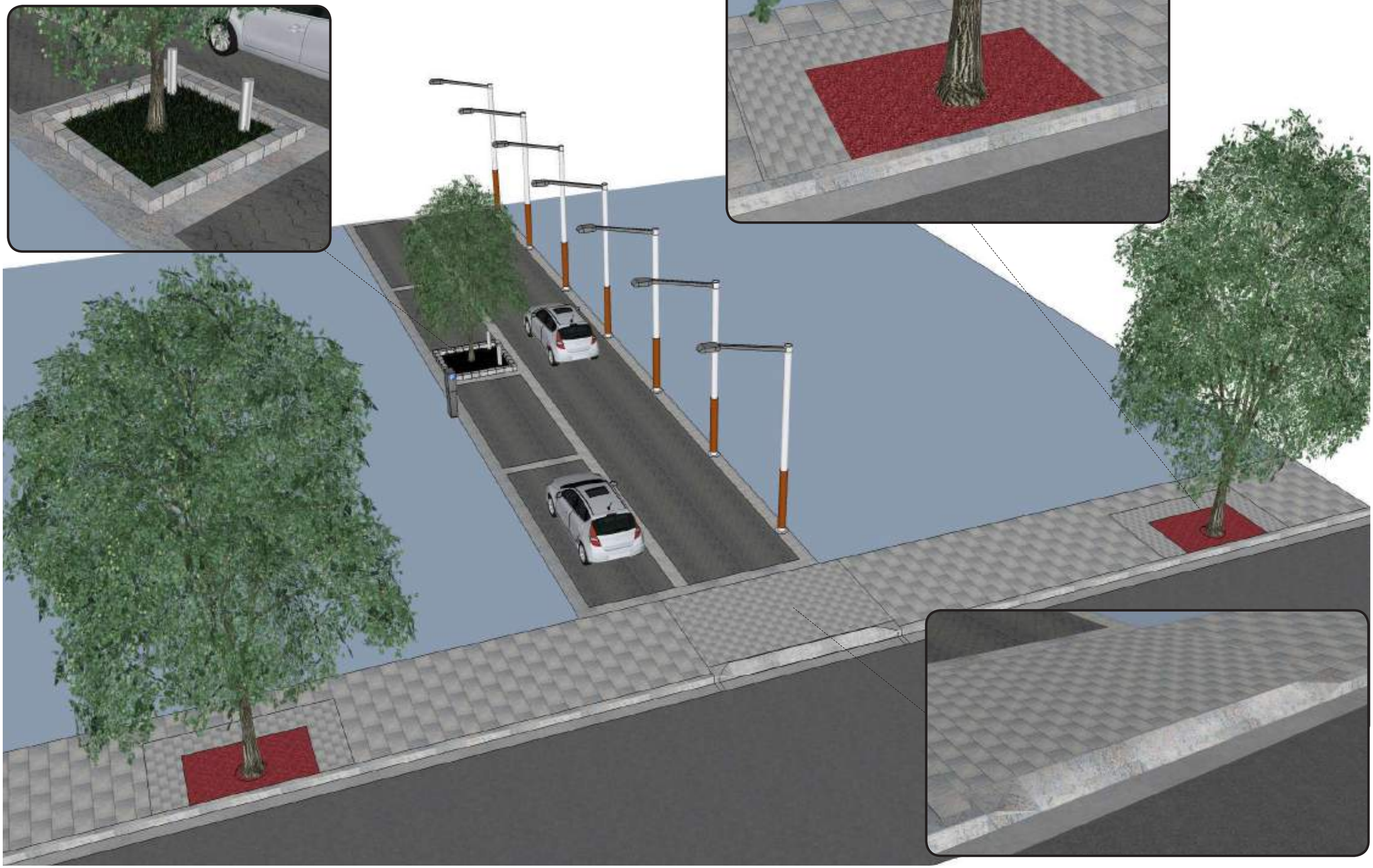


6.2.5 Laneways - plan and section view

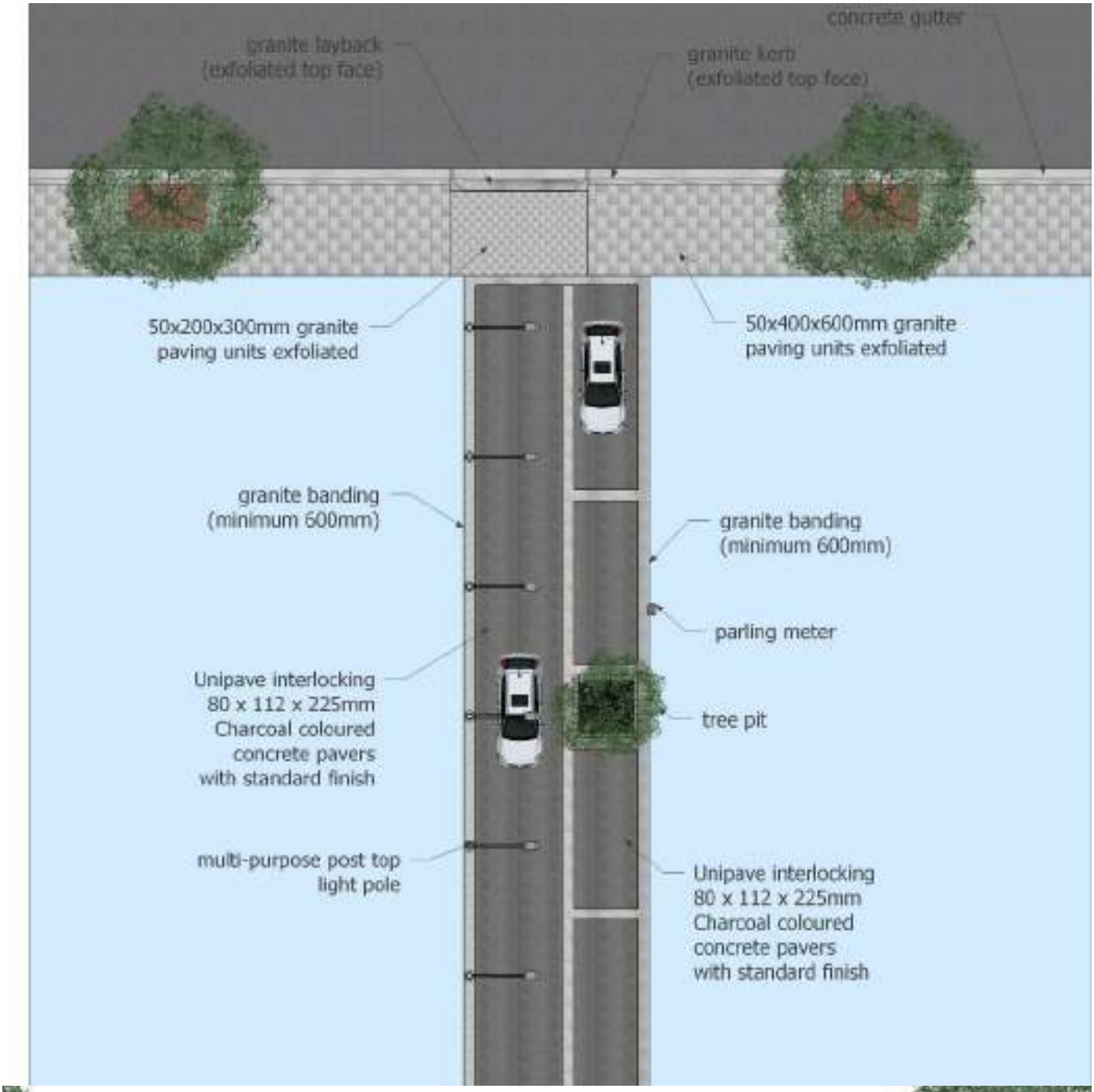


06 Special Areas: B Education Precinct

6.2.6 Shared zone - perspective view



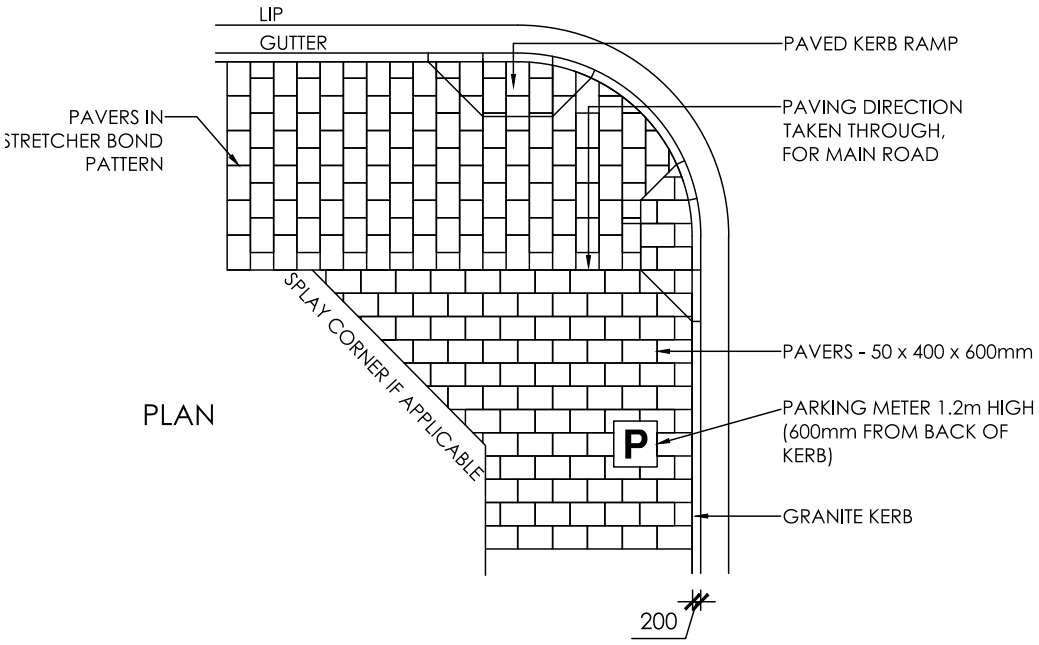
6.2.7 Shared zone - plan and section view

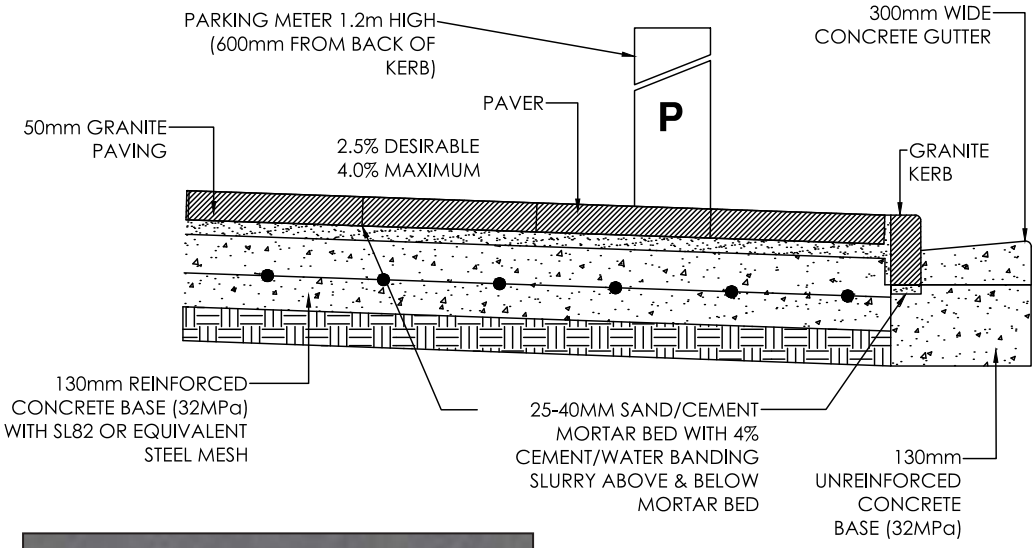


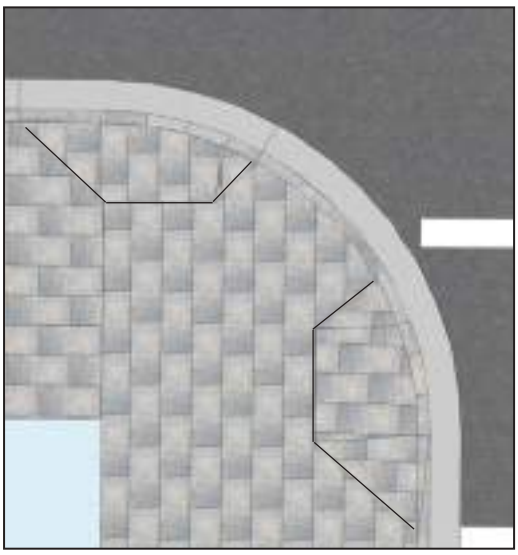
6.2.8 Indicative Materials and Furniture

Main Street

Typical footpath paving pattern plan and cross-section

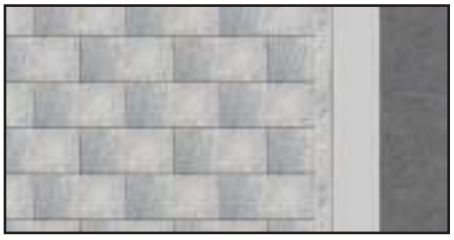






Kerb ramps align with boundary line

"Bruce" Rock (Austral Juperana) granite



"Bruce" Rock (Austral Juperana) granite

Notes

1. 50 x 400 x 600mm granite paving with an exfoliated finish to provide a hard wearing and serviceable finish.

2. Mid coloured paving with a fleck of colour for warmth.

3. Natural variation in granite assists in concealing marks.

4. Butt jointed, stretcher bond paving pattern with no header.

5. Rigid base - reinforced concrete slab.

6. All existing service pits within the footpath shall be replaced with infill paver lids. Applicable paving shall be laid in the pit lid on a mortar bed (paving thickness may require modification to suit depth of infill pit lid.

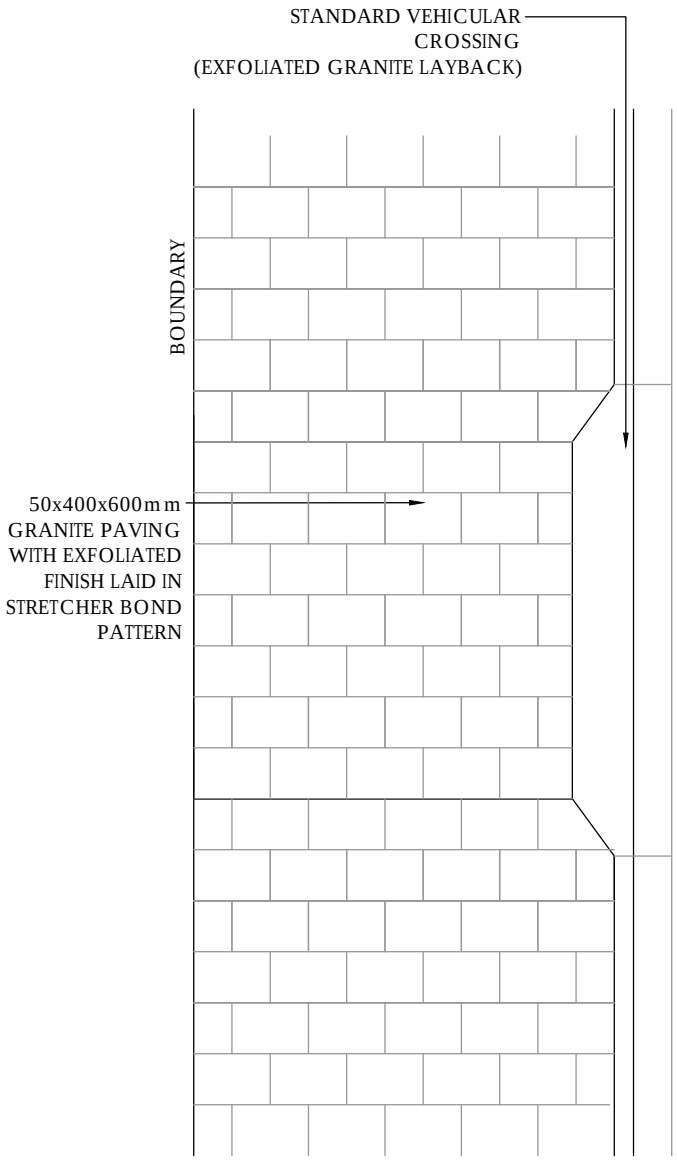
7. Where finished footpath surface levels do not match existing, contact Council's parking meter services division for further details about footing requirements and repositioning of meter stem

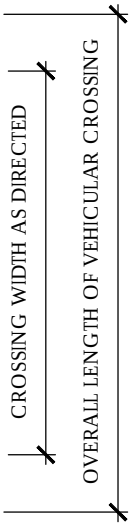
8. All sign stems (50mm NB) shall be installed using V-Loc + wedge system (galvanised). Footpath pavement shall be neatly core drilled 200mm DIA.

9. All open joints shall be sealed with Bostik "Seal 'N' Flex 1" in accordance with the manufacturer's recommendations - this includes boundaries, back of kerb and lintels, utility pits, construction joints etc

Main Street

Typical driveway paving





Notes

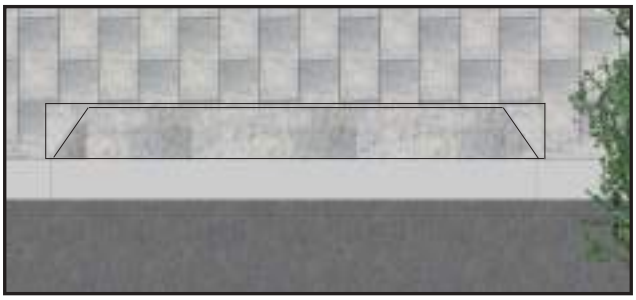
1. 50 x 400 x 600mm granite paving with exfoliated finish.

2. Rigid base - reinforced concrete slab.

3. Lanko 751 Priming Solution to be applied to concrete base slab.

4. 30-70mm Parex Streetscape Fine Bedding Concrete bed.

5. Lanko 702 Jointing Mortar.



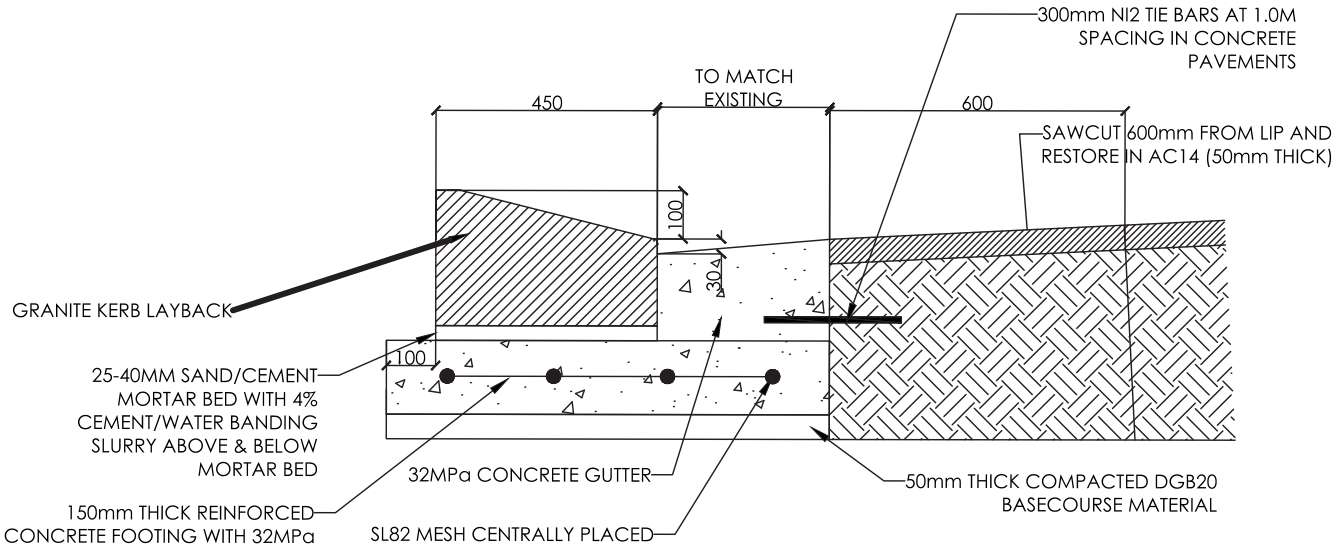
Typical driveway treatment

"Bruce" Rock (Austral Juperana) granite

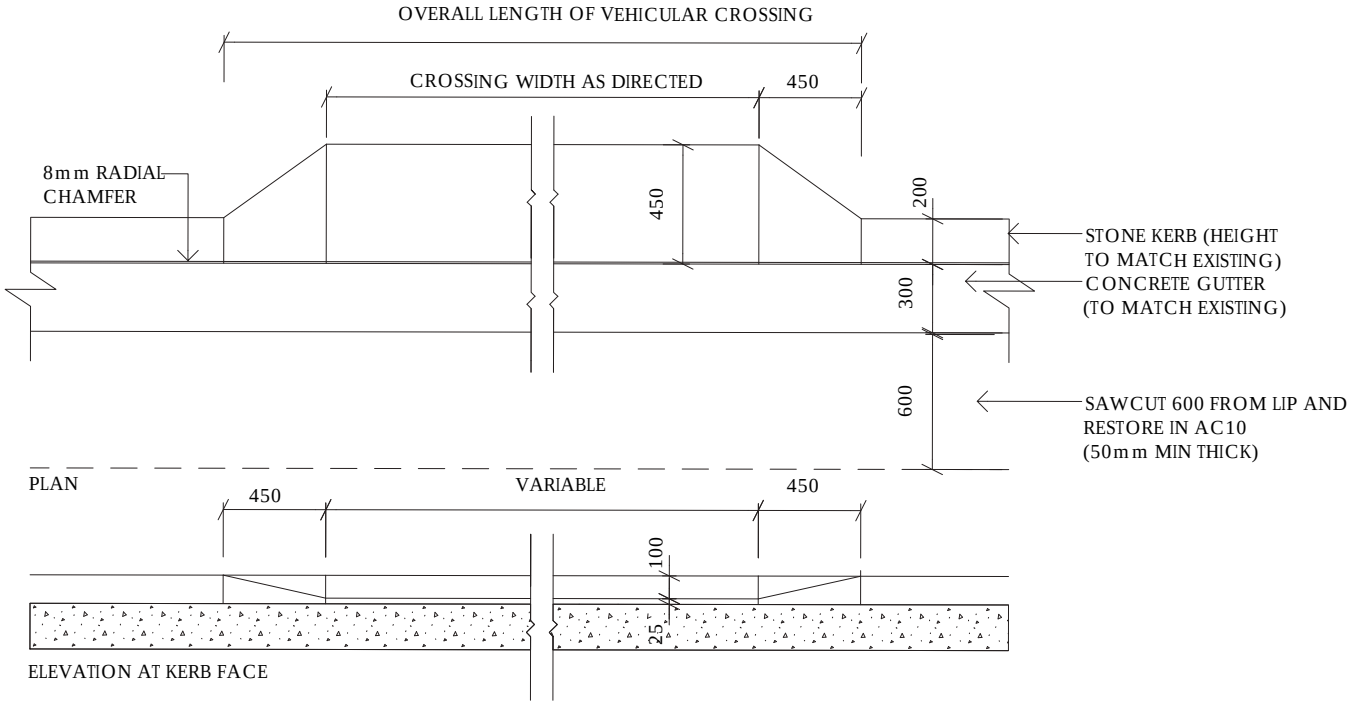
Granite layback on Berry Street

Main Street

Typical Vehicular Crossing

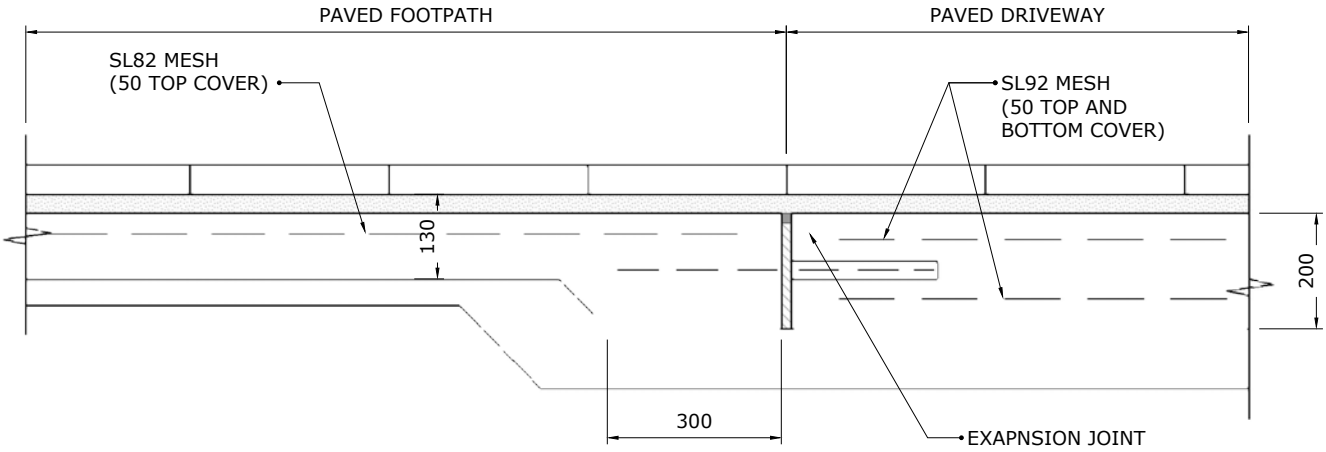


Typical Section

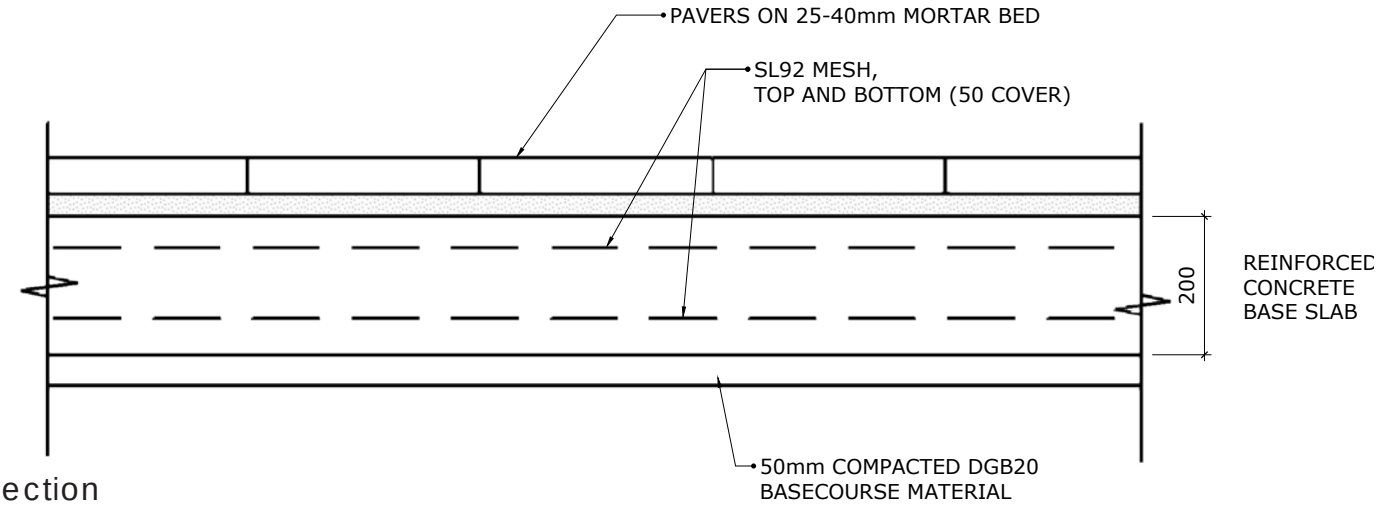


Main Street

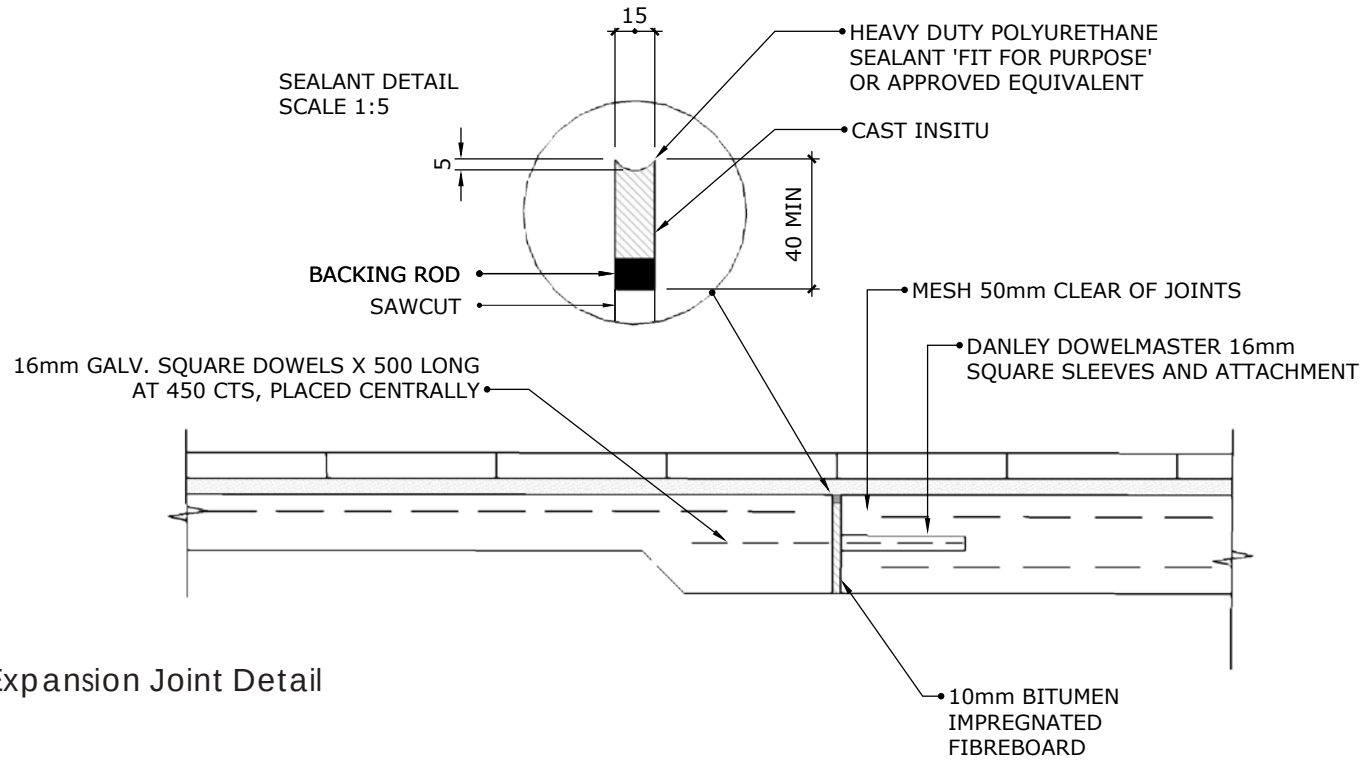
Typical Vehicular Crossing Slab



Elevation



Section

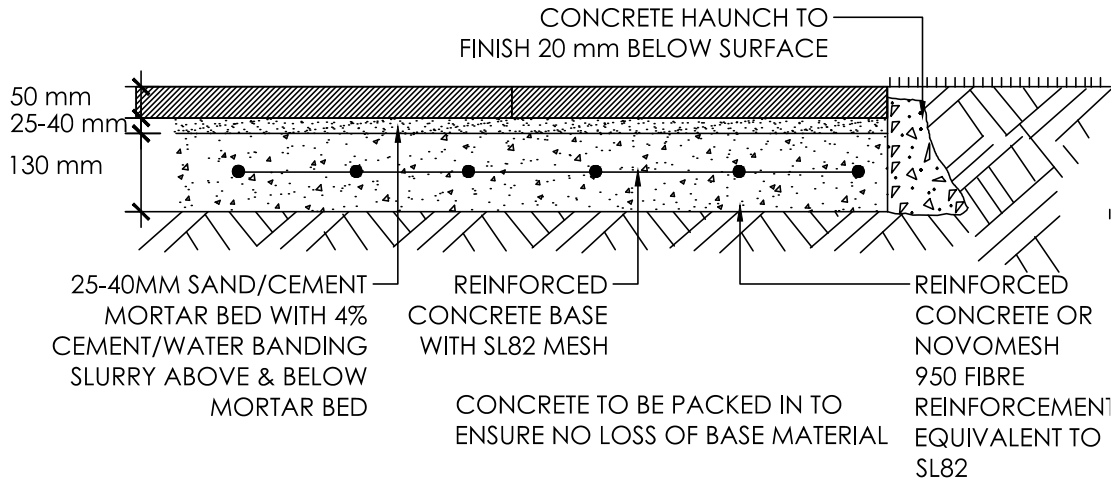


Expansion Joint Detail

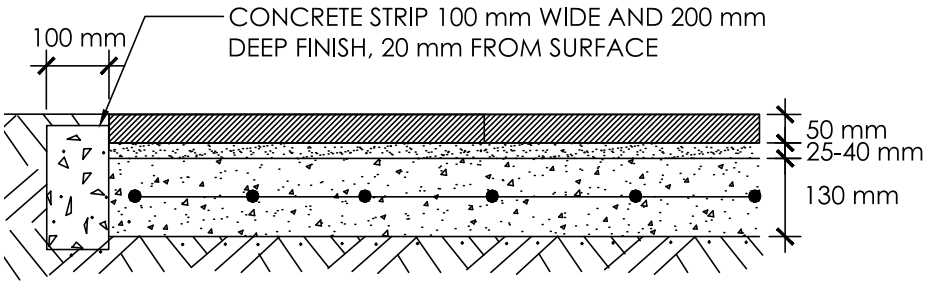
Main Street

Typical granite paving edge restraint - concrete haunch, concrete strip, brass edge

Concrete Haunch



Concrete Strip



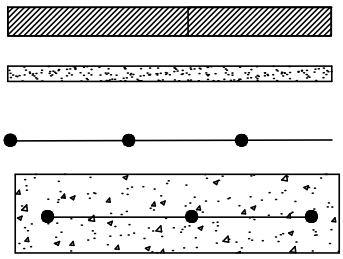
Notes

1. 50 x 400 x 600mm granite paving.

2. 25-40mm mortar bed.

3. Rigid base - 130mm concrete slab (F'c = 32 MPa) reinforced with SL82 with 65mm top cover; Novomesh 950 dosed at rate of 5.75kg/m3 or approved equivalent product.

LEGEND

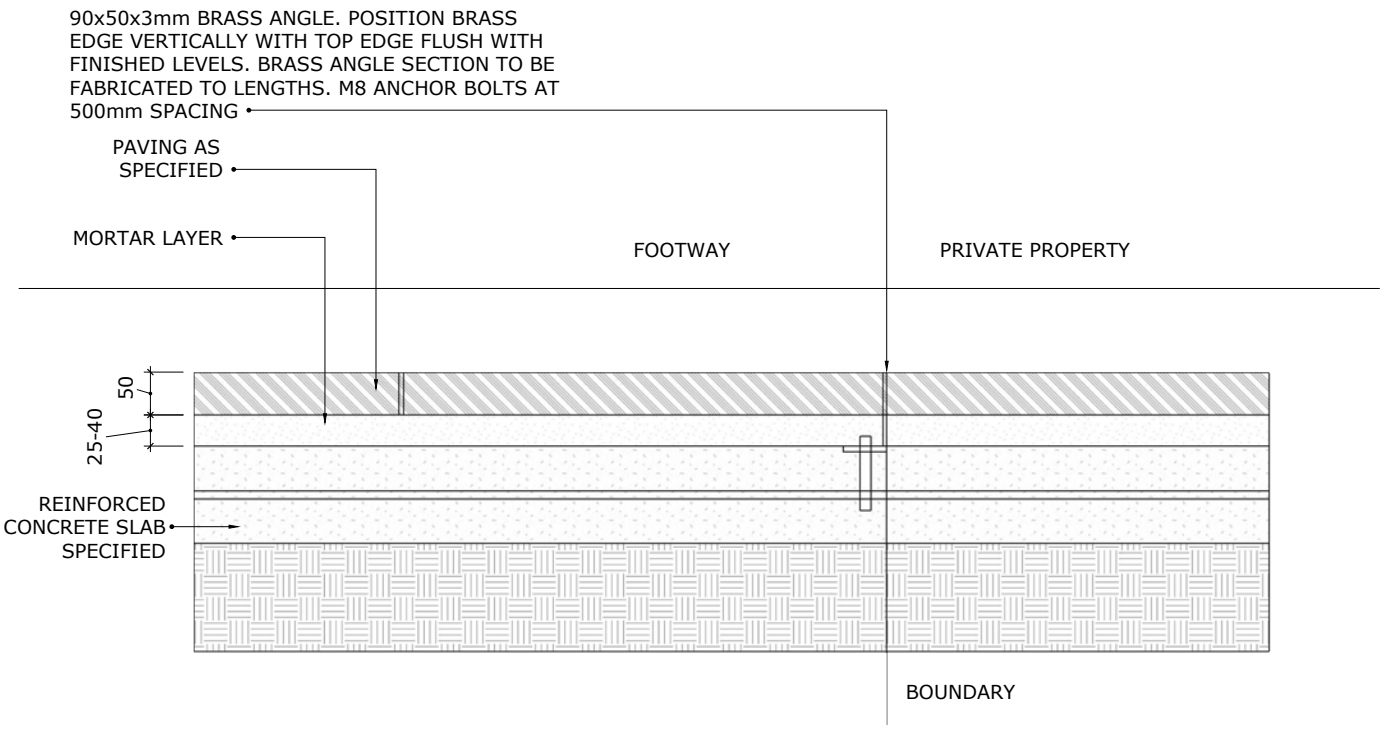


"Bruce" Rock (Austral Juperana) granite in stretcherbond pattern

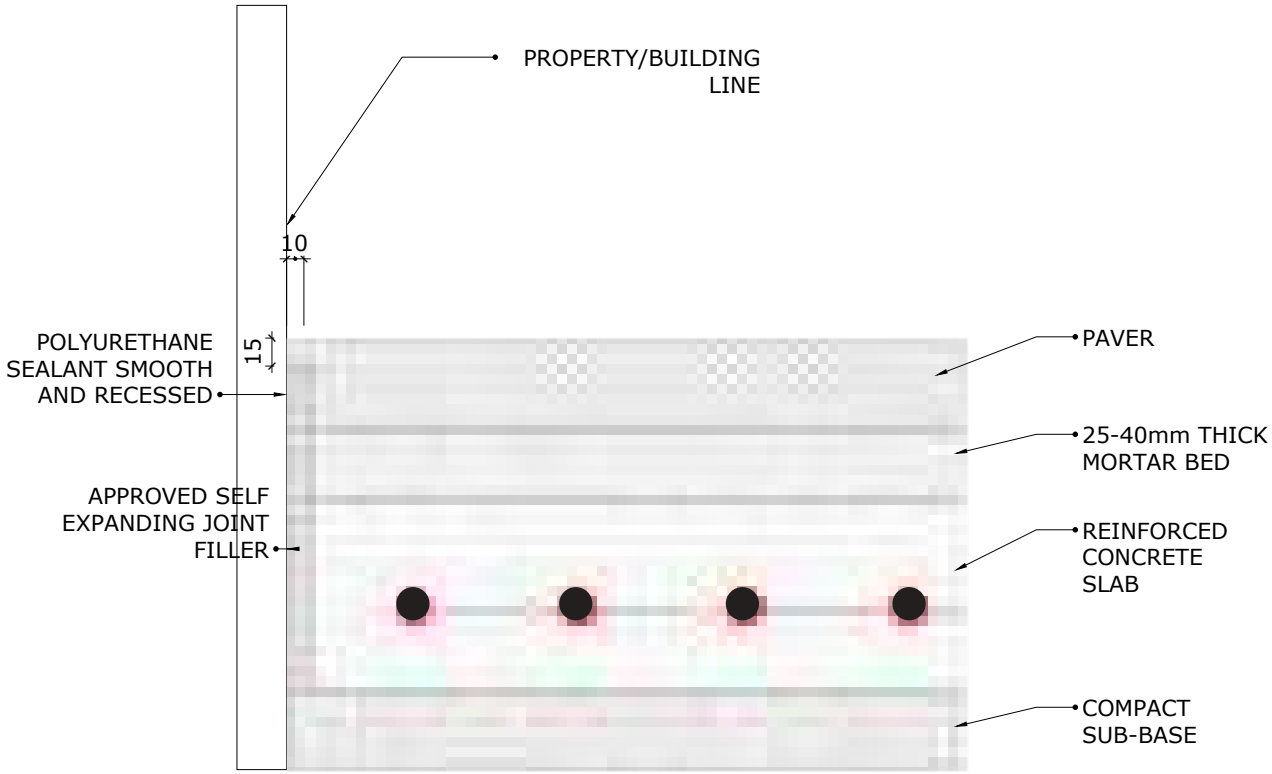
"Bruce" Rock (Austral Juperana) granite

Main Street

Brass Edge

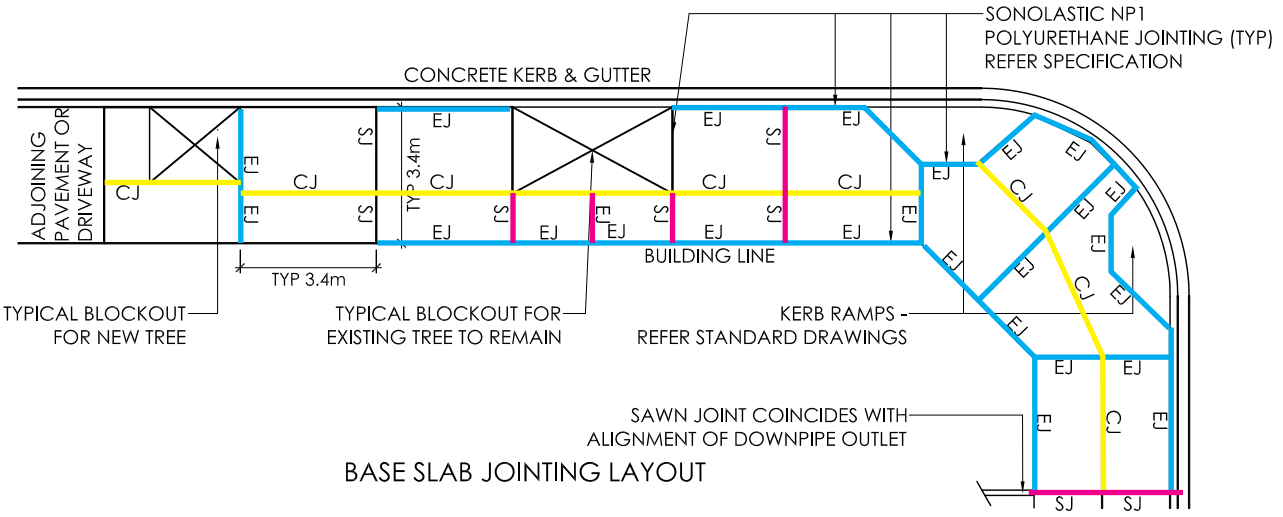


Paving Junction with Building Edge

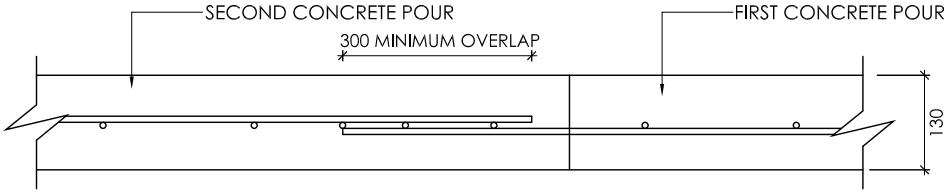


Main Street

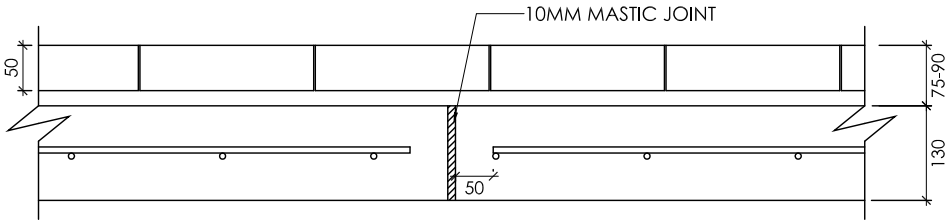
Typical base slab joint details



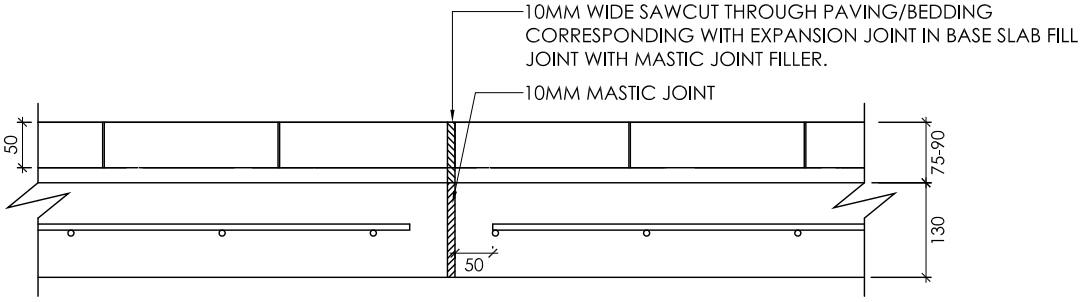
BASE SLAB JOINTING LAYOUT



CONSTRUCTION JOINT DETAIL (CJ)



SAWN JOINT DETAIL - GRANITE PAVEMENT (SJ)



EXPANSION JOINT DETAIL - GRANITE PAVEMENT (EJ)

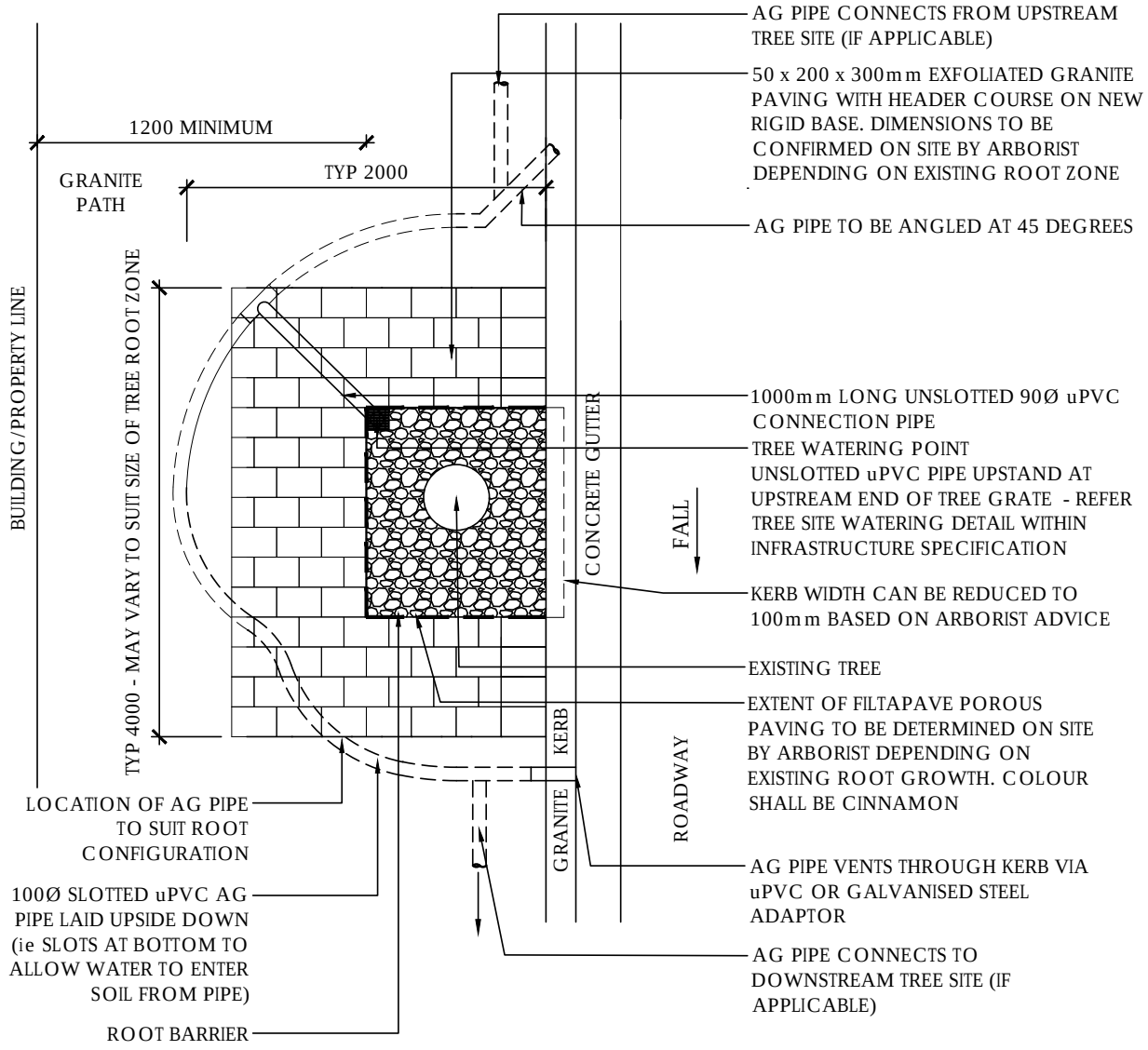
Notes

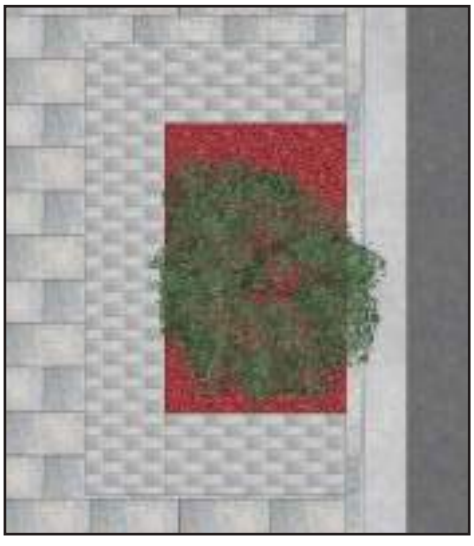
1. Base slab shall be 130mm concrete slab (F'c = 32 MPa) reinforced with SL82 with 65mm top cover; Novomesh 950 dosed at rate of 5.75kg/m3 or approved equivalent product.

2. The maximum aspect ratio of slab is length:width 2:1 with a maximum dimension of 4m in any direction.

Main Street

Typical existing CBD tree site porous rubber surround





Existing tree pit detail

Notes

1. Existing tree site with porous rubber surround.

2. Colour of FiltaPave surround is cinnamon.

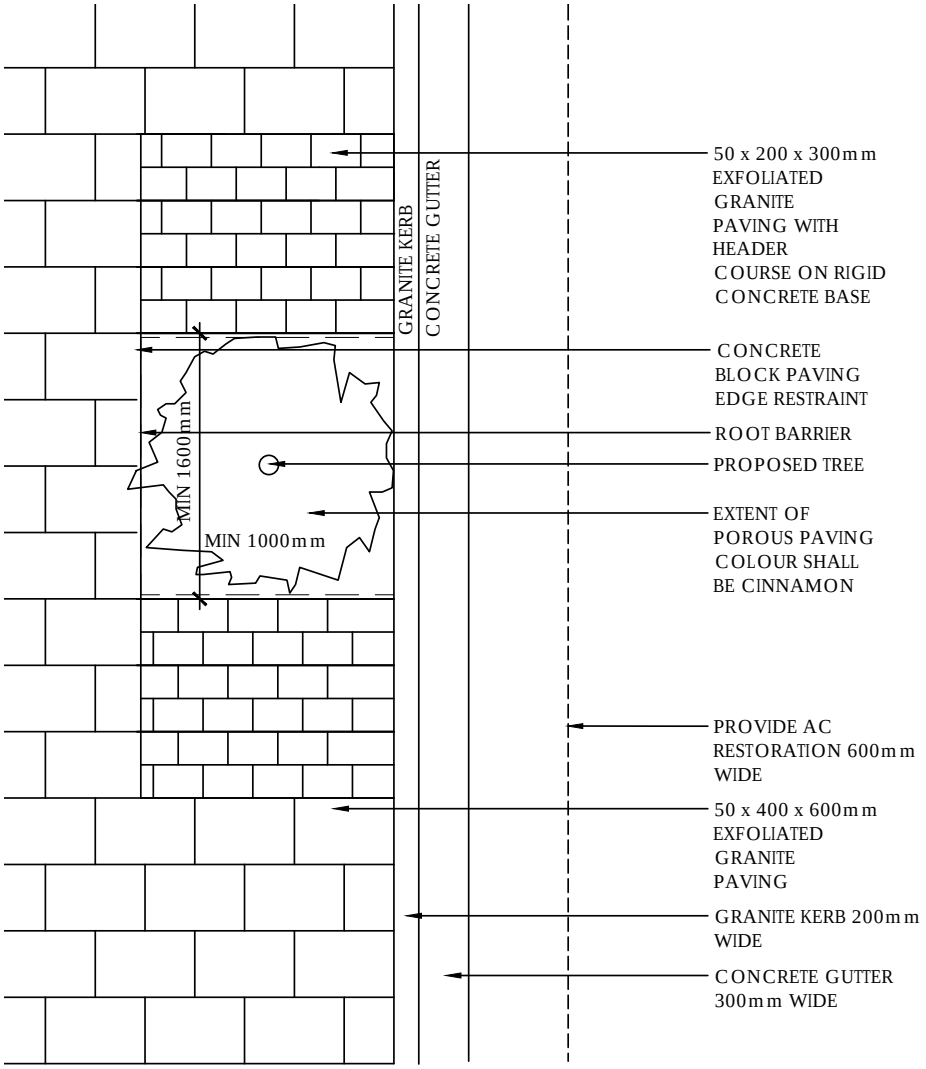
3. 50 x 200 x 300mm granite paving surround in an exfoliated finish.

4. Existing base to be reconstructed in concrete slab (130mm depth).

5. Butt jointed, stretcher bond paving pattern with header.

Main Street

Typical tree site formation for new tree



Notes

1. Tree site formed in paving pattern with a flexible base.

2. Concrete block paving edge restraint. Refer 'Typical granite paving edge restraint detail'.

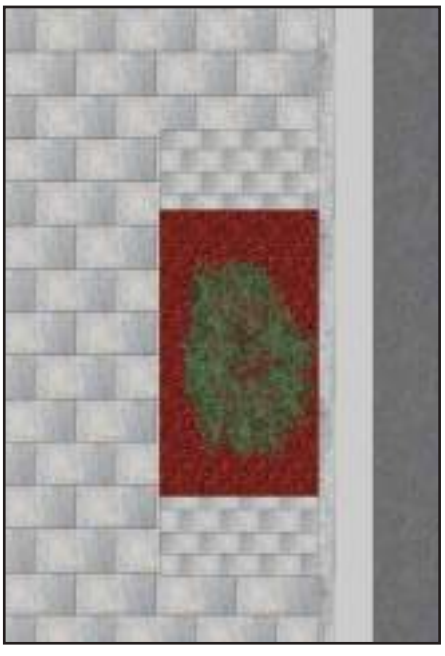
3. 50 x 200 x 300mm granite paving with an exfoliated finish to provide a hard wearing, serviceable finish. Smaller unit to extend for six courses on either side of tree pit.

4. Butt jointed, stretcher bond paving pattern with header to both sides of tree pit.

5. Tree pit min 1m x 1.6m with FiltaPave porous rubber surfacing. Colour shall be cinnamon, thickness shall be 45mm.

6. Root barrier - refer to Section 18 of Council's Infrastructure Specification'.

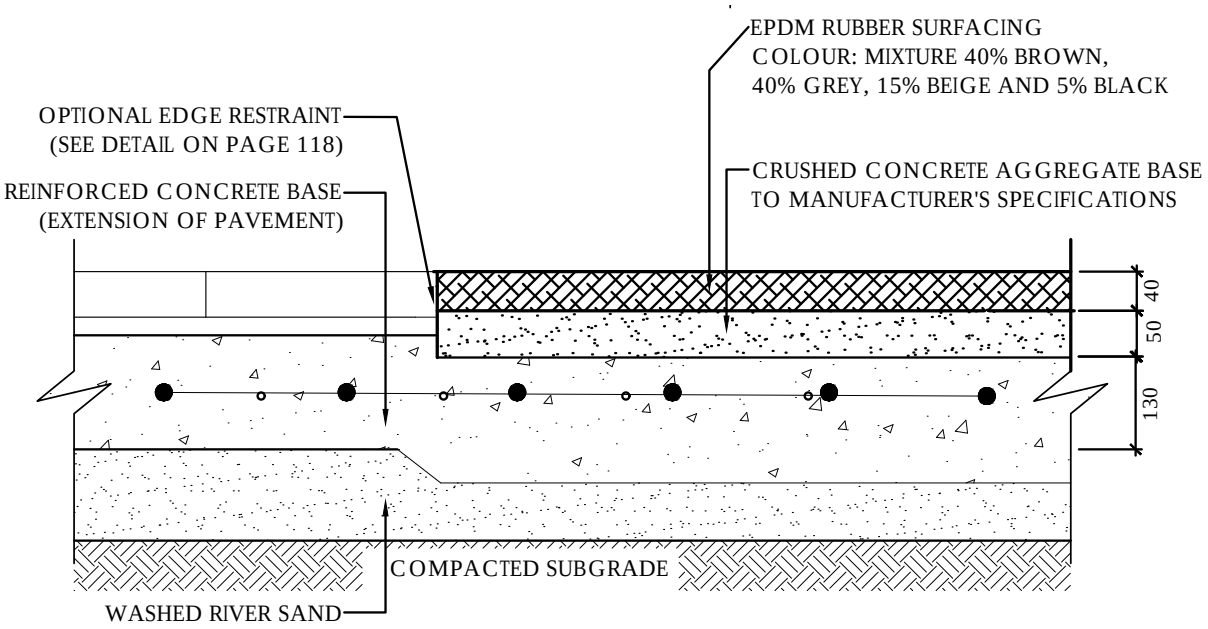
Porous rubber surfacing to tree pit



Tree site paving pattern (New tree)

Main Street

Typical rubber paver at “hotel” loading zones



RUBBER PAVER DETAIL

Notes

1. EPDM rubber surfacing.
Colour: 40% brown, 40% grey, 15% beige and 5% black

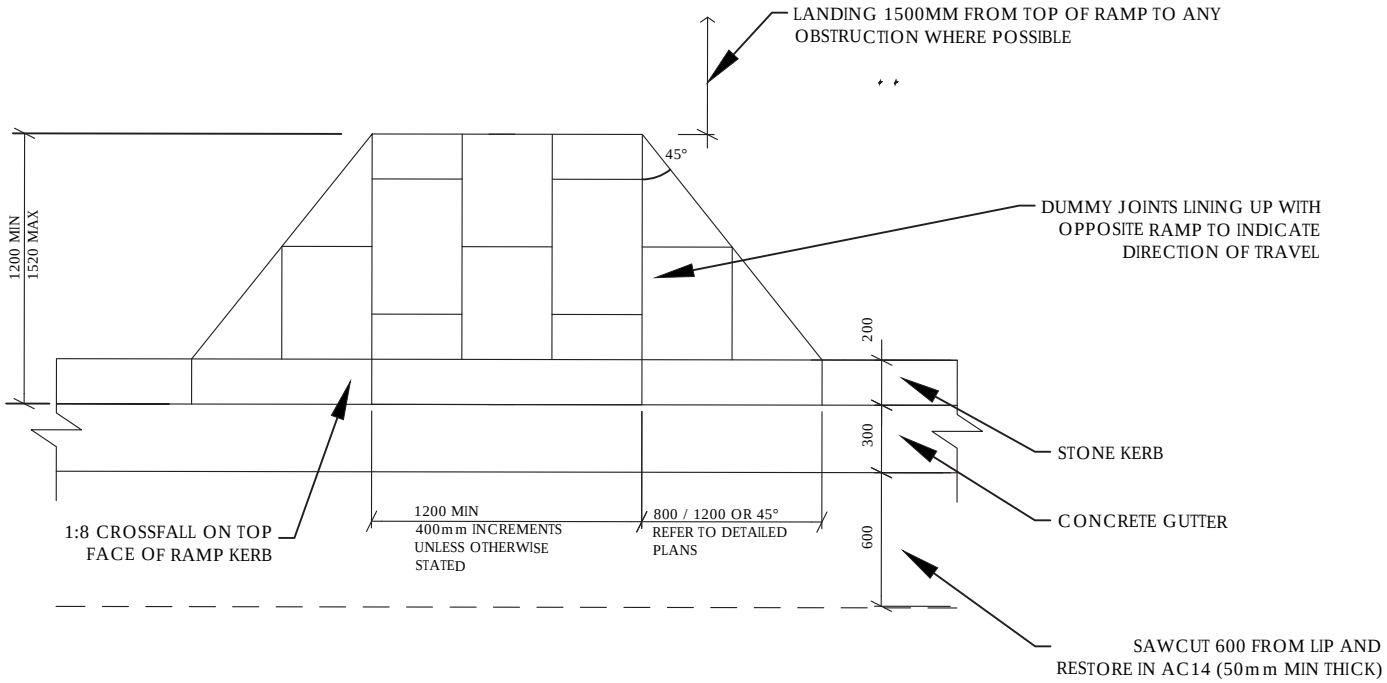
2. Base to be 50mm crushed concrete aggregate.

3. Rigid base - Reinforced concrete slab.

Recycled rubber surfacing

Main Street

Kerb Ramp



Typical Plan

Kerb Ramp

Notes

1. All kerb ramps shall be paved in granite. Smaller units shall be used when the standard unit 50 x 400 x 600mm cannot achieve the grade required.

2. Rigid base - reinforced concrete slab.

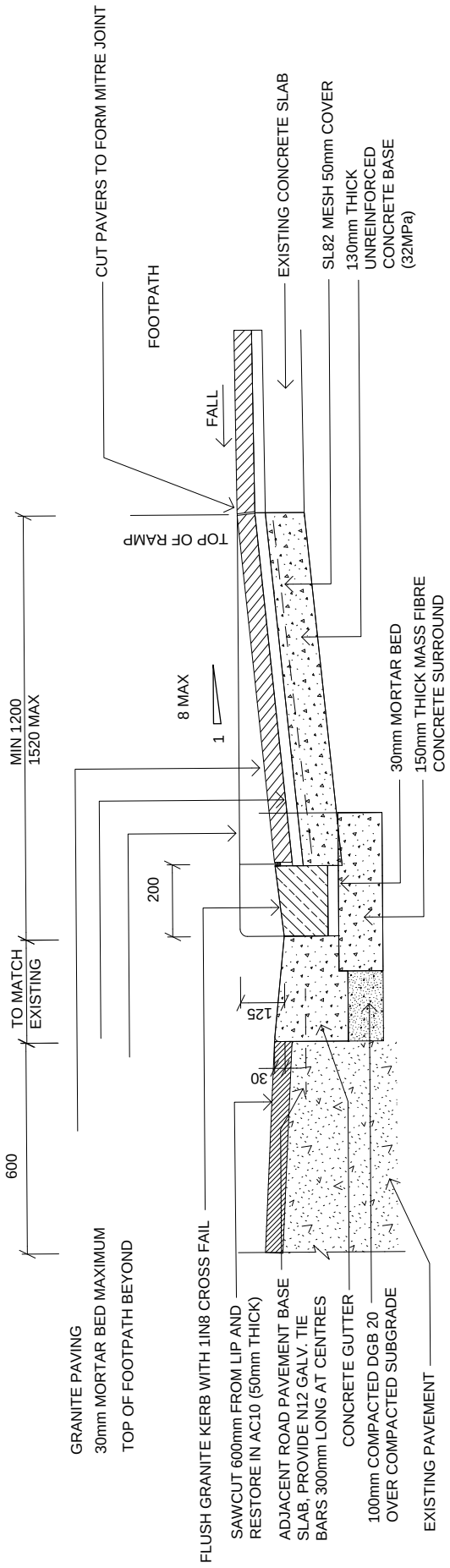
3. For ramps greater than 1520mm, maximum grade is 1 in 14.

4. Maximum grade from top to bottom of kerb ramp is 1 in 8.

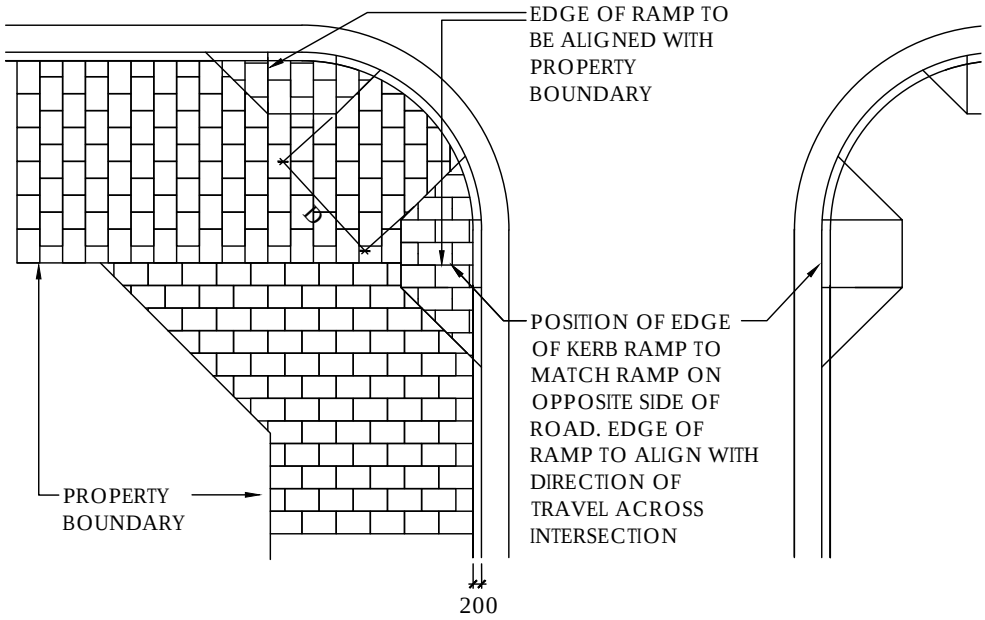
5. Typically 1200mm wide kerb ramps in North Sydney Centre.

Main Street

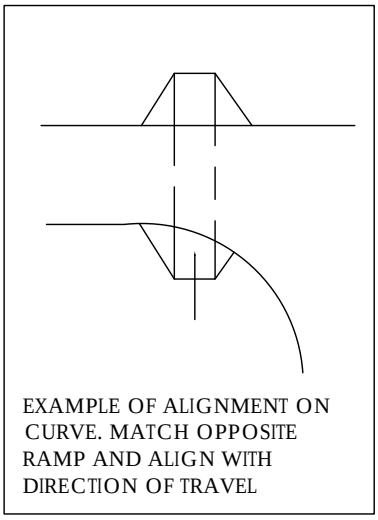
Typical Section- Kerb ramp



Main Street



PLAN



EXAMPLE OF ALIGNMENT ON CURVE. MATCH OPPOSITE RAMP AND ALIGN WITH DIRECTION OF TRAVEL

Notes

1. This drawing is to be read in conjunction with 'Typical Kerb Ramp' detail.

2. Granite unit paving to run down kerb ramp. 50 x 400 x 600mm units.

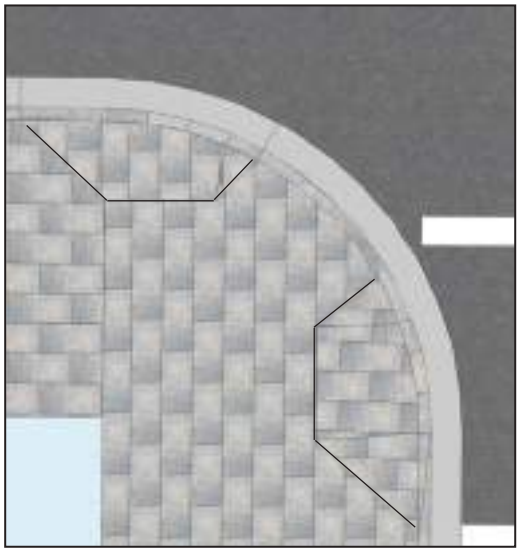
3. Kerb ramps align with property boundaries.

4. 1330mm landings at the top of any kerb ramp where possible.

5. 1:10 grade from top to bottom of kerb ramp. 1:8 maximum.

6. Kerb ramp to finish flush with adjacent paving.

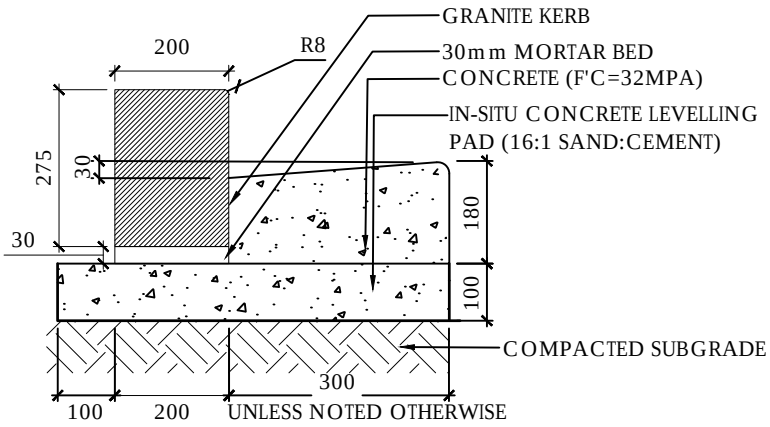
7. Kerb ramps to comply with AS1428.1.



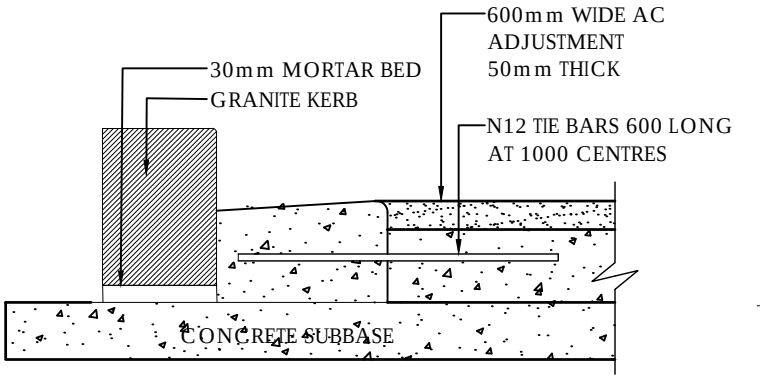
Typical plan

Main Street

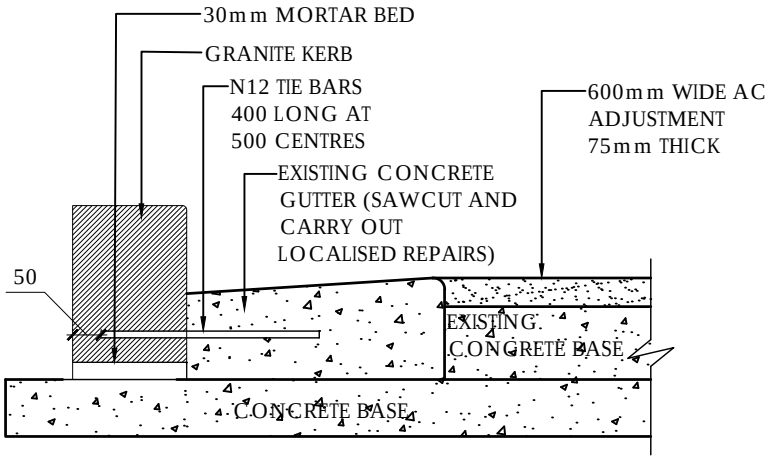
Typical granite kerb and concrete gutter detail (on State & Regional Roads only)



CBD BARRIER KERB & GUTTER



CBD BARRIER KERB - ROADS WITH CONCRETE BASE



CBD KERB ONLY - RMS ROADS

Kerb treatment

Existing Kerb treatment

Notes

1. Subgrade: compacted subgrade as shown.

2. Basecourse: Concrete base as shown.

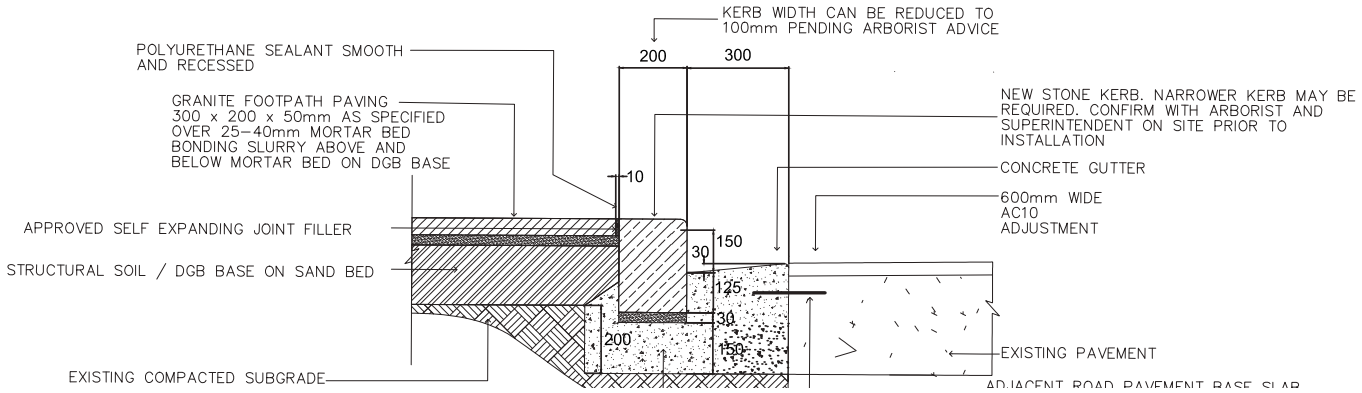
3. AC10mm adjustment:
Provide 600mm wide AC10 correction course layer 50mm/75mm thick as shown.

4. Granite kerb:
"Bruce" Rock granite (Austral Coffee). Top face only to have exfoliated finish. Front face is to have sawn finish.

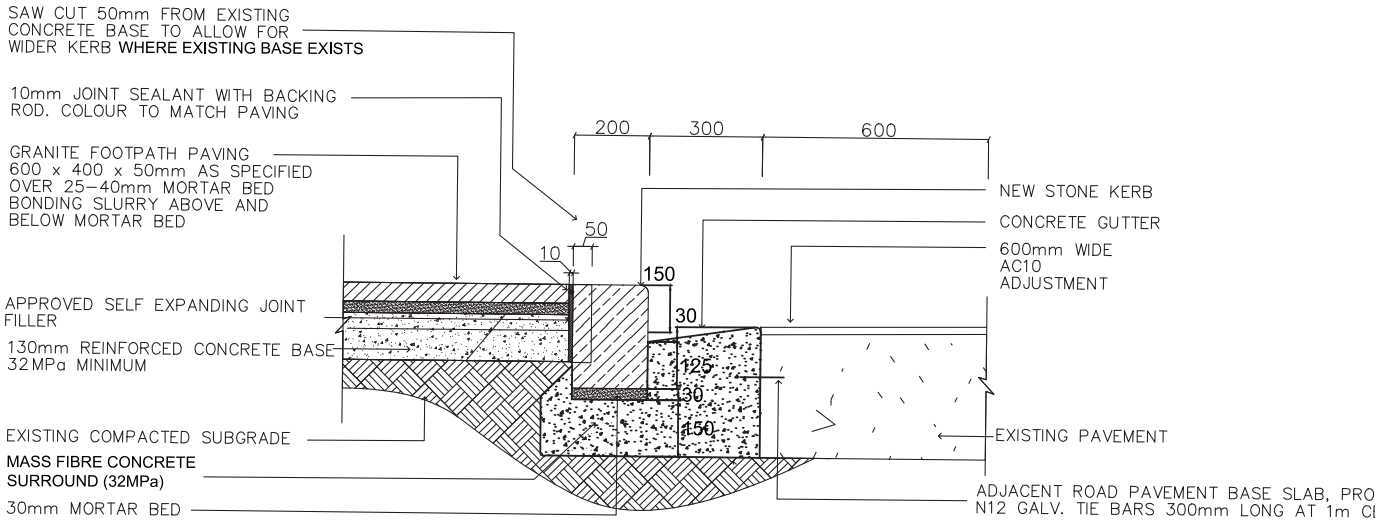
Main Street

Typical granite kerb and concrete gutter details (on non State & Regional roads)

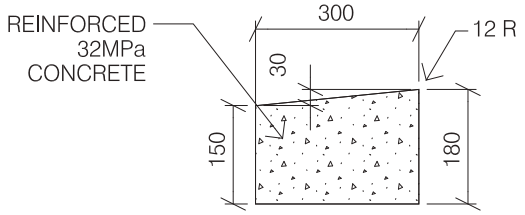
Granite Stone Kerb and Concrete Gutter to Tree Pit



Typical Granite Stone Kerb and Concrete Gutter



Concrete Gutter



Notes

1. Subgrade: compacted subgrade as shown.
2. Basecourse: Concrete base as shown.
3. AC10mm adjustment:

Provide 600mm wide AC10 correction course layer 50mm thick as shown.

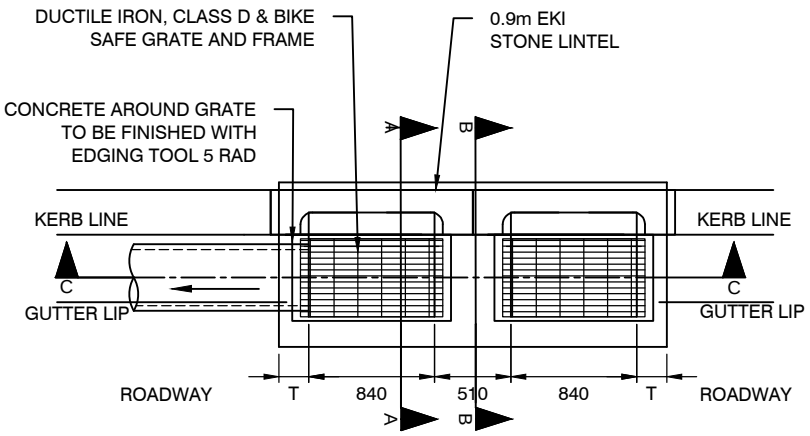
4. Granite kerb:

“Bruce” Rock granite (Austral Coffee). Top face only to have exfoliated finish. Front face is to have sawn finish.

Main Street

Double inlet pit with granite lintel

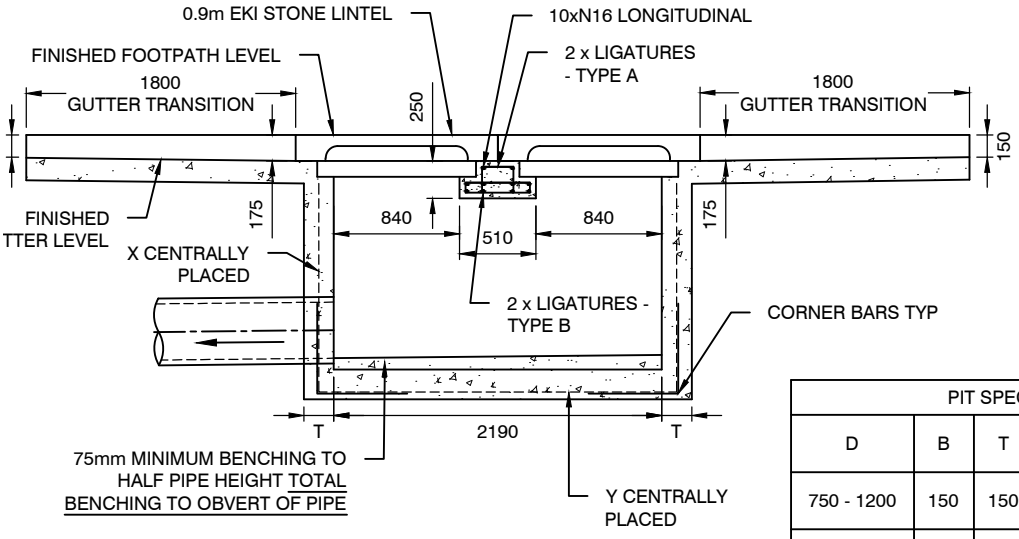
PLAN



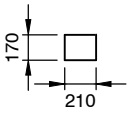
NOTES:

1. ALL LIGATURES TO BE R6 WITH DIMENSIONS AS SPECIFIED.
2. ALL REINFORCEMENT TO COMPLY WITH AS1302, 1303 & 1304.
3. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 32MPa.
4. 75mm MINIMUM BENCHING TO HALF PIPE HEIGHT TOTAL BENCHING TO OBVERT OF PIPE.
5. 100mmØ SUBSOIL DRAINAGE PIPE 3.0m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES.
6. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 300mm CENTRES.
7. PITS OVER 2.1m IN DEPTH TO BE DESIGNED BY STRUCTURAL ENGINEER.
8. GRATES SHALL BE BICYCLE SAFE AND HAVE MAXIMUM INLET CAPACITY. ALL GRATES MUST BE APPROVED BY THE CITY'S REPRESENTATIVE.
9. DRAINAGE PIPE TO BE MINIMUM 375Ø CLASS 4 REINFORCED CONCRETE PIPE

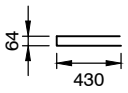
SECTION C-C



LIGATURES TYPE A

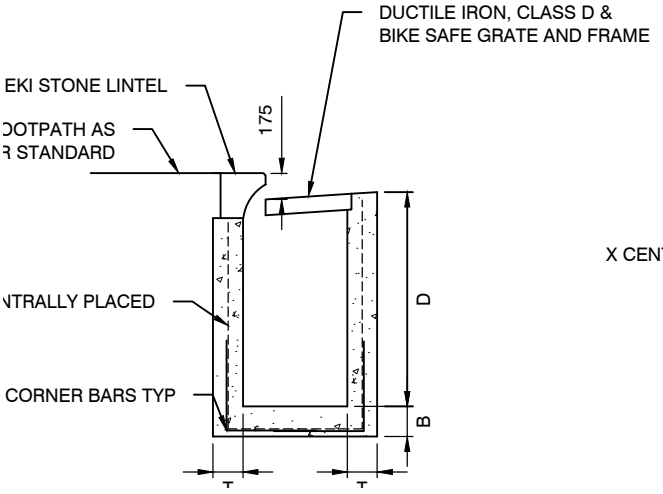


LIGATURES TYPE B

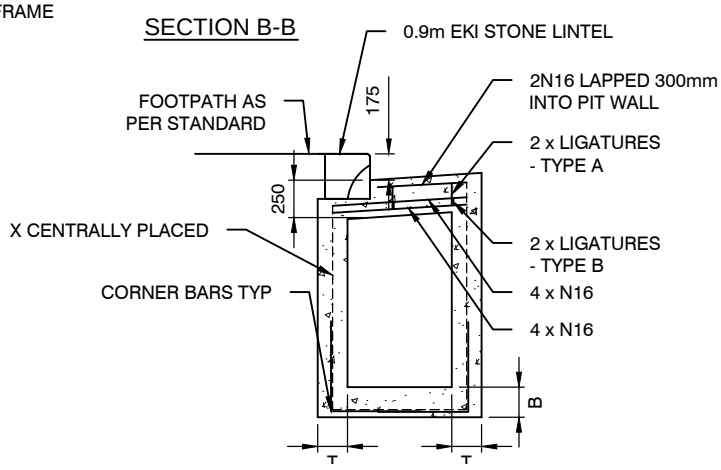


PIT SPECIFICATIONS					
D	B	T	X	Y	CORNER BARS
750 - 1200	150	150	SL82	SL81	N12-300 L 500
1200 - 2100	200	180	SL81	SL81	N12-200 L 600
> 2100	TO STRUCTURAL ENGINEERS SPECIFICATION				

SECTION A-A



SECTION B-B



Main Street

Single inlet pit with granite lintel

Typical Granite Stone Kerb and Concrete Gutter

Double inlet pit with granite lintel

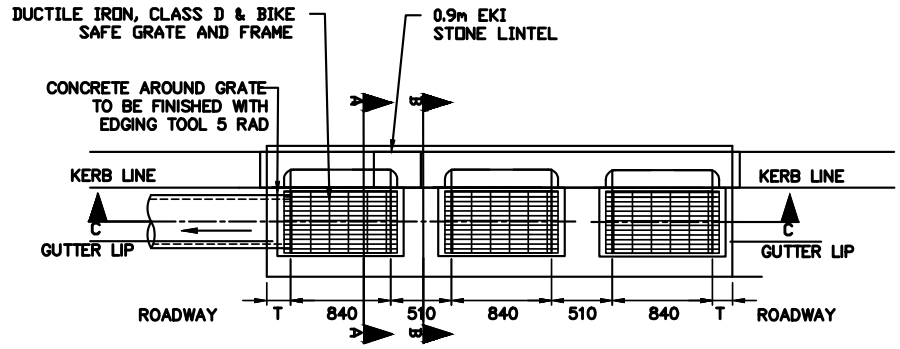
Typical Granite Stone Kerb and Concrete Gutter

High flow inlet pit with granite lintel (3 or more grated inlet pits)

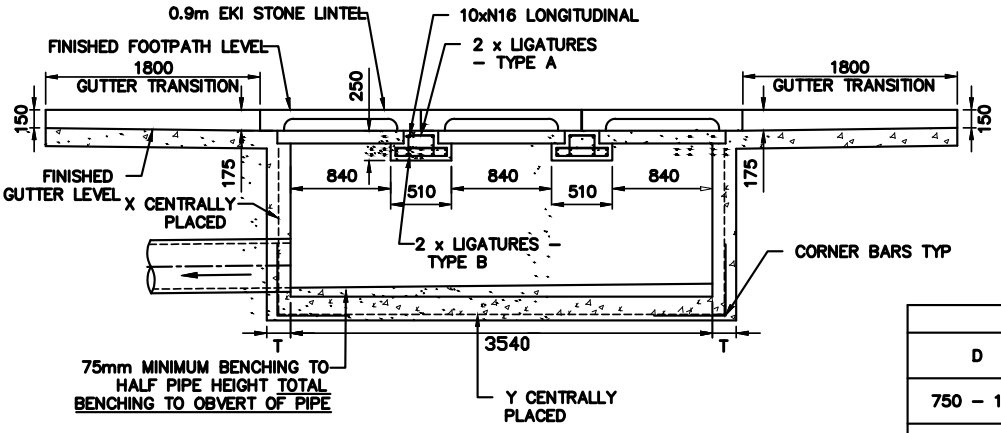
NOTES:

1. ALL LIGATURES TO BE R6 WITH DIMENSIONS AS SPECIFIED.
2. ALL REINFORCEMENT TO COMPLY WITH AS1302, 1303 & 1304
3. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE 32MPa.
4. 75mm MINIMUM BENCHING TO HALF PIPE HEIGHT TOTAL BENCHING TO OBVERT OF PIPE.
5. 100mmØ SUBSOIL DRAINAGE PIPE 3.0m LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES.
6. PROVIDE STEP IRONS WHERE PIT IS DEEPER THAN 1.0m AT 300mm CENTRES.
7. PITS OVER 2.1m IN DEPTH TO BE DESIGNED BY STRUCTURAL ENGINEER.
8. GRATES SHALL BE BICYCLE SAFE AND HAVE MAXIMUM INLET CAPACITY. ALL GRATES MUST BE APPROVED BY THE CITY'S REPRESENTATIVE.
9. DRAINAGE PIPE TO BE MINIMUM 375Ø CLASS 4 REINFORCED CONCRETE PIPE

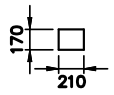
PLAN



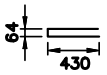
SECTION C-C



LIGATURES TYPE A

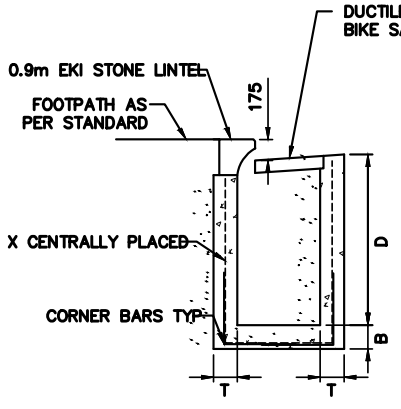


LIGATURES TYPE B

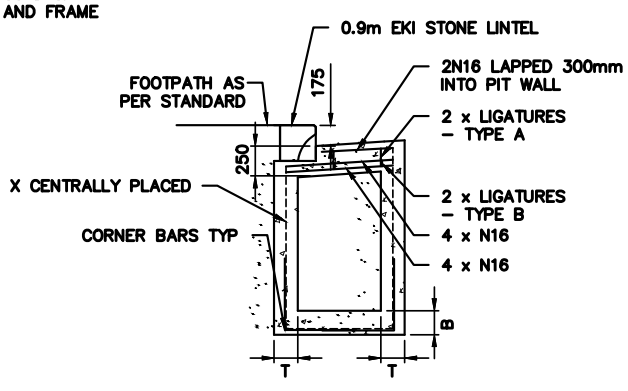


PIT SPECIFICATIONS					
D	B	T	X	Y	CORNER BARS
750 – 1200	150	150	SL82	SL81	N12–300 L 500
1200 – 2100	200	180	SL81	SL81	N12–200 L 600
> 2100	TO STRUCTURAL ENGINEERS SPECIFICATION				

SECTION A-A



SECTION B-B



SCALE 1:50

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

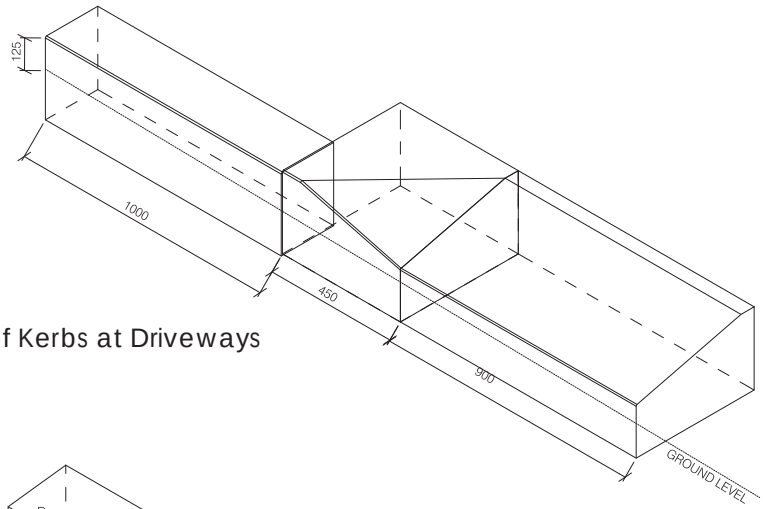
High flow inlet pit with granite lintel (3 or more grated inlet pits)

Typical Granite Stone Kerb and Concrete Gutter

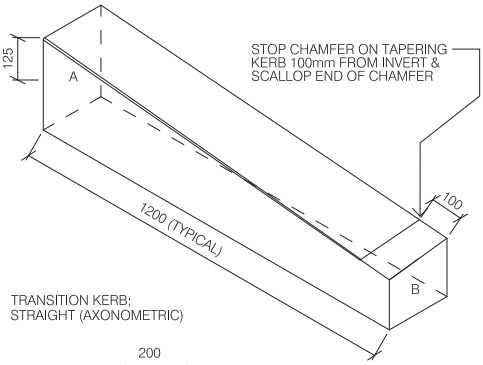
Typical Granite Stone Kerb and Concrete Gutter

Main Street

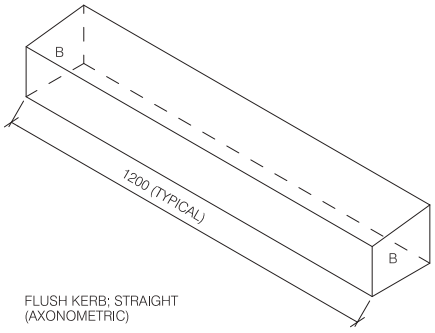
Stone Kerb, Layback Kerb and Layback Kerb Transition



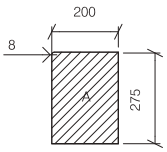
Sequence of Kerbs at Driveways



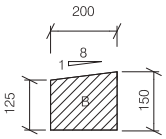
TRANSITION KERB; STRAIGHT (AXONOMETRIC)



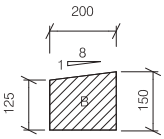
FLUSH KERB; STRAIGHT (AXONOMETRIC)



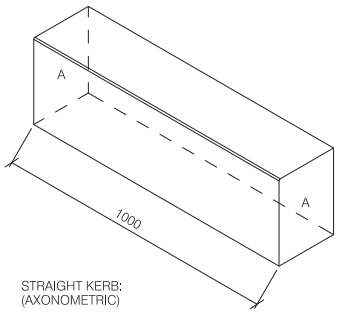
TRANSITION KERB; STRAIGHT (SECTION)



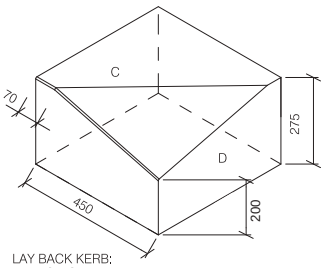
TRANSITION KERB; STRAIGHT (SECTION)



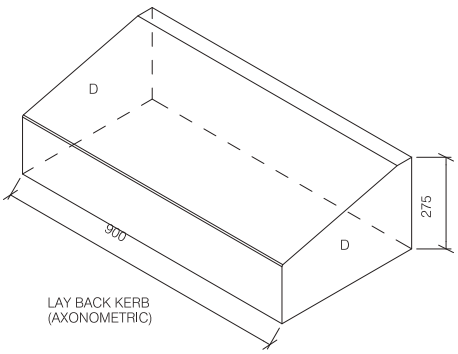
FLUSH KERB; STRAIGHT (SECTION)



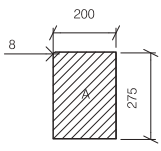
STRAIGHT KERB; (AXONOMETRIC)



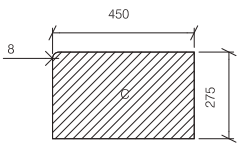
LAY BACK KERB; TRANSITION (AXONOMETRIC)



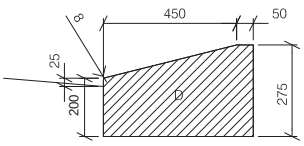
LAY BACK KERB (AXONOMETRIC)



STRAIGHT KERB: (SECTION)

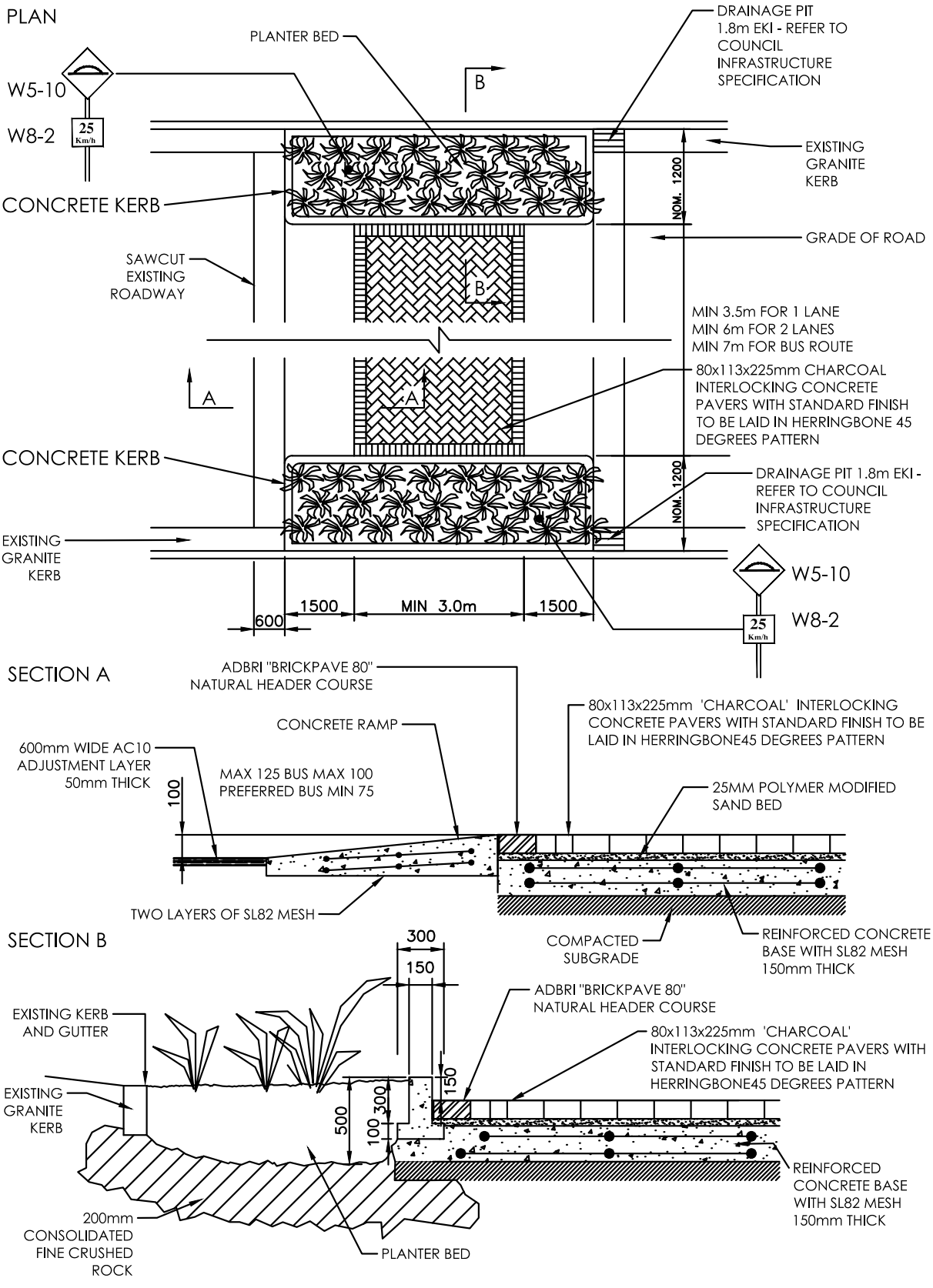


LAY BACK KERB:TRANSITION (SECTION)



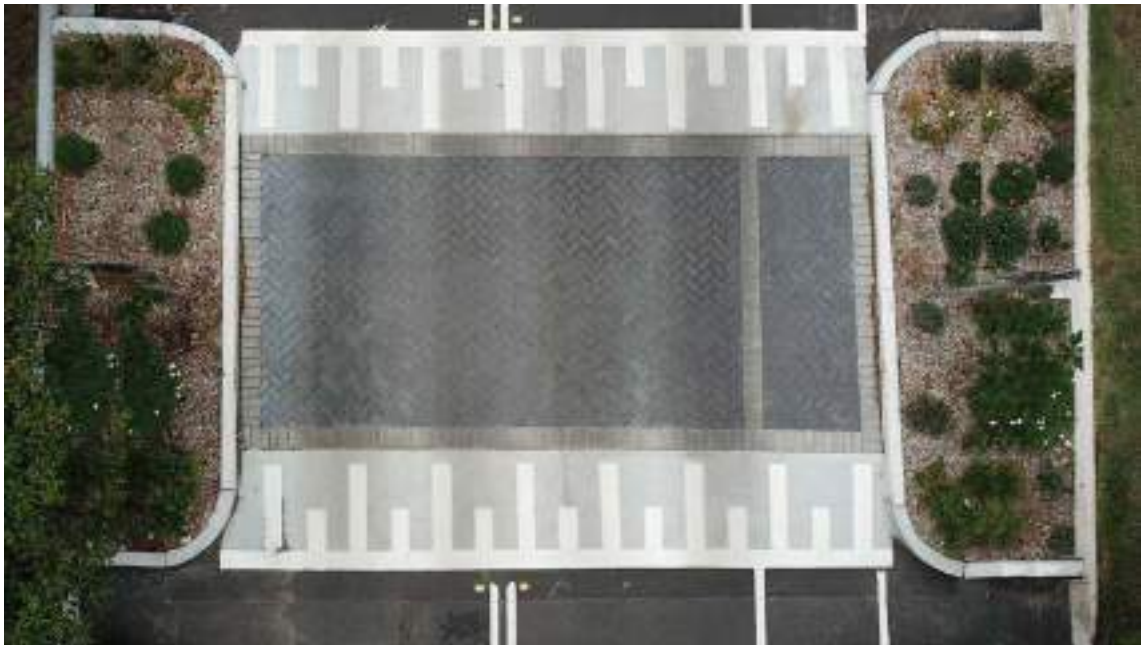
Main Street

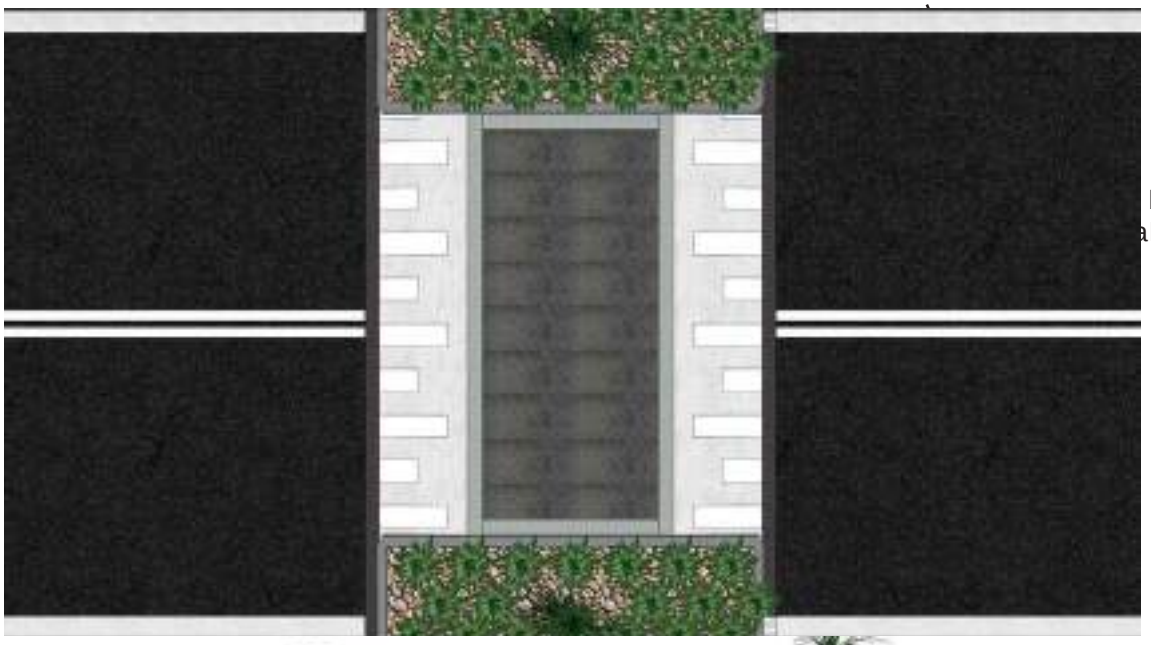
Typical threshold with concrete ramps and interlocking paving



Main Street

Typical threshold with concrete ramps and interlocking paving

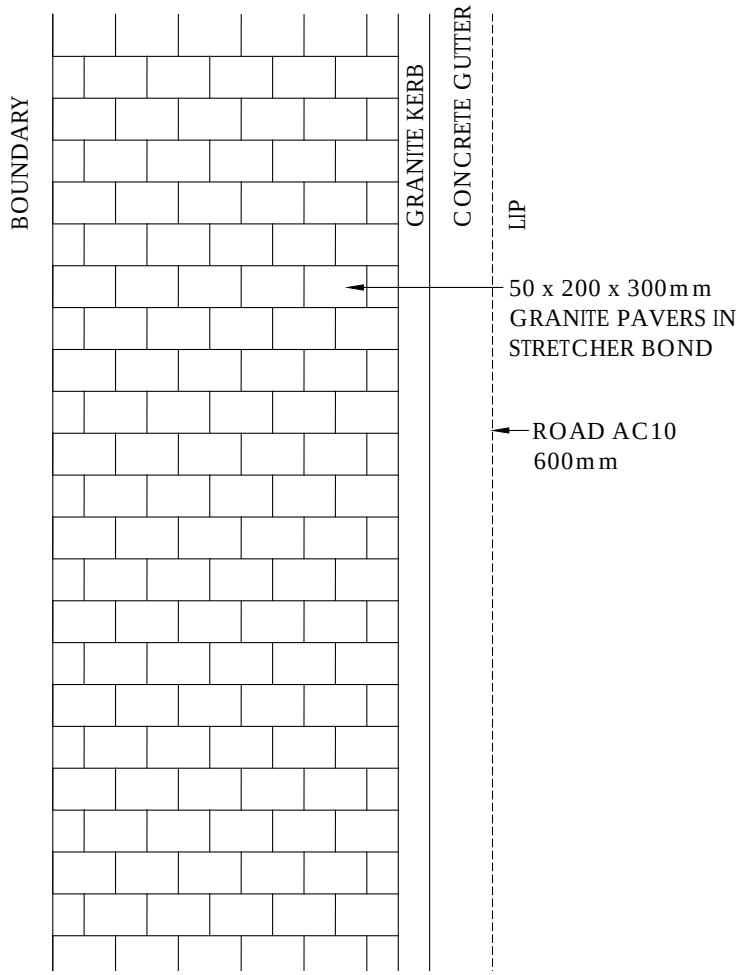




banding
al cycleway

Laneway

Typical footpath paving in laneways



Notes

1. 50 x 200 x 300mm granite paving with an exfoliated finish to provide a hard wearing and serviceable finish.

2. Mid coloured paving with a fleck of colour for warmth.

3. Natural variation in granite assists in concealing marks.

4. Butt jointed, stretcher bond paving pattern with no header.

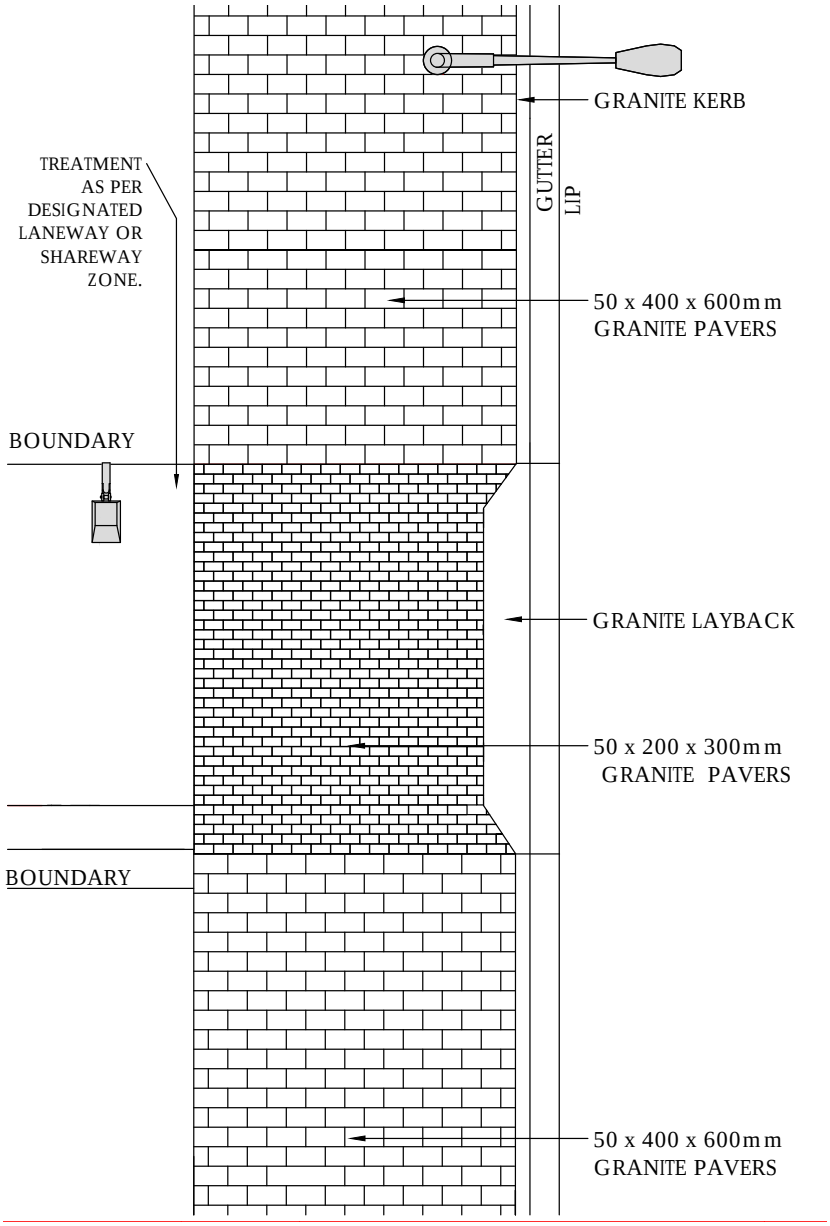
5. Rigid base - reinforced concrete slab.

"Bruce" Rock (Austral Juperana) granite

"Bruce" Rock (Austral Juperana) granite in stretcher bond pattern

Shared zone

Typical Raised Crossing at Entry to Laneway and Shared Zone



Notes

1. Main footpath 50 x 400 x 600mm granite paving with an exfoliated finish to provide a hard wearing and serviceable finish.

2. Laneway and shared zone crossing 50 x 200 x 300mm granite paving with an exfoliated finish to provide a hard wearing and serviceable finish.

3. Mid coloured paving with a fleck of colour for warmth.

4. Natural variation in granite assists in concealing marks.

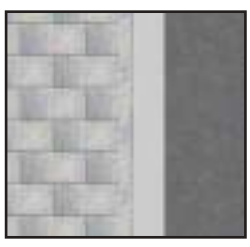
5. Butt jointed, stretcher bond paving pattern with no header.

6. Rigid base - reinforced concrete slab for granite pavement.

7. Laneway and shared zone crossing on Parex Streetscape System mortar bed and joining to manufacturer's specification

8. All sign stems (50mm NB) shall be installed using V-Loc + wedge system (galvanised). Footpath pavement shall be neatly core drilled 200mm DIA.

9. All open joints shall be sealed with Bostik "Seal 'N' Flex 1" in accordance with the manufacturer's recommendations - this includes boundaries, back of kerb and lintels, utility pits, construction joints etc



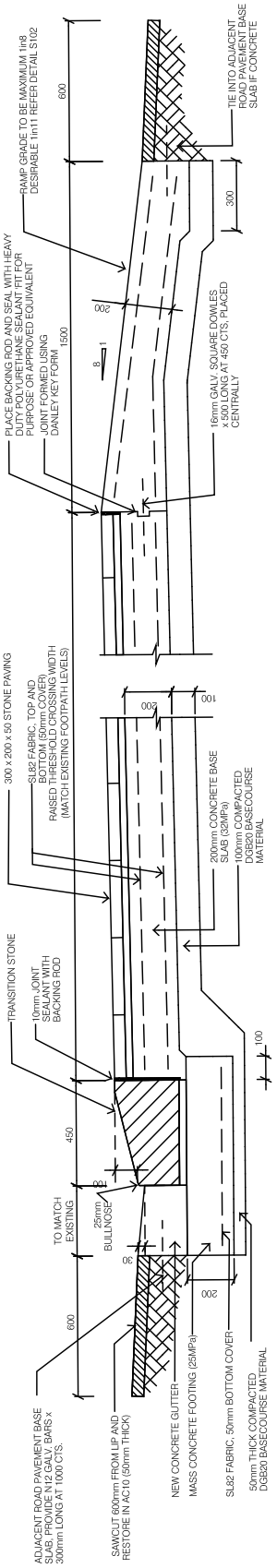
"Bruce" Rock (Austral Juperana) granite

"Bruce" Rock (Austral Juperana) granite in stretcherbond pattern

Typical driveway treatment

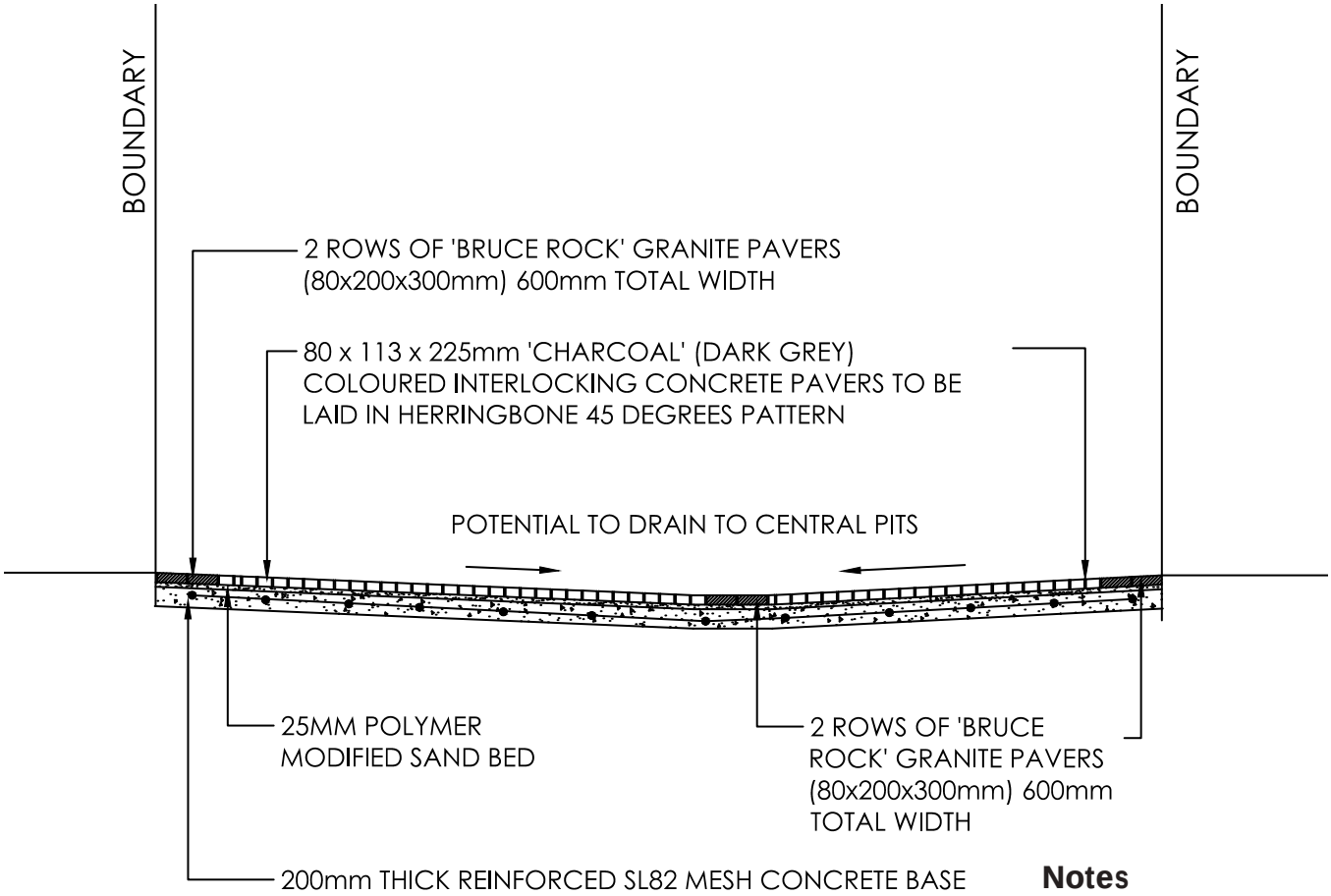
Laneway

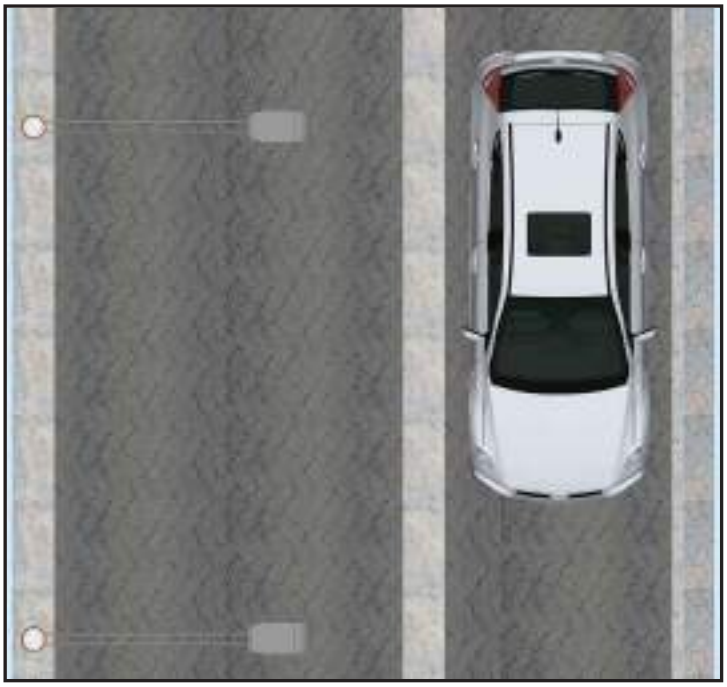
New Laneway Crossing



Shared zone

Typical laneway and shared zone section





Shared zone treatment

Interlocking concrete pavers

Granite pavers

Notes

1. Shared zone: 80 x 113 x 225mm 'Charcoal' (dark grey) coloured interlocking concrete pavers with standard finish

2. To be laid in herringbone 45 degrees pattern.

3. To be laid on a rigid base to prevent rutting.

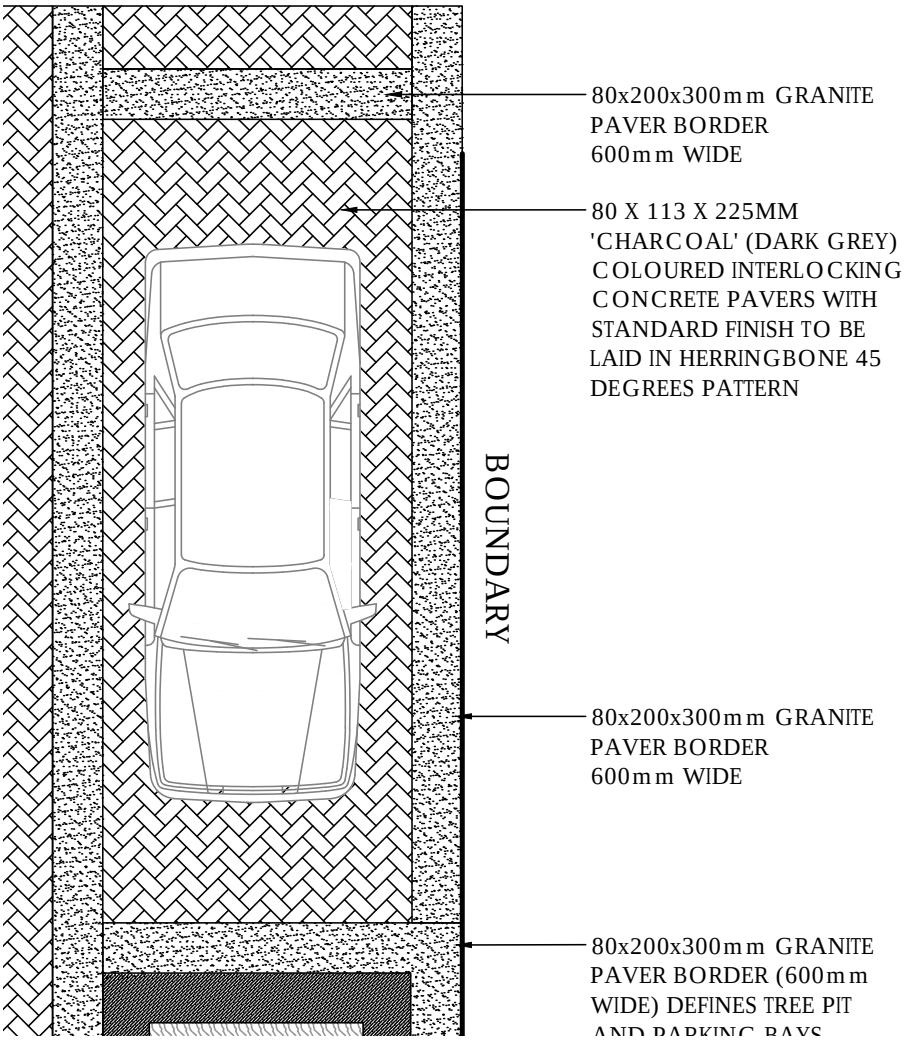
4. Main colour is 'charcoal'

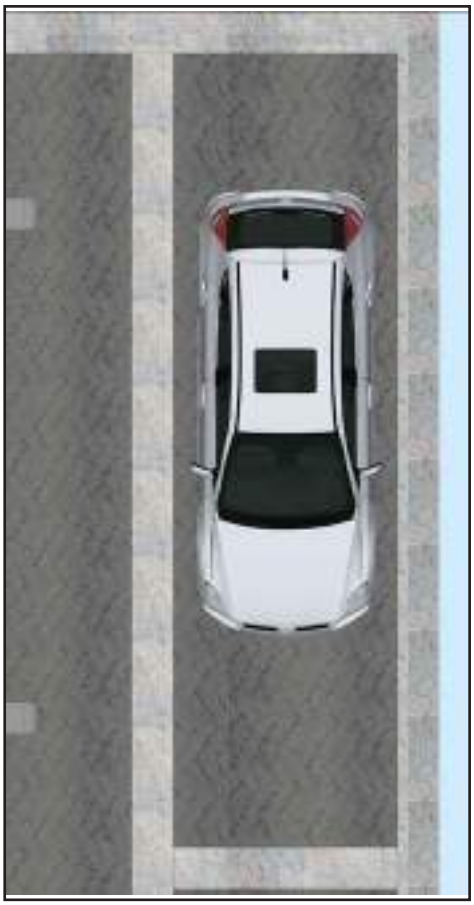
5. Border is granite paver 600mm wide.

6. Parking bays to be marked out in granite paver 80x200x300mm in stretcherbond pattern

Shared zone

Typical parking demarcation in granite - shared zone only





Shared zone treatment

Interlocking concrete pavers

Granite pavers

Notes

1. Shared zone: 80 x 113 x 225mm 'Charcoal' (dark grey) coloured interlocking concrete pavers with standard finish in stretcherbond pattern.

2. To be laid in herringbone 45 degrees pattern.

3. To be laid on a rigid base to prevent rutting.

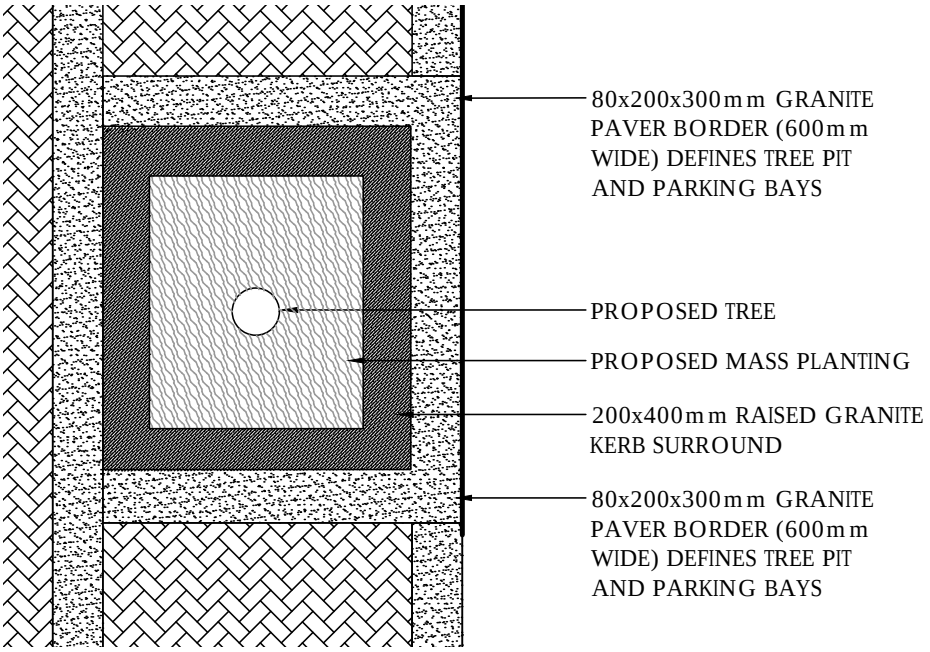
4. Main colour is 'charcoal'

5. All sign stems (50mm NB) shall be installed using V-Loc + wedge system (galvanised). Footpath pavement shall be neatly core drilled 200mm DIA.

6. All open joints shall be sealed with Bostik "Seal 'N' Flex 1" in accordance with the manufacturer's recommendations - this includes boundaries, back of kerb and lintels, utility pits, construction joints etc

Shared zone

Typical at grade tree pit in shared zone - plan and section



Tree Pit with optional Fixed bollard

Notes

1. Shared zone: 80 x 113 x 225mm 'Charcoal' coloured interlocking concrete pavers with standard finish to be laid in herringbone 45 degrees pattern and on a rigid base to prevent rutting.

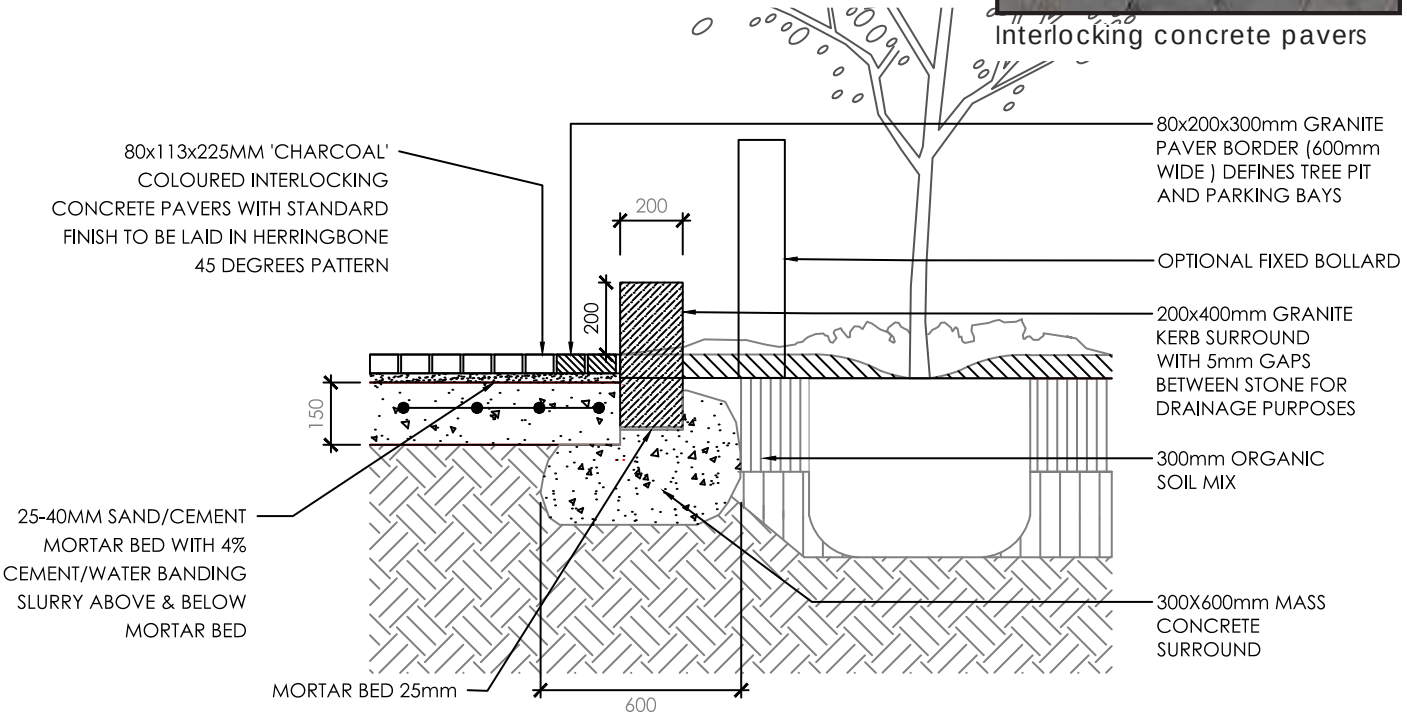
2. Interlocking to be laid on a polymer modified sand layer (Sydney Sand)

3. Granite to be laid on Parex Streetscape System motor bed and joining with Sikaflex high performance polyurethane sealant

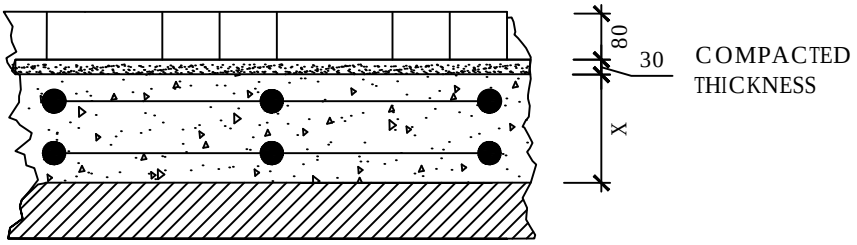
4. Granite to be sealed

Granite pavers

Interlocking concrete pavers



Typical road pavers interlocking including concrete base



ADBRI 'UNIPAVE 80' 80mm THICK IN HERRINGBONE LAYING PATTERN (OR APPROVED EQUIVALENT)

NOM. 30mm SAND BEDDING (MODIFIED POLYMER SAND)

REINFORCED CONCRETE SUB-BASE WITH SL82 MESH

SUBGRADE

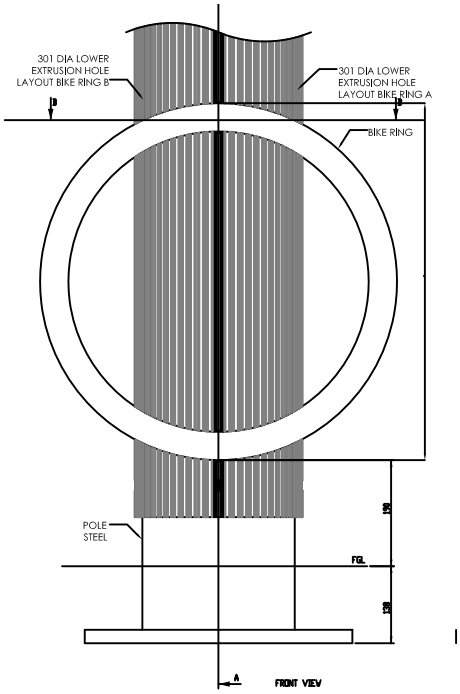
Notes

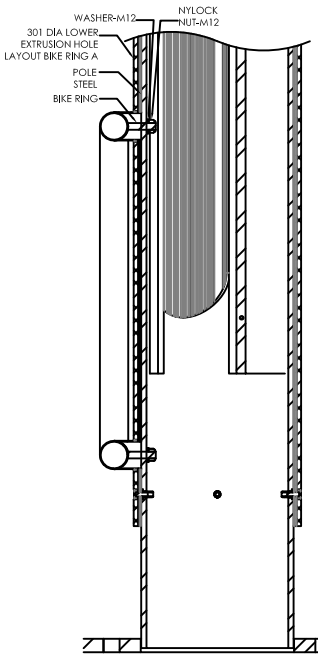
1. 'X' Is to be 250mm for bus bays and 200mm for driveways, reinforced with SL82 reinforcement top and bottom.

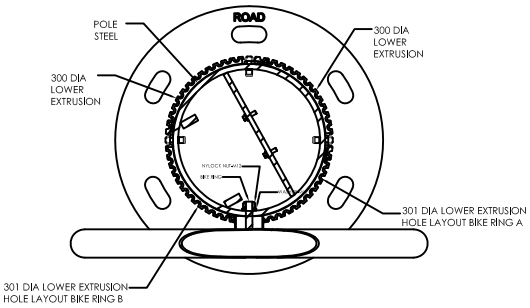
2. Interlocking pavers to be 'charcoal' colour. Highlight colour shall be 'Natural' 'Brickpave 80'.

Furniture and Fixtures

Typical bicycle parking







Notes

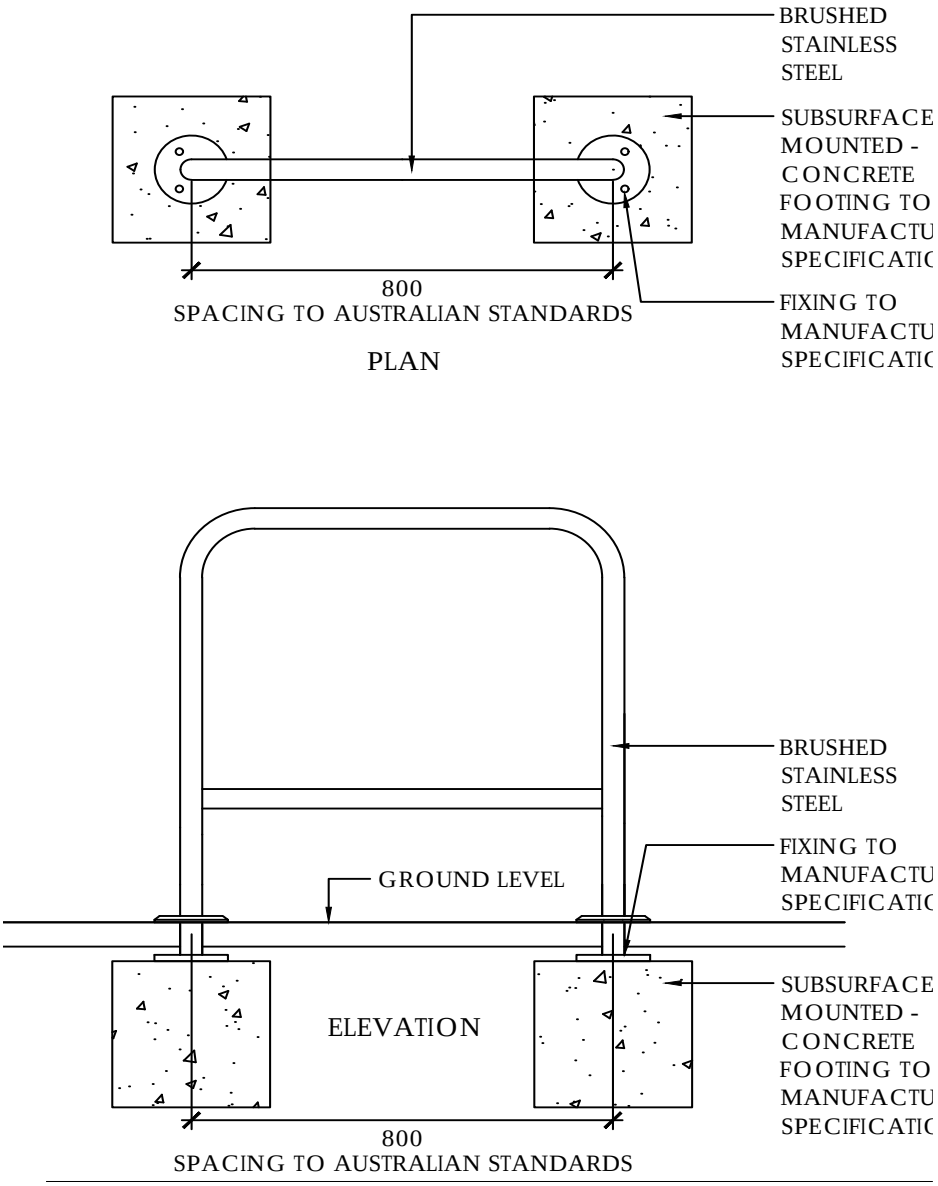
1. Bike hoops to be HUB bike ring assembly or approved equivalent.

2. Bike rings to be fixed to Multi-Purpose Poles (MPPs).

3. Brushed stainless steel (integral finish).

4. Ideally bike racks shall be located in areas where footpaths are widened. Bike racks should also be located where there is a change in transport type - for instance at ferry terminals, bus stops and train stations. They should also be located along cycleways and at cycle destinations.

Typical bicycle parking - bike rack



Notes

1. Subsurface mounted where possible.

2. Brushed stainless steel (brushed finish).

3. Ideally bike racks shall be located in areas where footpaths are widened. Bike racks should also be located where there is a change in transport type - for instance at ferry terminals, bus stops and train stations. They should also be located along cycleways and at cycle destinations.

Stainless steel bike racks

Typical parking meter

Parking meter

Notes

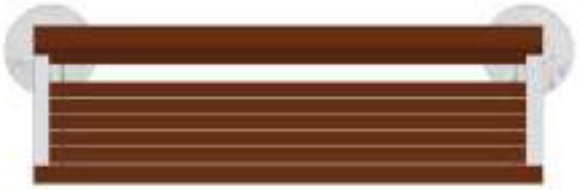
1. Parking meter 1.2m high

2. Situated 600mm from back of kerb

3. Where finished footpath surface levels do not match existing, contact Council's parking meter services division for further details about footing requirements and repositioning of meter stem.

Furniture and Fixtures

Typical seat with back



Notes

1. Timber battens with hidden fixings.

2. Stainless steel frame.

3. Angular, contemporary form.

4. Seat with back

5. Three person seats approximately 1850mm long.

6. To be sub-surface fixed where possible.

7. Stainless steel anti-tamper fixings.

8. Seat to be Rondo seat by StraBe or equal and approved. Image and details indicative of style only.

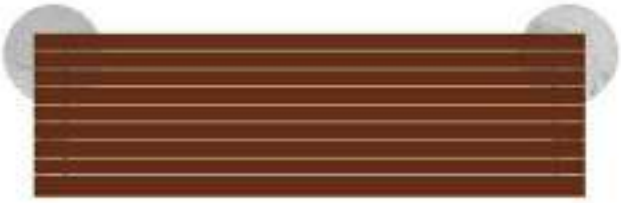
9. Timber to be weathered for 6 months and treated prior to installation.

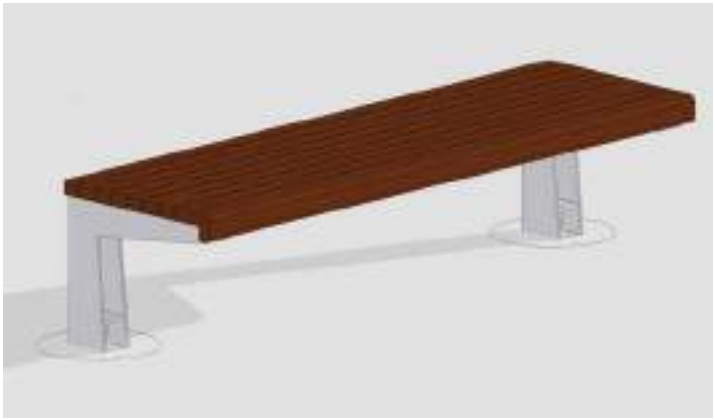
10. Maximum grade at which seats can be installed 8.6%. Min seat height 380mm; max seat height 540mm.

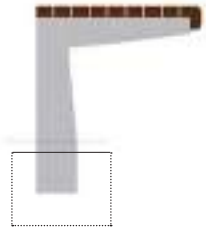
Furniture and Fixtures

Typical bench seat

Optional handrails shown







Notes

1. Timber battens with hidden fixings.

2. Stainless steel frame.

3. Angular, contemporary form.

4. Three person seats approximately 1850mm long.

5. To be sub-surface fixed where possible.

6. Stainless steel anti-tamper fixings.

7. Seat to be Rondo seat by StraBe or equal and approved. Image and details indicative of style only.

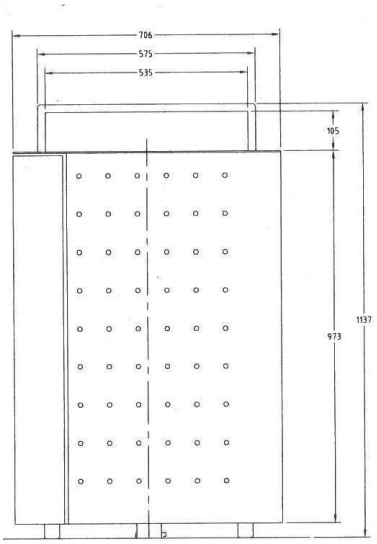
8. Timber to be weathered for 6 months and treated prior to installation.

9. Maximum grade at which seats can be installed 8.6%. Min seat height 380mm; max seat height 540mm.

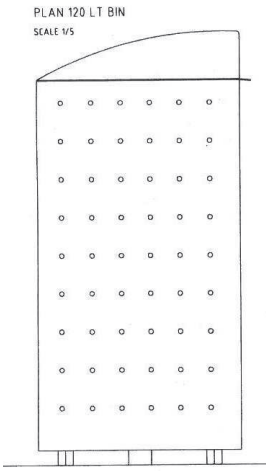
10. Optional handrails available

Furniture and Fixtures

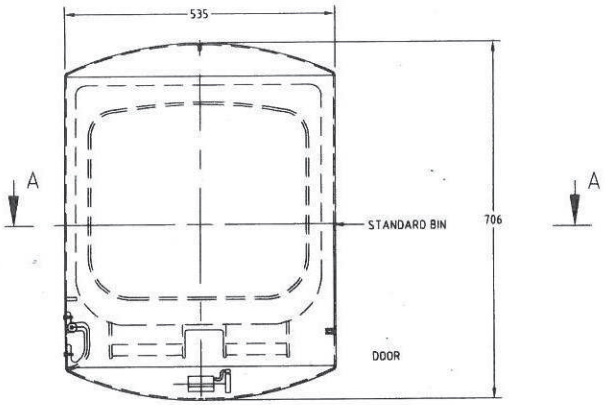
Typical metal bin Installation detail

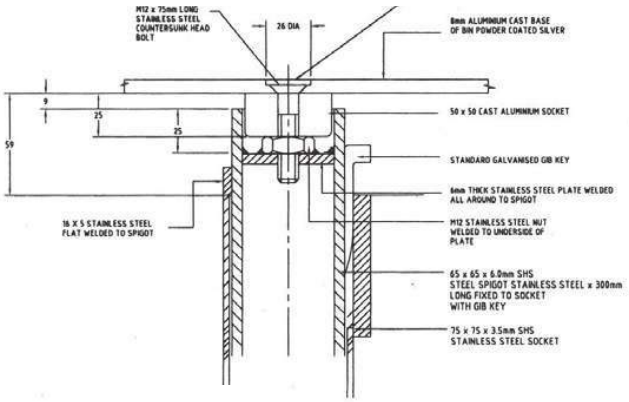


FRONT VIEW 120 LT BIN

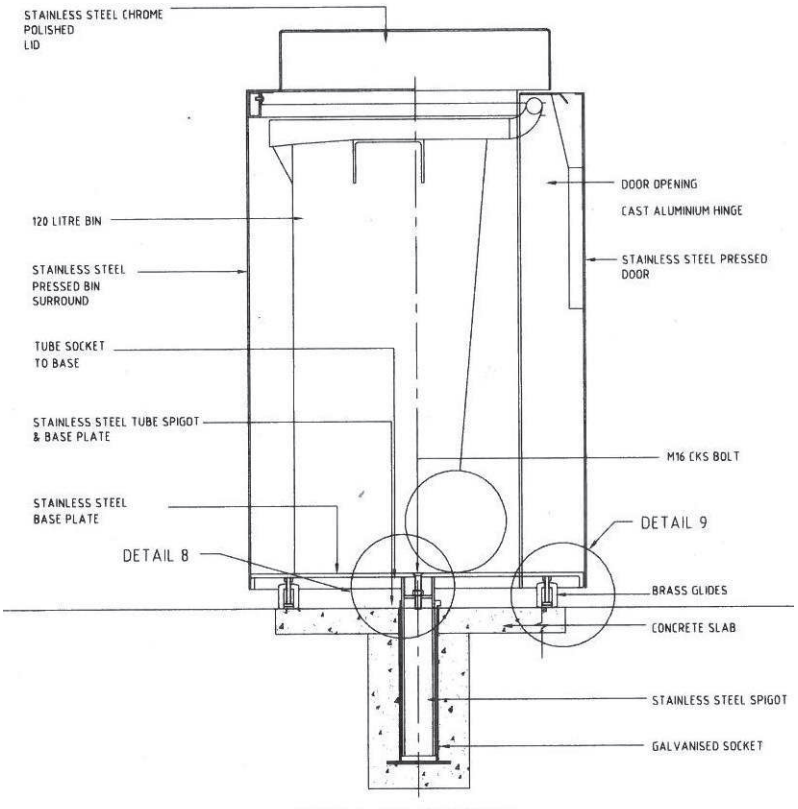


SECTION VIEW 120 LT BIN

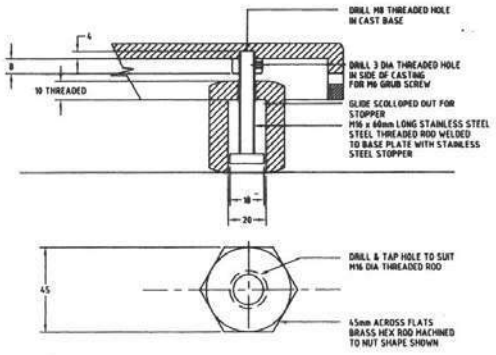




SPIGOT CONNECTION DETAIL



SECTION AA VIEW 120 LT BIN



ADJUSTABLE FEET DETAIL

Notes

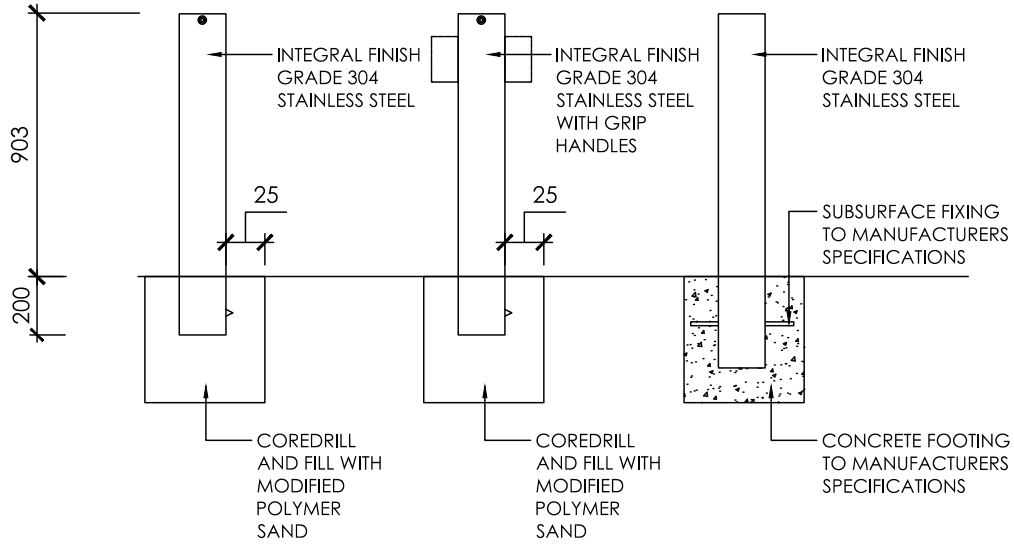
1. All dimensions in mm.

2. Stainless steel finish.

3. Bins are to be sub-surface mounted as shown.

Furniture and Fixtures

Typical 125mm and 150mm bollard - Fixed and removable



Locking and removable bollard

Locking and removable bollard with grip handles

Fixed insitu bollard

Notes

1. Integral finish grade 304 stainless steel.

2. Bollards are to be subsurface fixed.

3. Finish: Linished.

4. Optional handles and reflective tape.

Locking and removable bollard / Fixed insitu bollard (with optional grip handles)

168mm Bollard - Automatic retractable

Automatic retractable bollard with optional reflective tape

Notes

1. Integral finish grade 304 stainless steel.
2. Finish: Linished.
3. Optional reflective tape.
4. 168mm dia. 600mm high.
5. 6mm wall thickness automatic retractable bollard.

Furniture and Fixtures

Typical bus shelter

Notes

1. Urban / Contemporary bus shelter.

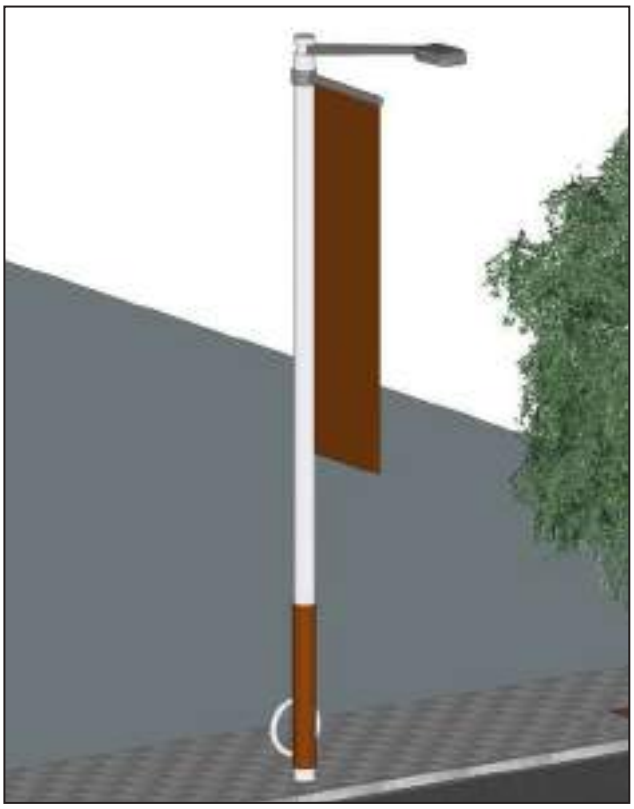
2. Bus shelter to incorporate advertising material and information panels.

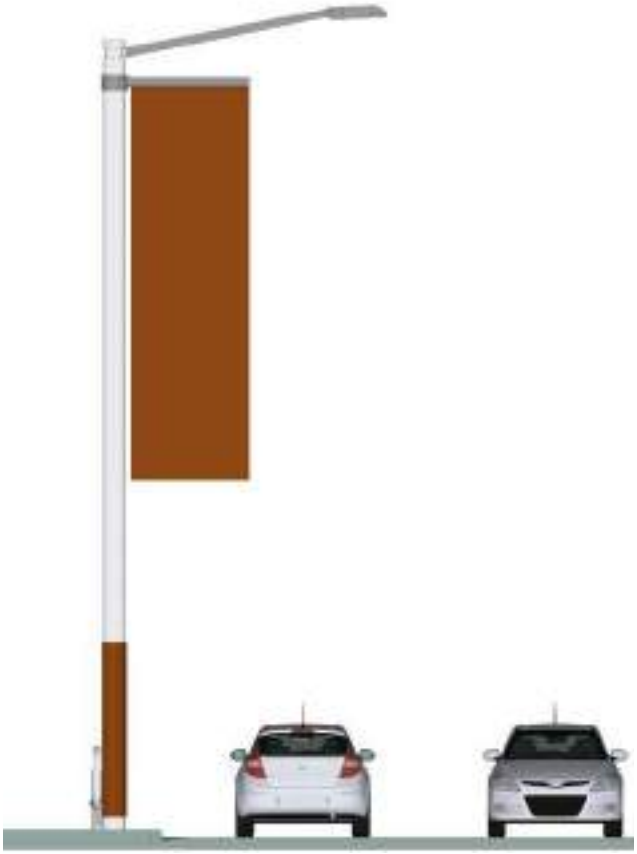
3. Size to vary to suit location and demand.

4. Bus shelters are to be installed as per the specification from North Sydney Council's future bus shelter supplier.

Furniture and Fixtures

Typical post top light (Main Street)

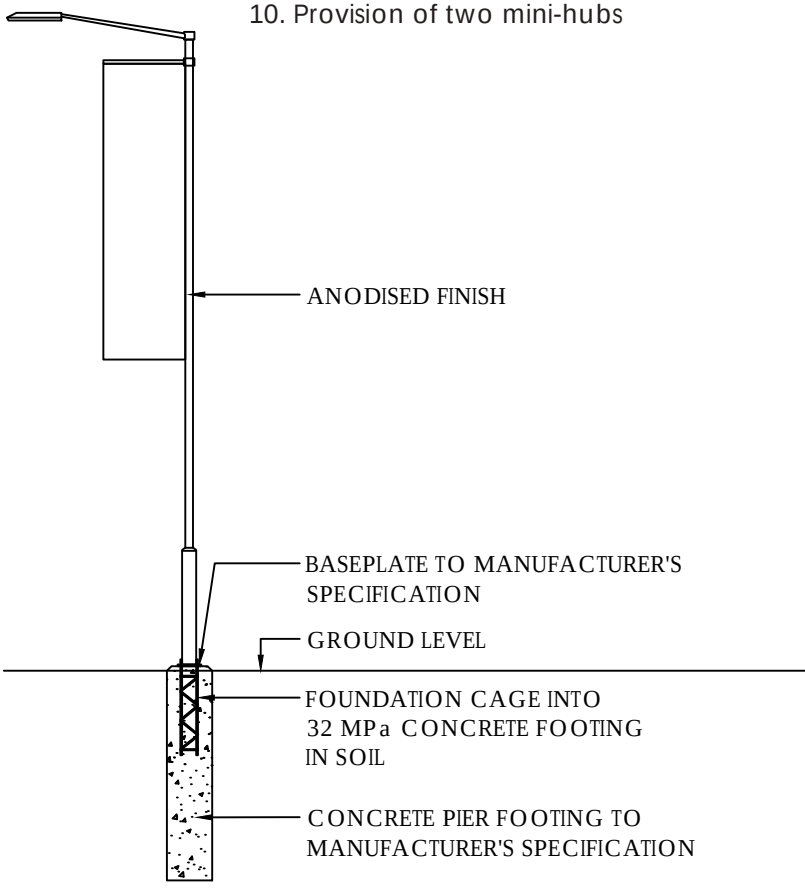




Multi-functional post top light pole

Notes

1. LED Luminaire with P.E. cells
2. Lighting design to comply with Australian Standards.
3. Anodised finish.
4. Foundation cage cast into 32 MPa concrete footing in subgrade.
5. Poles are to be assembled and erected in accordance with manufacturers specifications.
6. Pole Height: 9.5m
7. Luminaire outreach arm: 3m
8. Spacing of poles to be determined by lighting design.
9. Banner outreach arm: 2m
10. Provision of two mini-hubs



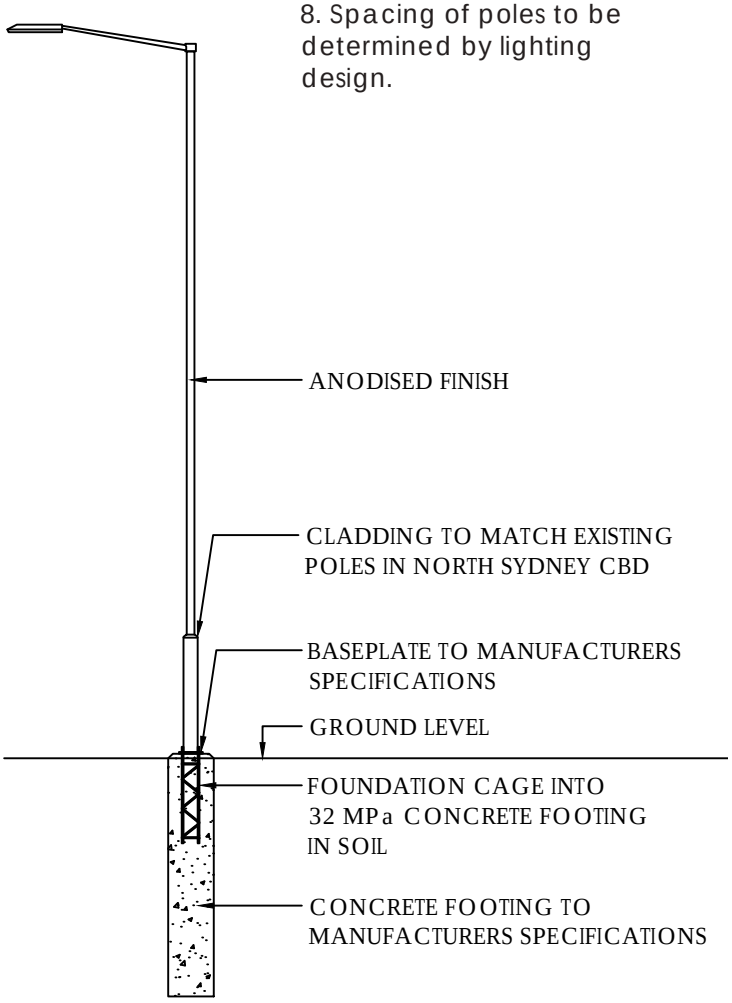
Furniture and Fixtures

Typical post top light - default option 1 (Laneways and shared zones)

Multi-functional post top light pole

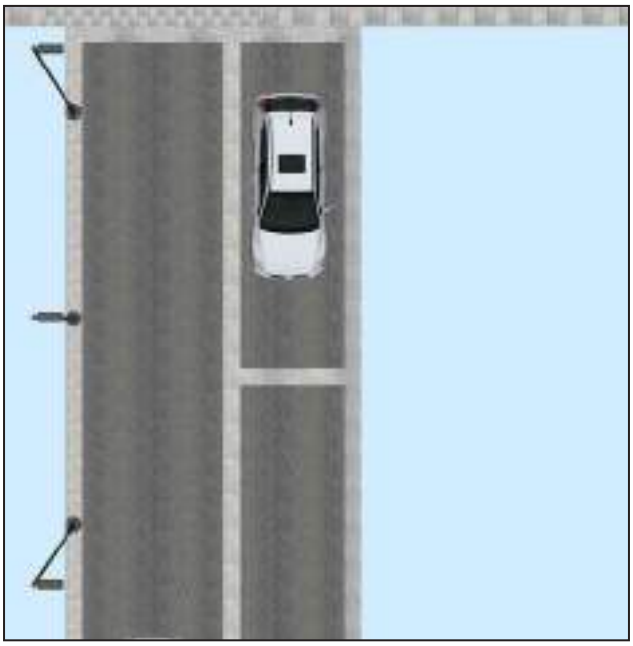
Notes

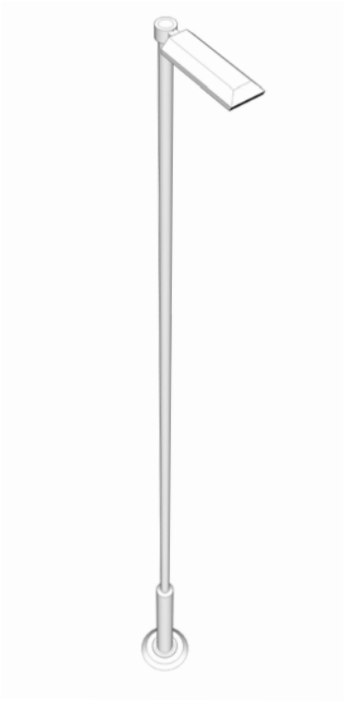
1. LED Luminaire with P.E. cells
2. Lighting design to comply with Australian Standards.
3. Anodised finish.
4. Foundation cage cast into 32 MPa concrete footing in subgrade.
5. Poles are to be assembled and erected in accordance with manufacturers specifications.
6. Pole Height: 7m
7. Luminaire outreach arm: 2m
8. Spacing of poles to be determined by lighting design.



Furniture and Fixtures

Typical post top light - option 2 (Laneways and shared zones)

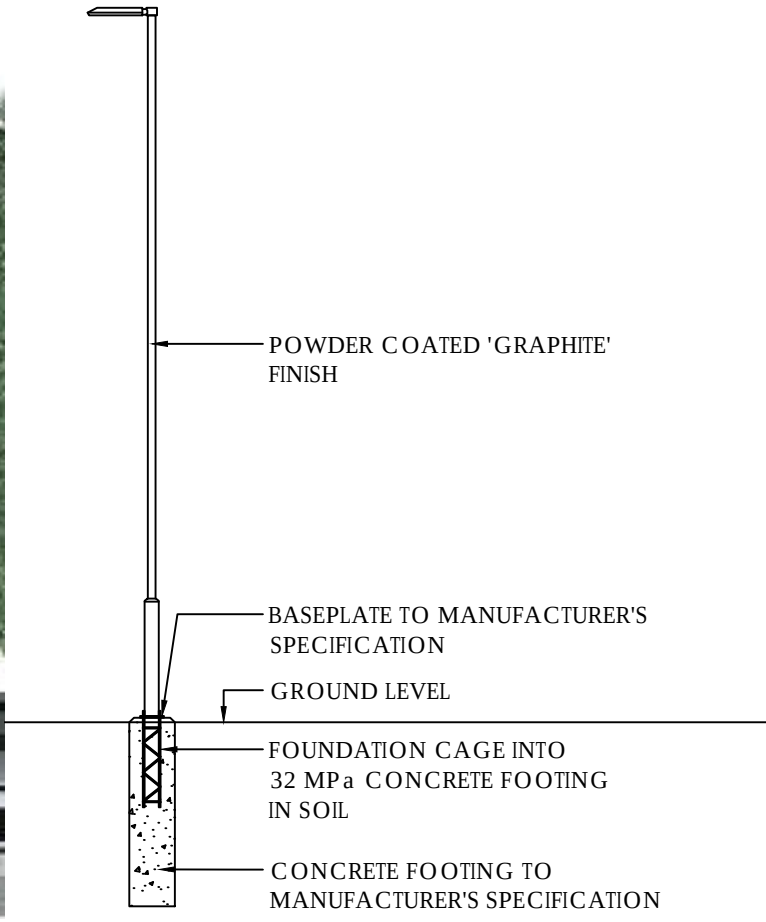




Post top light pole

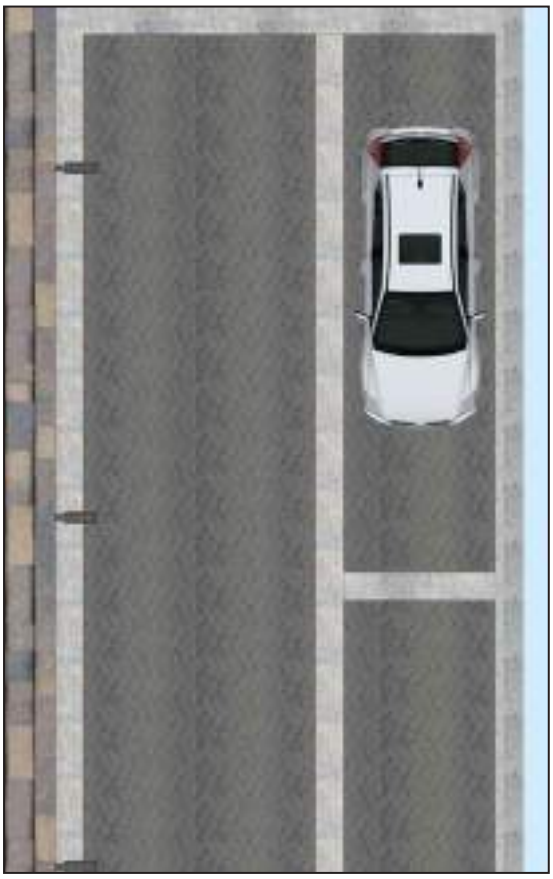
Notes

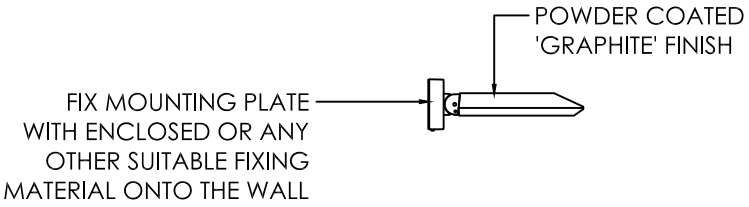
1. LED Luminaire with P.E. cells
2. Lighting design to comply with Australian Standards.
3. Powder coated 'Graphite' finish.
4. Foundation cage cast into 32 MPa concrete footing in subgrade.
5. Poles are to be assembled and erected in accordance with manufacturers specifications.
6. Pole Height: 7m
7. Spacing of poles to be determined by lighting design.

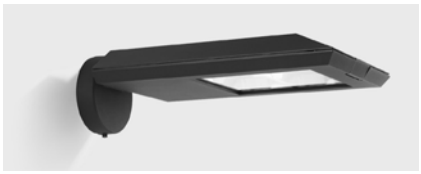


Furniture and Fixtures

Typical wall mounted light (Laneways and shared zones)







Wall mounted LED light

Notes

1. A consistent light colour warmth across fittings.

2. A consistent palette of light fittings for different applications.

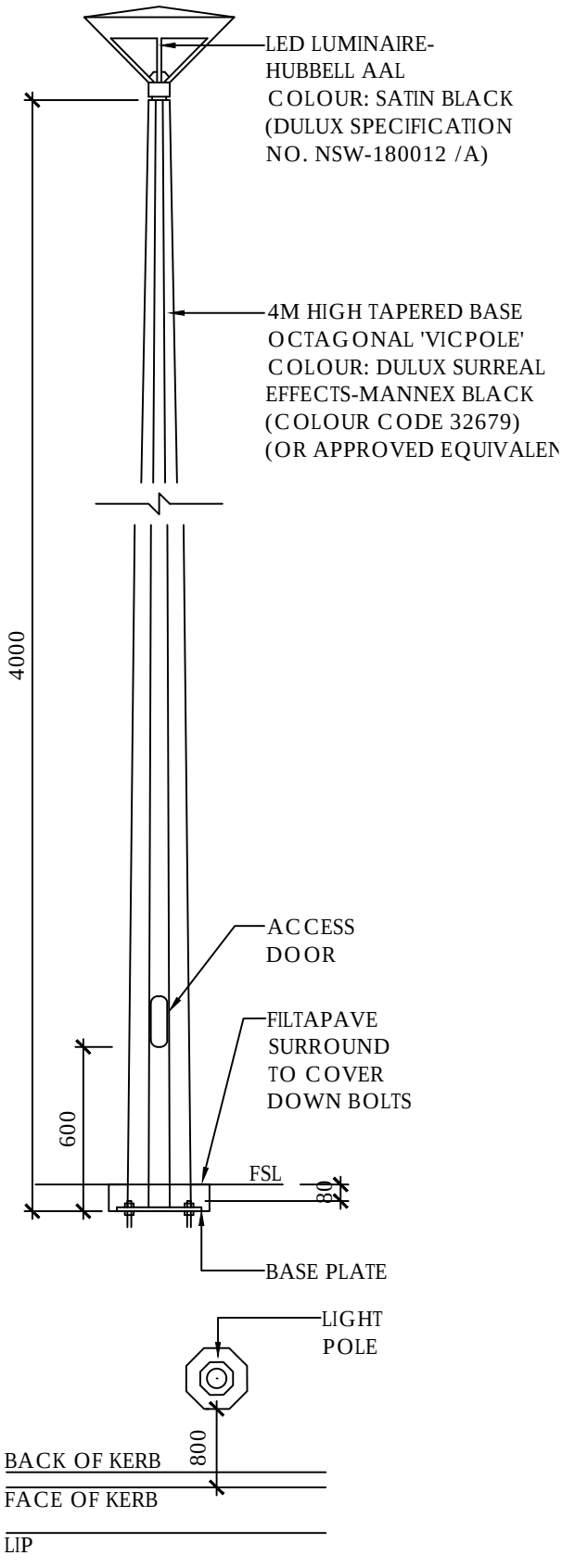
3. Powdercoated 'Graphite'.

4. Lead mains supply cable through the cable entry of the mounting plate.

5. Fix the mounting plate with enclosed or any other suitable fixing material onto the mounting surface.

Furniture and Fixtures

Typical octagonal light pole (Public plazas and spaces)



Notes

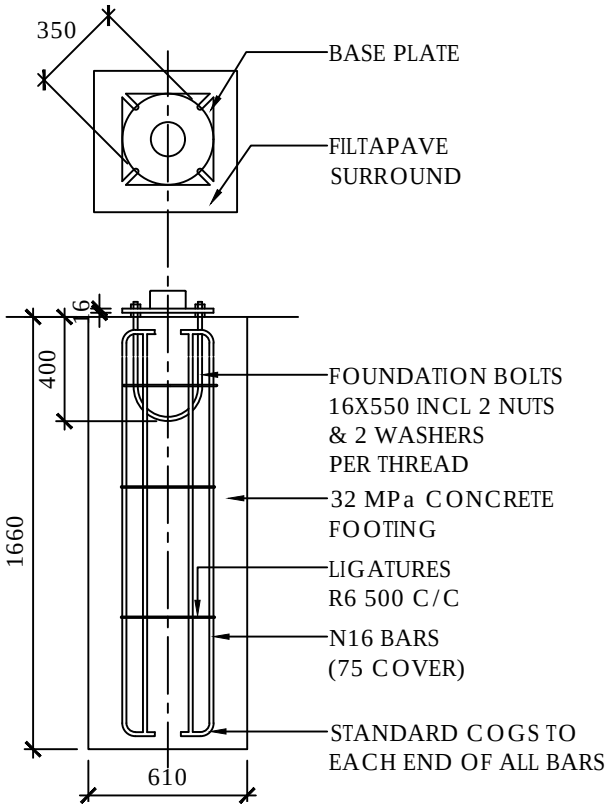
1. For installation detail. Refer to manufacturer's specification.

2. Allow for grout packing between the concrete footing and the base plate of the light pole to achieve a vertical alignment when erecting the pole. The grout pack shall have a minimum strength of 32MPa at 7 days. The maximum tolerance for vertical misalignment will be 30mm from the vertical.

3. Light colour warmth to match other fittings.

4. Painted in Matte Black (MTB).

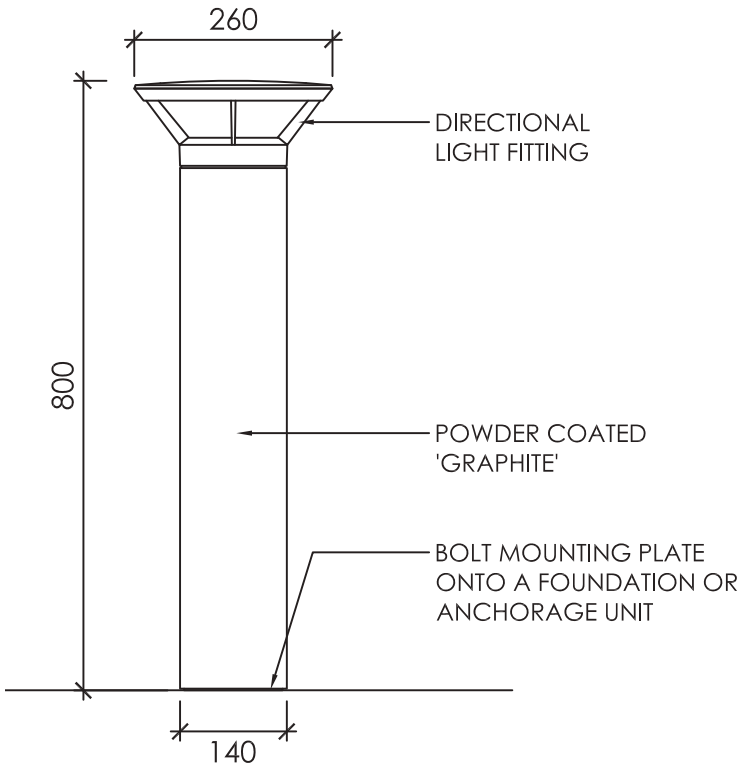
Post top LED light



Furniture and Fixtures

Typical illuminated bollard

Illuminated Bollard



Notes

1. Fixing: Bolted with a mounting plate onto a foundation.

2. Light fittings shall be directional.

3. Powder coated 'Graphite'.

4. Fitting to match post top (parks and plazas) luminaire range.

5. Bolt mounting plate onto foundation or anchorage unit to manufacturers specifications.

Furniture and Fixtures

Typical handrail lighting

Notes

1. Lighting to be housed within a stainless steel handrail.

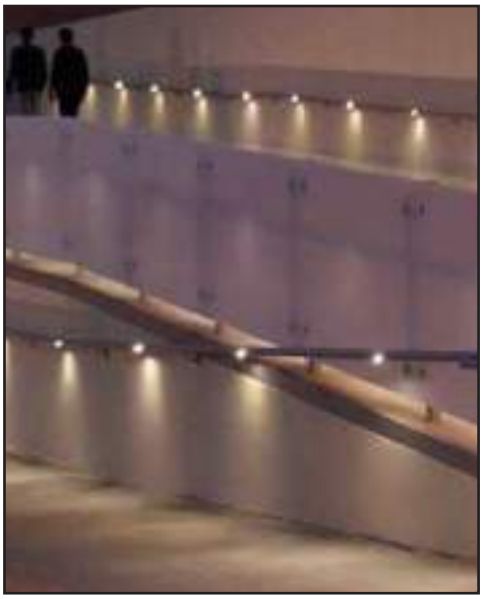
2. Point source lighting at a regular interval directed to the adjacent path of travel.

3. Light fittings to be easy to replace over time and to not be on a single circuit.

4. Light fitting must not protrude from handrail.

5. Stainless Steel fixture.

6. Lighting to be installed as per specification from Planet Lighting.

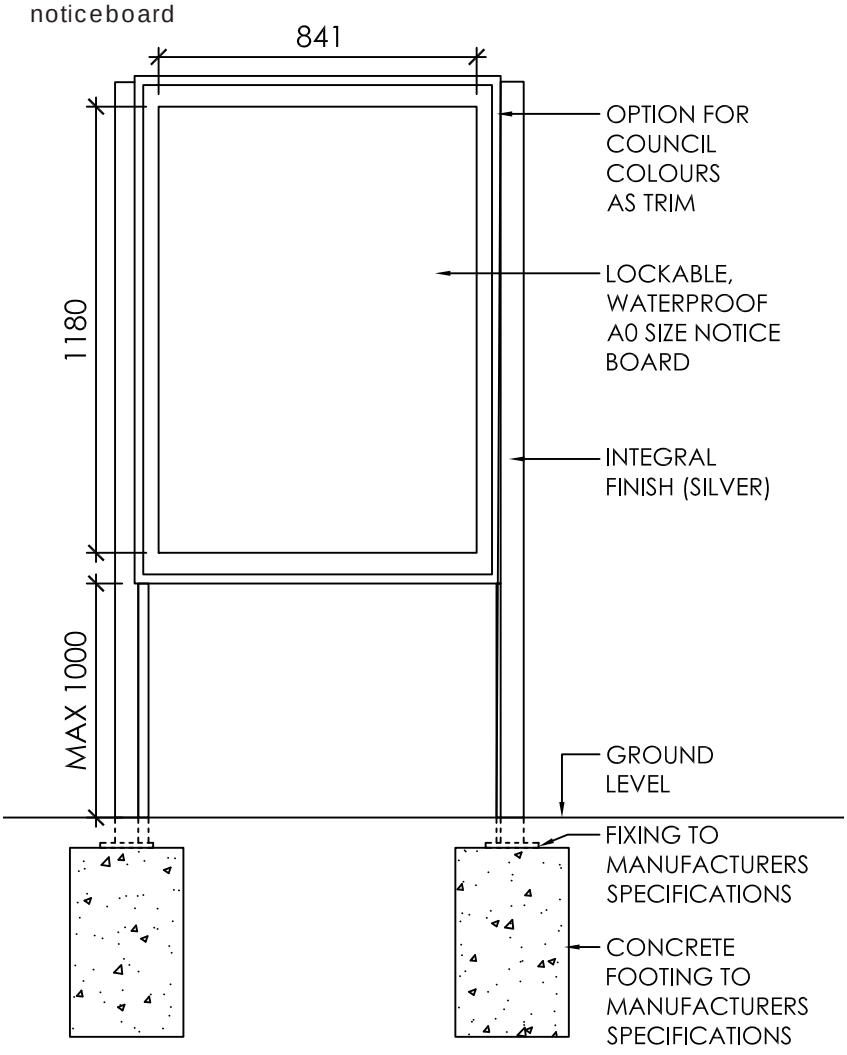


Indicative handrail lighting

Furniture and Fixtures

Typical community notice board - free standing

Indicative illustration of free standing community noticeboard



Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Weather proof seals.

9. Stainless steel hinges incorporated into the swing door.

10. Manual or gas struts door stays.

11. 3mm poly carbonate or acrylic cover.

12. Optional anti-graffiti film applied to cover.

13. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Furniture and Fixtures

Typical community noticeboard - wall mounted

Indicative illustration of wall mounted noticeboard in village bus stop (portrait)

Example of A0 noticeboard (landscape)

Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Wall mounted.

9. Weather proof seals.

10. Stainless steel hinges incorporated into the swing door.

11. Manual or gas struts door stays.

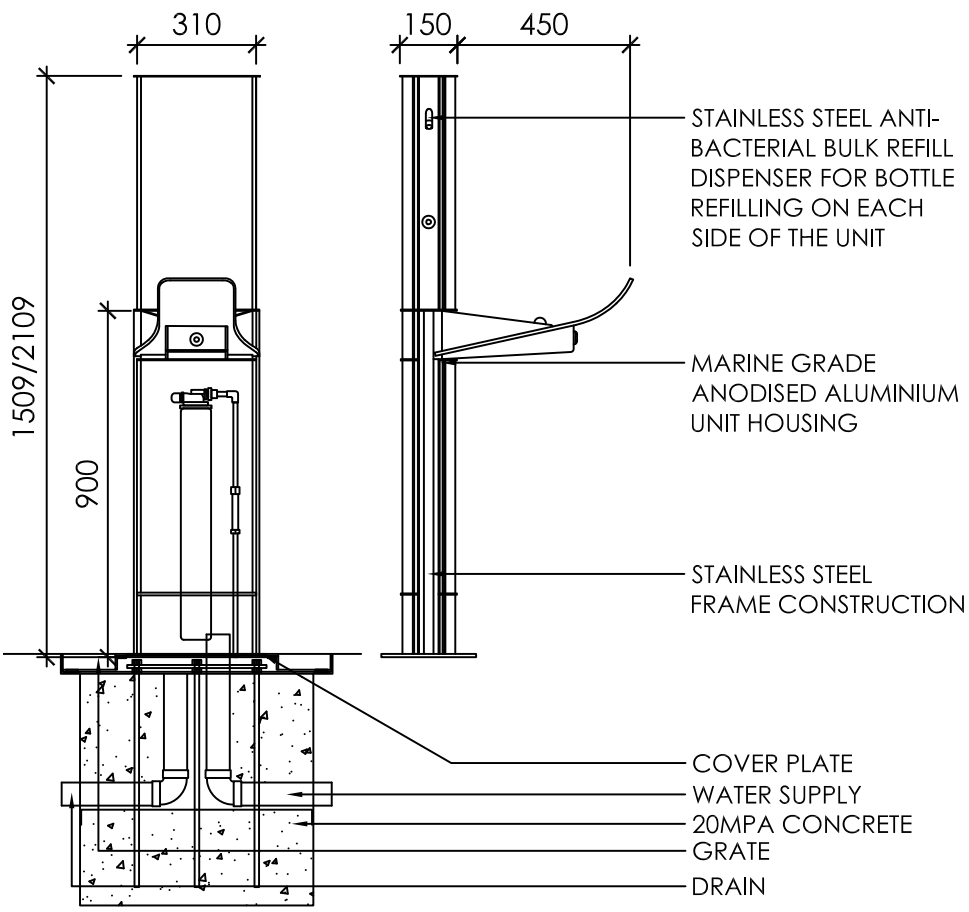
12. All fixings to be concealed.

12. 3mm Poly carbonate or acrylic cover.

13. Optional anti-graffiti film applied to cover.

14. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Typical bottle refill station with drinking fountain



Bottle refilling station with drinking fountain

Bottle refilling station with drinking fountain

Notes

1. Wheelchair accessible drinking fountain.

2. 1500mm high refill station.

3. Stainless steel bulk refill dispenser for bottle refilling each side of the unit.

4. Stainless steel frame construction.

5. Marine grade anodised aluminium unit housing.

6. Optional filtered water unit.

7. Multiple bottle refill points.

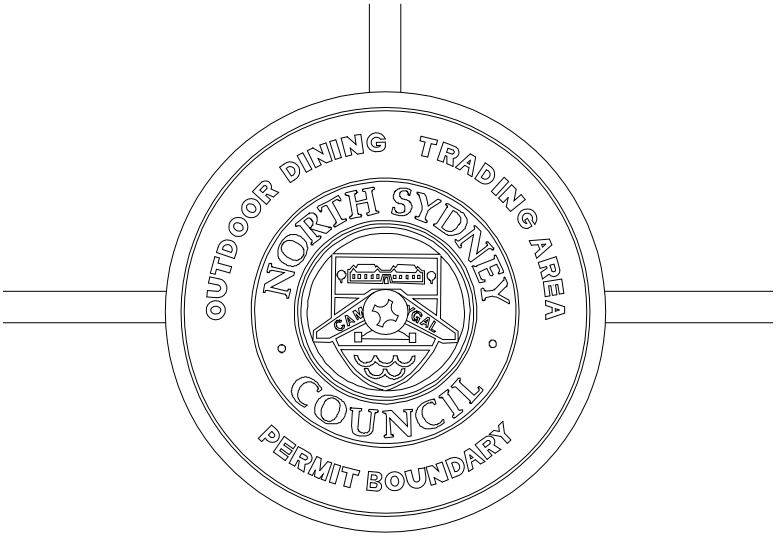
8. Excavate a hole 440 x 730 x 500mm.

9. Footing cage and drainage tray installed with the top of the drainage tray flush with ground level.

10. Connect plumbing for drainage and water supply.

Furniture and Fixtures

Typical alfresco demarcation line



Notes

1. Alfresco demarcation plaques are to be nailed to the pavement along the extent of licenced outdoor dining trading area.

2. Plaques are to be nailed into joints between pavers if possible.

3. Plaques are to be located in a consistent line at an interval appropriate to the scale of the space.

4. Plaques are to be supplied by council and are to have the North Sydney logo.

5. Plaques are brass and are epoxy fixed along with a central pin.


ACU
Start here.
Go anywhere.
40
AREA

6.2.9 Materials palette

(Approved equal alternative product may also be used)

SPECIAL AREAS: B EDUCATION PRECINCT MATERIALS PALETTE			
ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FOOTPATH AND ROAD WORKS DRAWINGS / PAVING DRAWINGS			
KERB AND GUTTER	Gutter Material: Concrete Finish: Finished with a steel trowel Kerb & Lintel Material: “Bruce” Rock (Coffee) Granite kerb stone Finish: exfoliated finish to top face; sawn finish to front face.	Gutter Material: Concrete Finish: Finished with a steel trowel Kerb & Lintel Material: “Bruce” Rock (Coffee) Granite kerb stone Finish: exfoliated finish to top face; sawn finish to front face.	Not Applicable
PAVING - FOOTPATH	Material: Granite Finish: Exfoliated Size: 50 x 400 x 600mm Pattern: Stretcher bond Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Granite equal or equivalent to “Bruce” Rock (Austral Juperana). Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant	Material: Granite Finish: Exfoliated Size: 50 x 200 x 300mm Pattern: Stretcher bond Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Granite equal or equivalent to “Bruce” Rock (Austral Juperana). Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FOOTPATH AND ROAD WORKS DRAWINGS / PAVING DRAWINGS			
PAVING - FOOTPATH - TACTILES	Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428 Size: Individual tactile studs Pattern: As per AS1428.4.1 Colour: Black top silver sides Fixing: Drill and pressure fit or drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316)	Pathfinder Stainless Steel TGSI with Carborundum insert to meet AS 1428 Size: Individual tactile studs Pattern: As per AS1428.4.1 Colour: Black top silver sides Fixing: Drill and pressure fit or drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316)	Not Applicable
UTILITY PIT SURROUNDS (IN FOOTPATH PAVING)	Material: Coloured concrete - 'Chicory' by Sydney Decorative Concrete Warehouse Mortar mix - Lanko 702 Durabed available from Bunnings Warehouse	Material: Coloured concrete - 'Chicory' by Sydney Decorative Concrete Warehouse Mortar mix - Lanko 702 Durabed available from Bunnings Warehouse	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PARKING DRAWINGS			
PAVING - VEHICULAR CROSS OVER / SHARED ZONE ROAD PAVING	Material: Granite Finish: Exfoliated Size: 50 x 200 x 300mm Pattern: Stretcher bond Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Material Granite equal or equivalent to “Bruce” Rock (Austral Juperana) Mortar: Parex Streetscape System mortar bed and joining to manufacturer’s specification Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant	Material: Precast concrete interlocking paving Colour: Charcoal Size: 80x112.5x225mm Bedding: Modified polymer sand (Sydney Sand) Granite Finish: Exfoliated Size: 80 x 200 x 300mm Pattern: Stretcher bond interlocking Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Material Granite equal or equivalent to “Bruce” Rock (Austral Juperana) Mortar: Parex Streetscape System mortar bed and joining to manufacturer’s specification Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant	Material: Precast concrete interlocking paving Colour: Charcoal Size: 80x112.5x225mm Bedding: Modified polymer sand (Sydney Sand) Granite Finish: Exfoliated Size: 80 x 200 x 300mm Pattern: Stretcher bond interlocking Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Material Granite equal or equivalent to “Bruce” Rock (Austral Juperana) Mortar: Parex Streetscape System mortar bed and joining to manufacturer’s specification Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PARKING DRAWINGS			
KERB RAMPS	Material: Granite Finish: Exfoliated Granite equal or equivalent to “Bruce” Rock (Austral Juperana). Base: Rigid Base	Material: Granite Finish: Exfoliated Granite equal or equivalent to “Bruce” Rock (Austral Juperana). Base: Rigid Base	Not Applicable
PARKING METERS / PARKING LINES	North Sydney standard electronic parking meter. Yellow line markings	North Sydney standard electronic parking meter. Yellow line markings	North Sydney standard electronic parking meter. Contrasting granite line markings Material: Granite Finish: Exfoliated Size: 80 x 200 x 300mm Pattern: Stretcher bond Colour: Natural stone integral finish Base: Rigid base - Reinforced concrete slab Granite equal or equivalent to “Bruce” Rock (Austral Juperana) Mortar: Parex Streetscape System mortar bed and joining to manufacturer’s specification Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
PAVING DRAWINGS			
PAVING - RECYCLED RUBBER SURFACING AT HOTEL LOADING ZONES	Material: EPDM rubber surfacing Base: 50mm crushed concrete aggregate. Colour Mixture: 40% Brown, 40% Grey, 15% Beige and 5% Black Base: Rigid base - Reinforced concrete slab	Material: EPDM rubber surfacing Base: 50mm crushed concrete aggregate. Colour Mixture: 40% Brown, 40% Grey, 15% Beige and 5% Black Base: Rigid base - Reinforced concrete slab	Not Applicable
LANDSCAPE DRAWINGS			
TREE PIT BASE TREATMENTS - EXISTING TREE	Existing CBD tree site with Filtapave porous paving surround Colour: Cinnamon Paving surround Material: Granite Exfoliated Size: 50 x 200 x 300mm Pattern: As per detail / butt jointed Colour: Natural stone integral finish Equal or equivalent to “Bruce” Rock (Austral Juperana) Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant (Grey) Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant Finish: Base: Rigid concrete base Edge: Steel edge with root barrier	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
UTILITY PIT SURROUND (IN FOOTPATH PAVING)	Material: concrete colour – Chicory from Sydney Decorative Concrete Warehouse; mortar mix – Lanko 702 Durabed from Bunnings Warehouse.	Material: concrete colour – Chicory from Sydney Decorative Concrete Warehouse; mortar mix – Lanko 702 Durabed from Bunnings Warehouse.	Not Applicable
PAVING DRAWINGS / LANDSCAPE DRAWINGS			
TREE PIT BASE TREATMENTS - PROPOSED TREE	Tree pit with steel edge min. 1m x1.6m tree pit. No header treatment Material: Filtapave porous paving Colour: Cinnamon Paving surround Material: Granite Equal or equivalent to "Bruce" Rock (Austral Juperana) Joint sealant: Sikaflex - High Performance Polyurethane Joint Sealant Paver sealant: Dry Treat Stain Proof with Intensifia and wet look sealant Finish: Exfoliated Size: 50 x 200 x 300mm Pattern: As per detail, butt jointed Colour: Natural stone integral finish Base: Rigid concrete base Edge: Steel edge with root barrier	Tree pit in road level granite kerb blister surround - refer to detail on page 271	Tree pit in road level granite kerb blister surround - refer to detail on page 271

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
BICYCLE RACKS	Material: Stainless steel Fixing: Circular Rings: Equal or equivalent to stainless steel bike ring assembly by HUB Inground Racks: Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage	Material: Stainless steel Fixing: Circular Rings: Equal or equivalent to stainless steel bike ring assembly by HUB Inground Racks: Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage	Material: Stainless steel Fixing: Circular Rings: Equal or equivalent to stainless steel bike ring assembly by HUB Inground Racks: Equal or equivalent to the GM850 (modified to include bottom rail) by Bikestorage
SEATING	Timber seat approx. 1850 mm long with back rest. Bench seat approx. 1800mm long. Stainless steel legs/frame. Spotted gum battens weathered for 6 months prior to installation. Fixing: Seats and benches are to be subsurface fixed. Stainless steel anti-tamper fixing Equal or equivalent to Rondo seat by StraBe	Timber seat approx. 1850 mm long with back rest. Bench seat approx. 1800mm long. Stainless steel legs/frame. Spotted gum battens weathered for 6 months prior to installation. Fixing: Seats and benches are to be subsurface fixed. Stainless steel anti- tamper fixing Equal or equivalent to Rondo seat by StraBe	Not Applicable
RUBBISH BINS	North Sydney standard bin Fixing: Bins are to be subsurface fixed. Spigot and socket mounted. Equal or equivalent bin designed by Ian Dryden of Dryden Crute Design Victoria.		

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
125mm or 150mm BOLLARDS - FIXED INSITU, REMOVEABLE, AUTOMATIC RETRACTABLE	(Fixed, removable, automatic retractable) 900mm high stainless steel bollard Finish: Linished Optional reflective tape Removable Bollard: Socket and cap for when bollard is removed Fixed Bollard Fixing: Bollards are to be subsurface fixed with mass concrete footings. 125mm or 150mm equal or equivalent to Leda Slimline bollard (Fixed or removable (Locking and removable)) Equal or equivalent to 168mm dia, 600mm high, 6mm wall thickness Advantage automatic retractable bollard by Leda	Not Applicable	(Removable, automatic retractable) Removable Bollard 900mm high stainless steel bollard Finish: Linished Optional reflective tape Fixed Bollard Removable Bollard: Socket and cap for when bollard is removed Automatic retractable Bollard: 600mm high stainless steel bollard 168mm diameter 125mm or 150mm equal or equivalent to Leda Slimline bollard (removable (Locking and removable))
BUS SHELTER	Contemporary bus shelter. Glass awning Advertising and signage panels if specified Approx. 1800mm long timber seating with backrest Equal or equivalent to JCDecaux 'Cox' bus shelter	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
STREET LIGHTING	Post Top LED with P.E cell Luminaire: Gerard ATB2 (including spigot) Wattage: 215W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core Steel core – 220mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 9.5m with single 3.0m light outreach arm Banner arm: 2m outreach Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 9.5m (HUB-NSP-SL95-S3) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 (including spigot) Wattage: 100W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 7m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 7m (HUB-HUB-NSP-SL70) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 (including spigot) Wattage: 100W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 7m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 7m (HUB-HUB-NSP-SL70) or approved equivalent

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PEDESTRIAN LIGHTING – (OPTION 1) PREFERRED OPTION UNLESS APPROVED OTHERWISE BY NORTH SYDNEY COUNCIL)	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent	Post Top LED with P.E cell Luminaire: Gerard ATB0 Wattage: 70W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core – 168mm DIA Colour: Anodised aluminium extrusion Height: 5m Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 5m (HUB-HUB-NSP-PL50) or approved equivalent

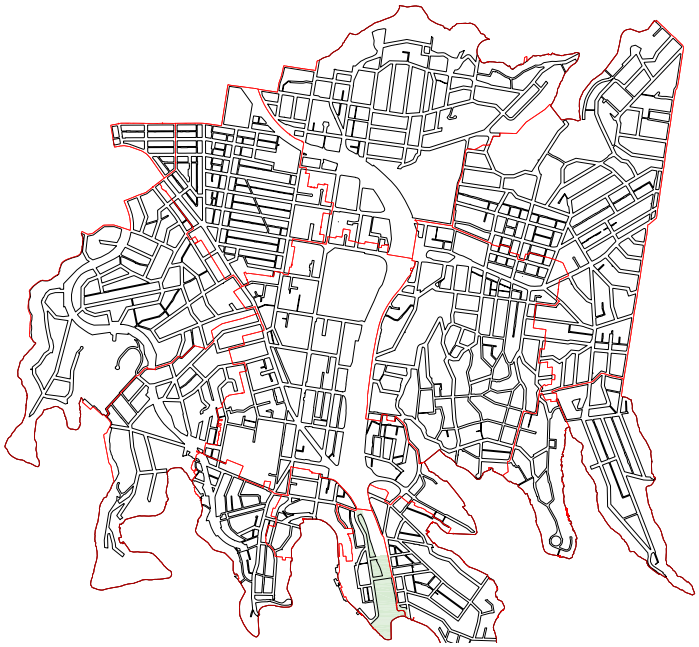
ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PEDESTRIAN LIGHTING - (Option 2) POST TOP LIGHT	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.
PEDESTRIAN LIGHTING WALL MOUNTED LIGHT (Laneways and Shared Zones)	Not Applicable	Wall luminaire LED Finish: Powdercoated Colour: Graphite Equal or equivalent to BEGA LED Wall luminaire.	Wall luminaire LED Finish: Powdercoated Colour: Graphite Equal or equivalent to BEGA LED Wall luminaire.
PEDESTRIAN LIGHTING - POST TOP LIGHT (Park / Plaza locations)	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.	Not Applicable	Not Applicable

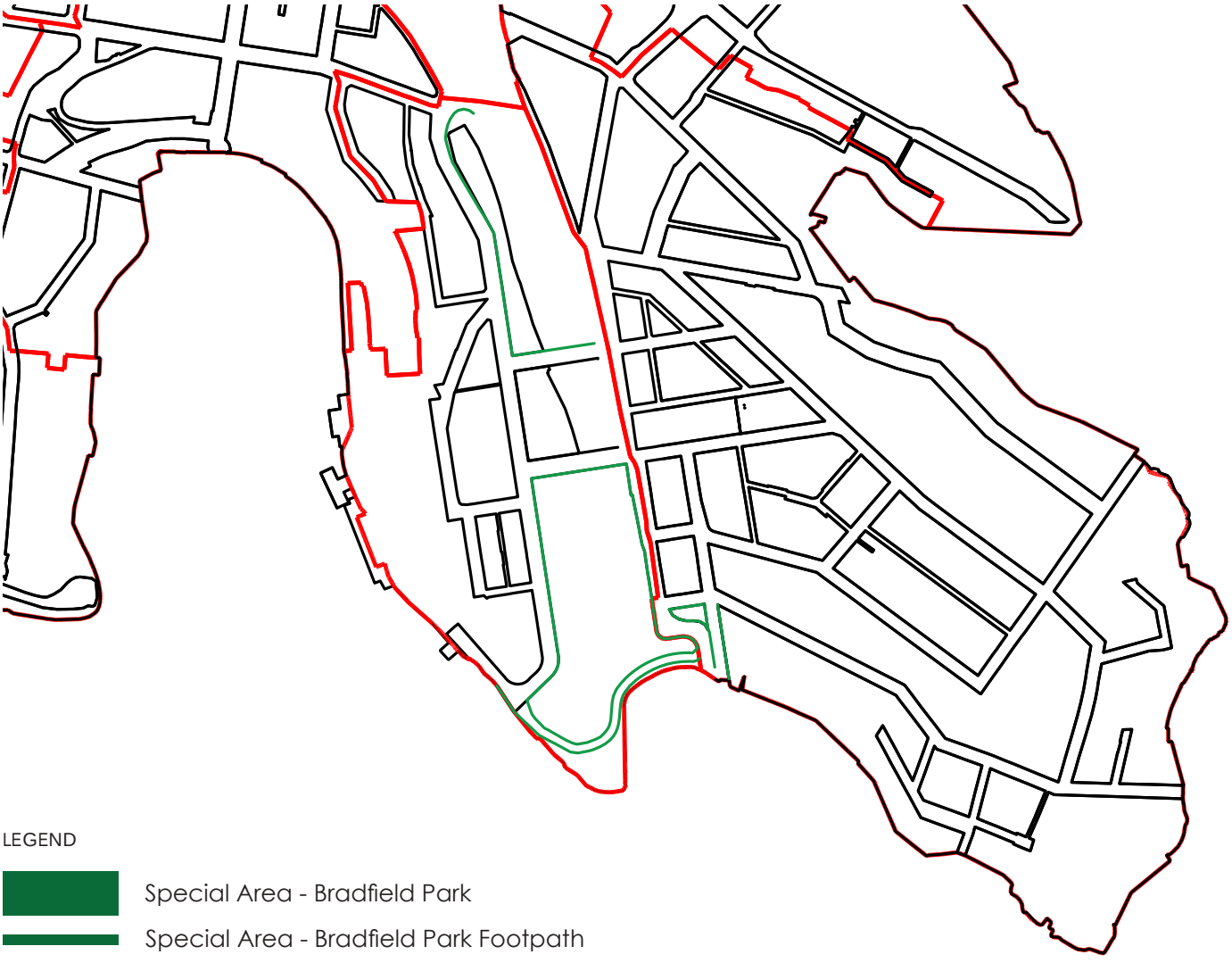
ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
PEDESTRIAN LIGHTING - ILLUMINATED BOLLARD	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED
PEDESTRIAN LIGHTING - HANDRAILS	LED integrated handrail lighting system Equal or equivalent to Planet Lighting HLS GEN4 LED integrated handrail lighting system.	Not Applicable	Not Applicable
MISCELLANEOUS COMMUNITY NOTICE BOARDS Free standing community notice board / Outdoor wall mounted notice board	Colour: Silver frame with option for council colours to be incorporated as a trim Key features: Lockable Waterproof A0 (1180 x 841mm) internal dimension Portrait orientation Option for anti-graffiti film on notice board Poly carbonate or acrylic cover Equal or equivalent to HD1 Harsh Duty Outdoor Lockable Notice Board by Arrow Alpha Equal or equivalent to MD6 Keyless Secure Notice Board by Arrow Alpha	Not Applicable	Not Applicable

ITEM	MAIN STREET	LANEWAY	SHARED ZONE
FIXTURES - FURNITURE			
MISCELLANEOUS FIXTURES -FURNITURE Bottle refill station with drinking fountain	1500mm high refill station with drinking fountain Stainless steel bulk refill dispenser for bottle refilling each side of the unit Marine grade anodised aluminium unit housing Optional filtered water unit Multiple bottle refill points Changeable panels Stainless steel drinking bowl Stainless steel frame construction Fixing: Stainless steel base plate with drainage pit Equal or equivalent to Aquafill product Type C 1500mm high refill station with drinking fountain by Arrow-Alpha Industries	Not Applicable	Not Applicable
PAVING - ALFRESCO DINING AREAS	Outdoor dining - trading area permit boundary markers with North Sydney logo Material: Brass Fixing: Epoxy fix with central pin	Not Applicable	Not Applicable
BANNER POLE	6063T6 Untapered high tensile aluminium Powdercoat finish Equal or equivalent to Abel Elegance range banner pole	Not Applicable	Not Applicable

06 - 3 Special Areas:
C. Bradfield Park

Bradfield Park provides unique outlooks & a place for outdoor recreation. Milsons Point station opens directly onto the park.





LEGEND

Special Area - Bradfield Park

Special Area - Bradfield Park Footpath

06- 3 Special Areas: C. Bradfield Park

Bradfield Park is the most visible and iconic of all North Sydney's parks. It houses one end of the Harbour bridge and Milson Point train station. It is located near Luna Park and the harbour. There are stunning views across to the city and of the harbour.

On the east it is bordered by the village centre of Kirribilli. To the west is Milson Point. To the south it is bordered by the harbour.

The park is divided into two by the bridge and a plaza space is located underneath. The park has large informal grassed areas and smaller more passive recreation type spaces.

Bradfield Park has a unique look and feel generated though its materials palette that is currently unique to this location.

The park has strong links to its past with interpretive paving inlays and historic items such as the Harbour bridge and its on and off ramps.

Bradfield Park is set aside from the other parks of the LGA as it is an iconic park and therefore requires higher quality materials and specifications then other parks and open space areas.

6.3.1 Materials palette objectives

Public domain materials palette should retain and build on existing established palette of Bradfield Park.

Contents

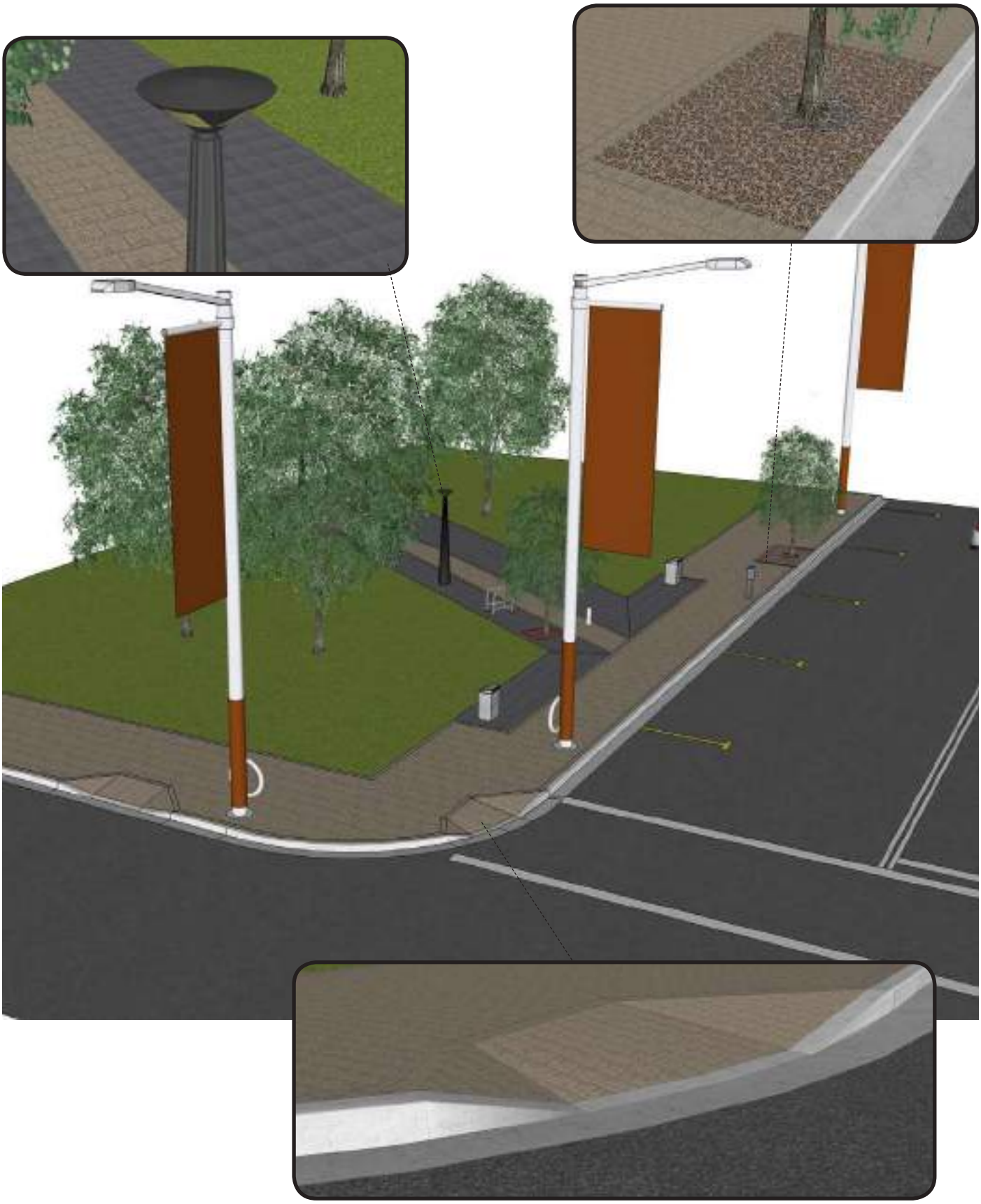
Hardscape

- Typical footpath paving pattern plan and cross-section
- Typical precast concrete paving edge restraint - concrete haunch, concrete strip, steel edge
- Typical kerb ramp
- Typical kerb ramp configuration
- Typical kerb and gutter

Furniture and Fixtures

- Typical seating with back
- Typical bench
- Typical picnic seating
- Typical metal bin Installation detail
- Typical illuminated bollard
- Typical parking meter
- Typical bicycle parking
- Typical bottle refill station with drinking fountain
- Typical octagonal light pole (Public plazas and spaces)
- Typical community notice board - free standing
- Typical community notice board - free standing open

6.3.2 Main streets / Park - perspective view



6.3.3 Main streets / Park - plan and section view

6.3.4 Indicative Materials and Furniture



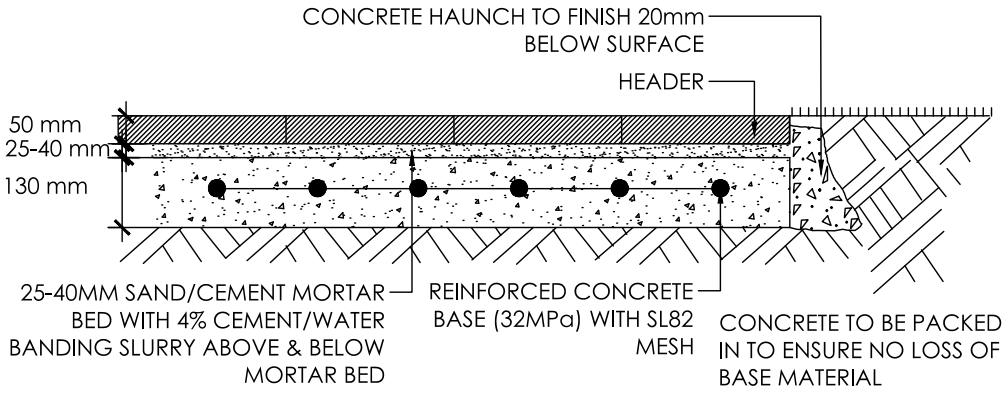


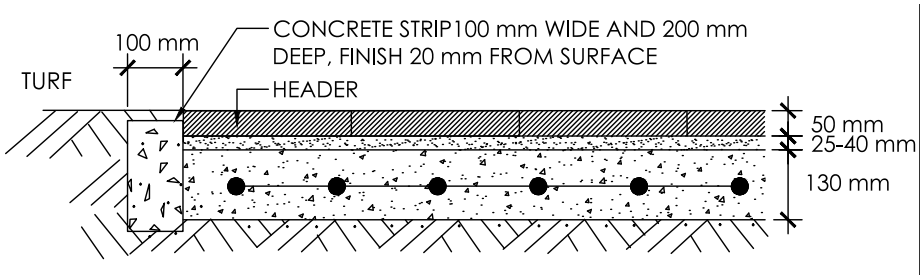




Hardscape

Typical footpath paving pattern plan and cross-section





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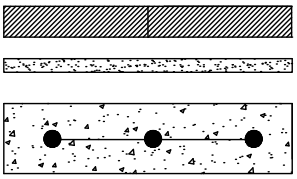


300 x 300 x 50mm PRECAST CONCRETE PAVERS

25-40MM SAND/CEMENT MORTAR BED WITH 4% CEMENT / WATER BANDING SLURRY ABOVE & BELOW MORTAR BED

130 mm THICKNESS REINFORCED CONCRETE SLAB

Notes

1. 50 x 300 x 300mm precast concrete unit paver in a honed finish.

2. Mid coloured paving with a fleck of colour for warmth.

3. Butt jointed, stretcher bond paving pattern with a header.

4. Rigid base - reinforced concrete slab.

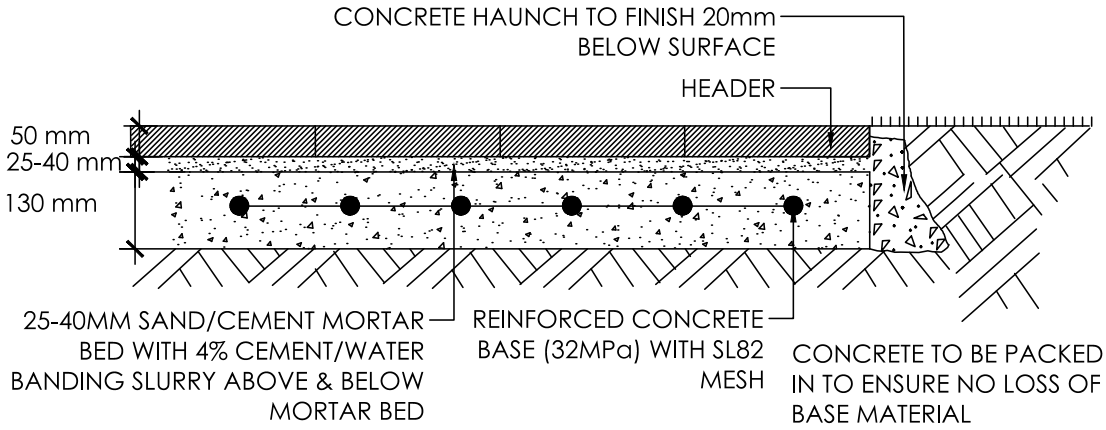
5. Selected highlight areas 50 x 400 x 400mm Precast concrete unit paver in a honed finish laid in stackbond on a rigid base.

6. All existing service pits shall be replaced with infill paver lids. Applicable paving shall be laid in the pit lid on a mortar bed (paving thickness may require modification to suit depth of infill pit lid.

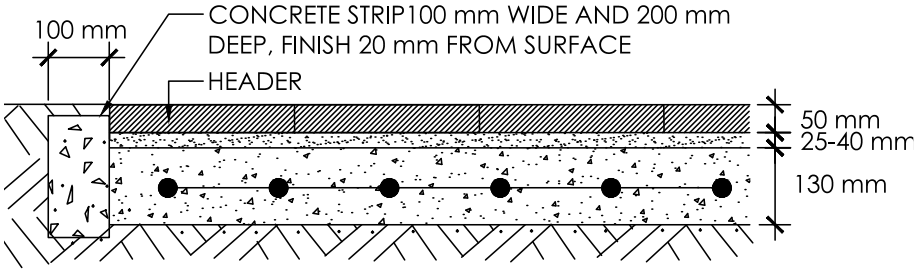
Hardscape

Typical precast concrete paving edge restraint - concrete haunch, concrete strip, steel edge

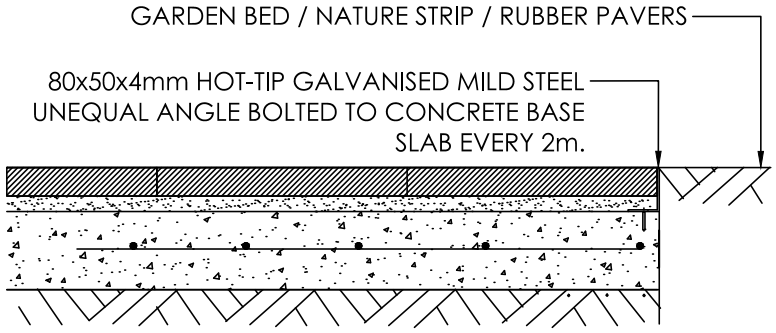
Concrete haunch



Concrete Strip



Steel Edge



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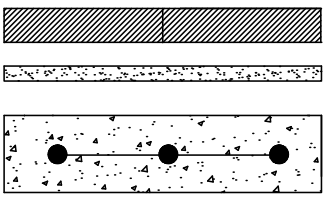


300 x 300 x 50mm PRECAST CONCRETE PAVERS

25-40MM SAND/CEMENT MORTAR BED WITH 4% CEMENT / WATER BANDING SLURRY ABOVE & BELOW MORTAR BED

130 mm THICKNESS REINFORCED CONCRETE SLAB

300 X 300mm precast concrete unit in stackbond pattern with header.

Urbanstone 'Gunmetal' Honed, 400x400mm

Notes

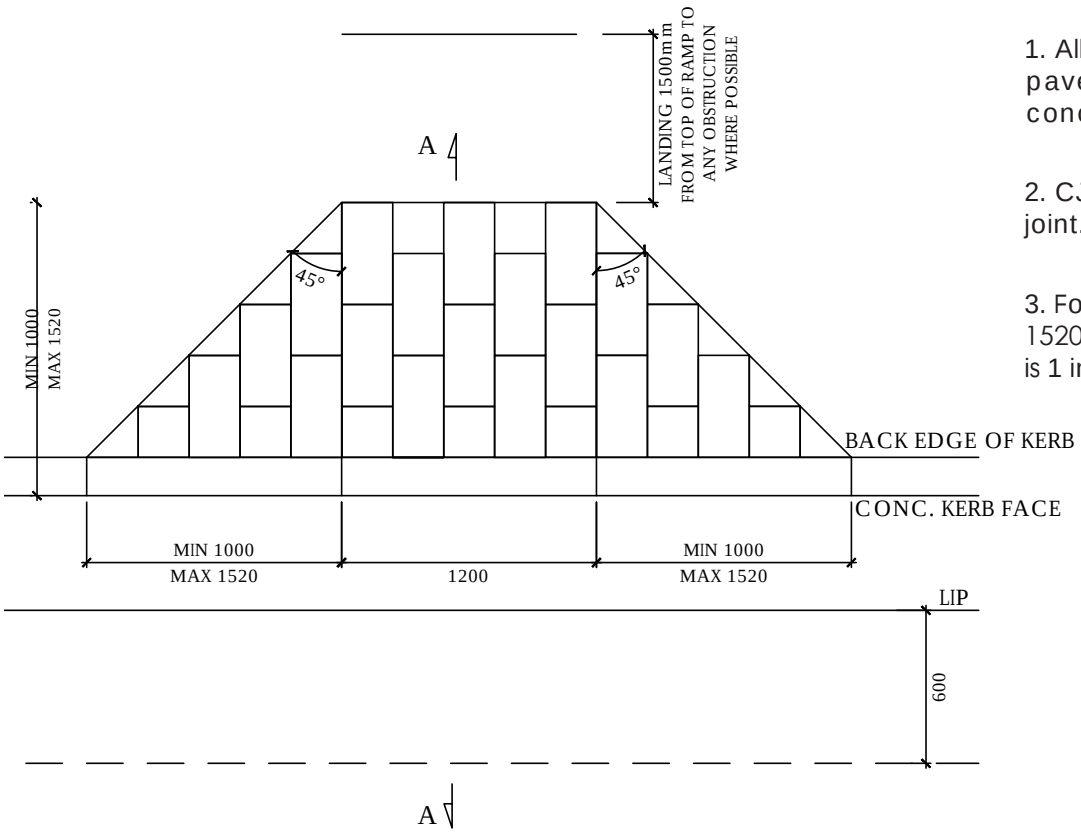
1. 50mm thick precast concrete paving.

2. 25-40mm mortar bed.

3. Rigid base - concrete slab.

Hardscape

Typical kerb ramp

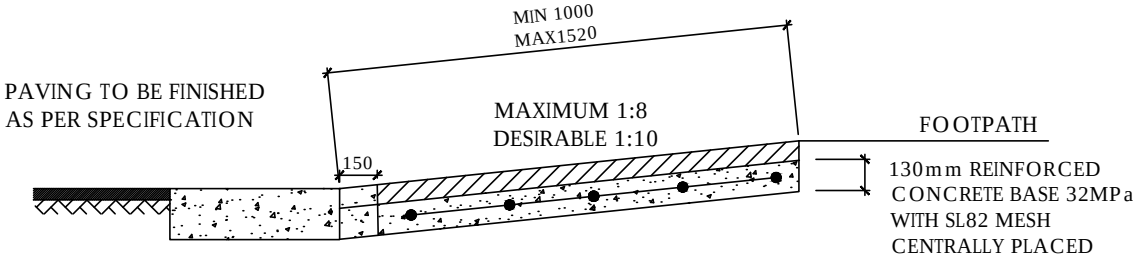


Notes

1. All kerb ramps shall paved through precast concrete pavers.

2. CJ refers to construction joint.

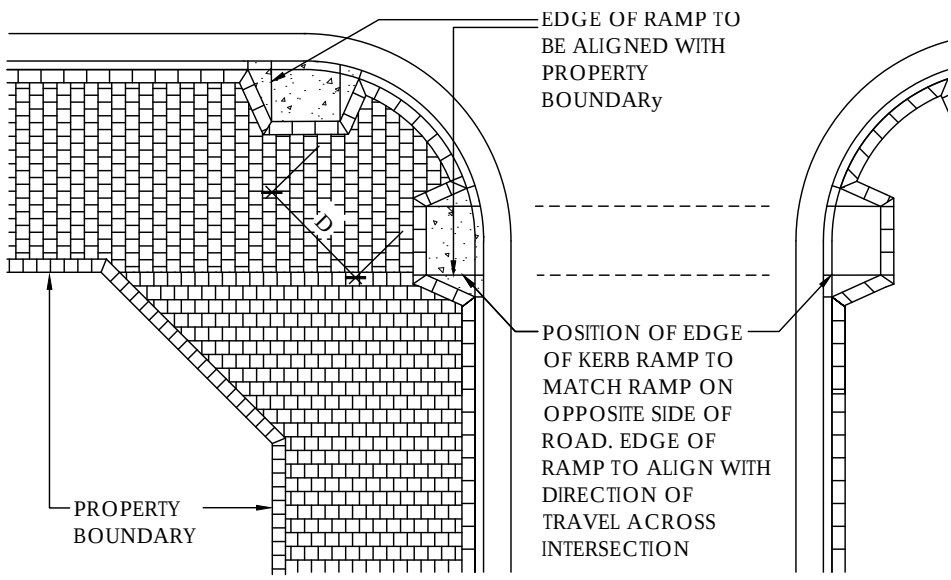
3. For ramps greater than 1520mm, maximum grade is 1 in 14.



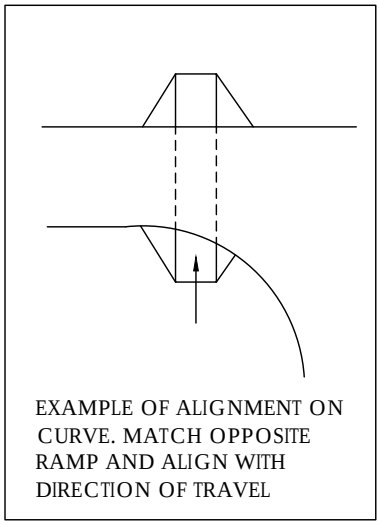
Paved through kerb ramp with precast concrete pavers

Hardscape

Typical kerb ramp configuration



PLAN



Typical concrete kerb ramp

Notes

1. This drawing is to be read in conjunction with 'Typical kerb ramp' detail.

2. Concrete kerb ramps wood float finish.

4. Dummy joints line up with opposite kerb ramp.

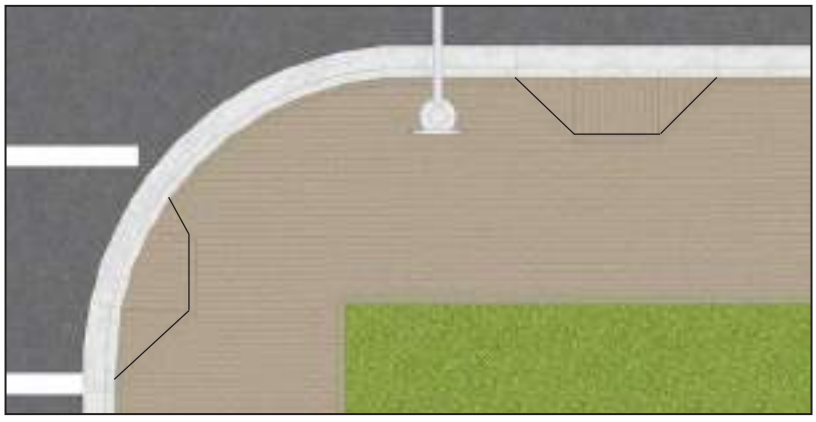
5. Kerb ramps align with property boundaries.

6. 1330mm landings at the top of any kerb ramp.

7. 1:10 grade desirable from top to bottom of kerb ramp. 1:8 maximum.

8. Kerb ramp to finish flush with adjacent paving.

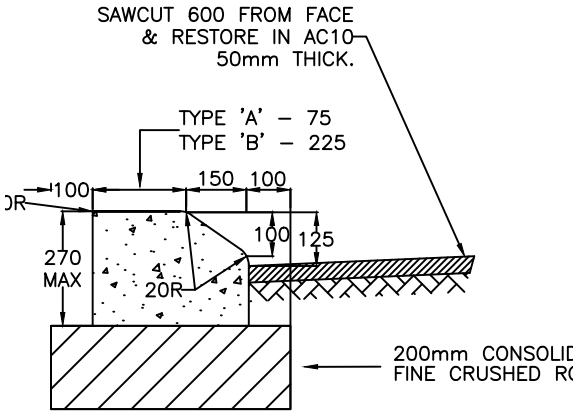
9. Kerb ramps to comply with AS1428.1.



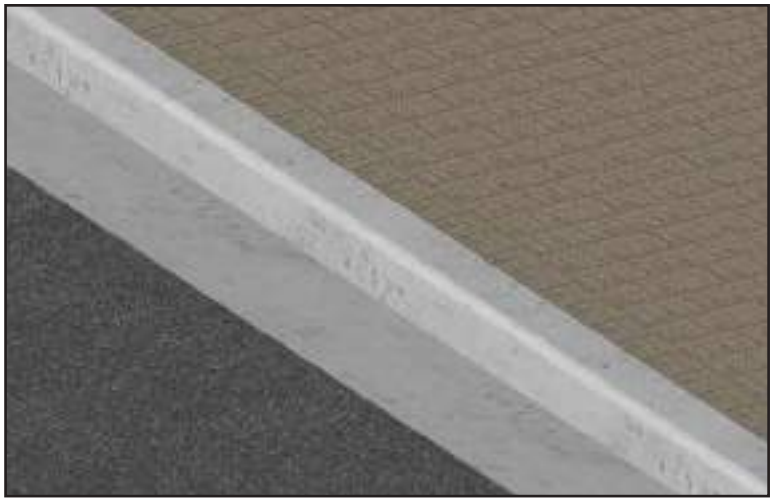
Typical paved through kerb ramp

Hardscape

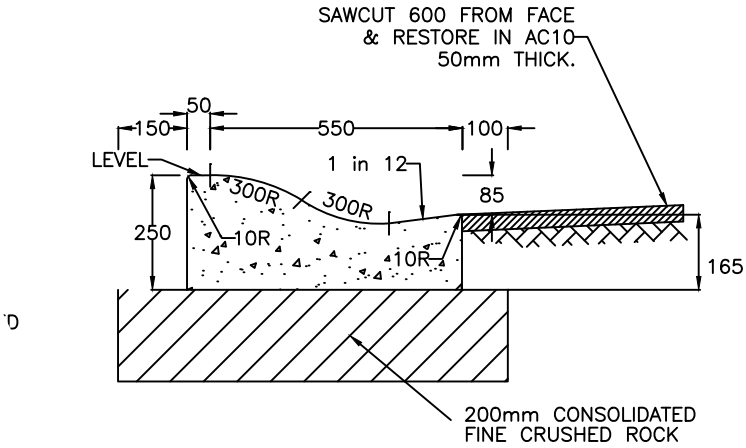
Typical kerb and gutter



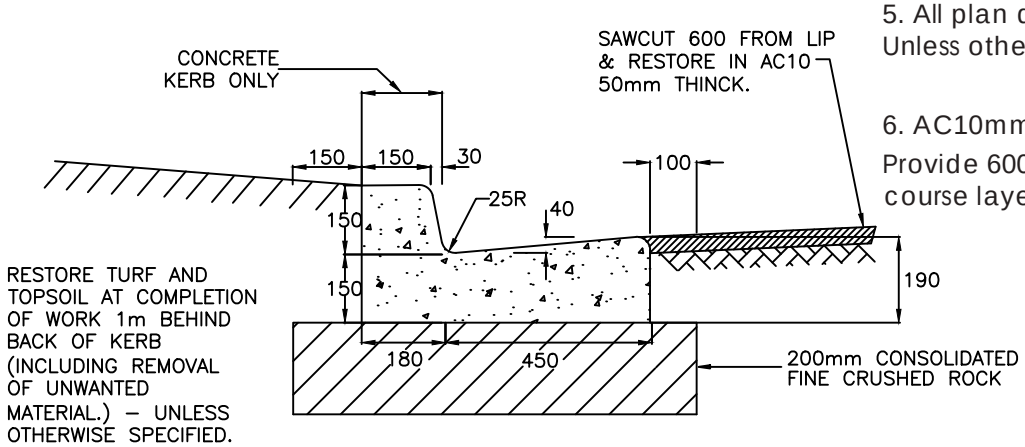
MOUNTABLE KERB



Kerb and gutter treatment



ROLL KERB



BARRIER KERB

Notes

1. Base course: Consolidated fine crushed rock to councils specification.

2. Concrete finish

A. All edges shall be tool finished with 12mm rad. 50mm wide edging tool.

B. Gutter and layback shall be finished with a steel trowel.

C. Driveway slab to be finished with wood float.

3. Expansion joints: Expansion joints shall be placed at 6m intervals.

4. Contractors shall conform to councils standard conditions of approval for construction of vehicular crossing / concrete footpaths and to line level and grade fixed by council.

5. All plan dimensions are in millimetres. Unless otherwise noted.

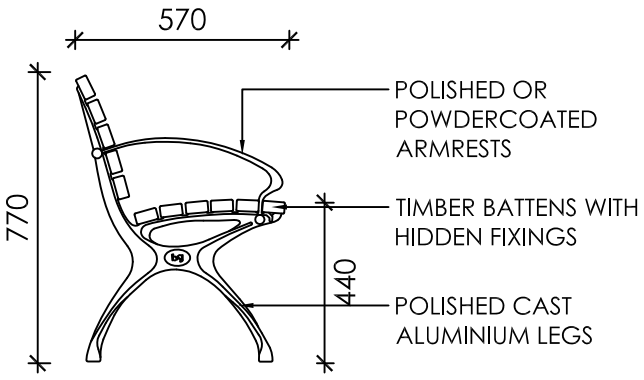
6. AC10mm adjustment

Provide 600mm wide AC10 correction course layer 50mm thick as shown.

Furniture and Fixtures

Typical seating with back

Park Seat



Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

4. Robust design.

5. Simple design with clean lines.

6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

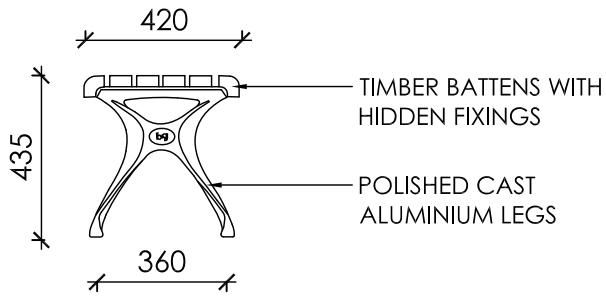
7. Skateboard deterrents optional.

8. Image indicative of style only.

Furniture and Fixtures

Typical bench

Park bench



Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

4. Robust design.

5. Simple design with clean lines.

6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

7. Skateboard deterrents optional.

8. Image indicative of style only.

Furniture and Fixtures

Typical picnic seating

Picnic table and benches

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Table and benches.

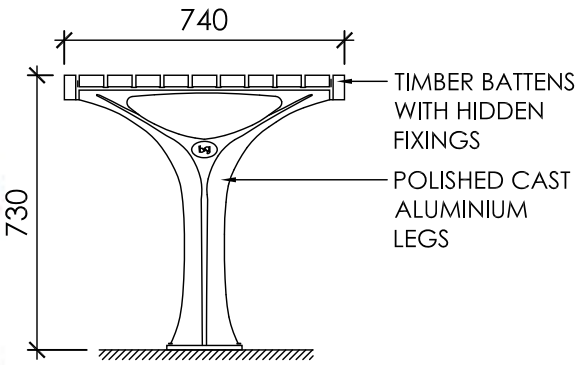
4. Three person seats - Refer typical bench detail.

5. Robust design.

6. Simple design with clean lines.

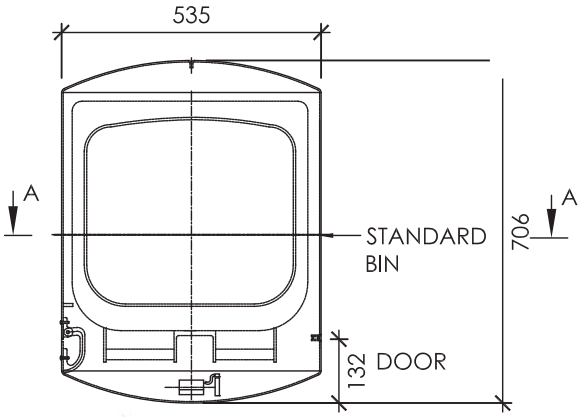
7. Fixed seating. M10 treated rod epoxy grouting to concrete footing below pavement. Install dome nuts to exposed rods to table legs.

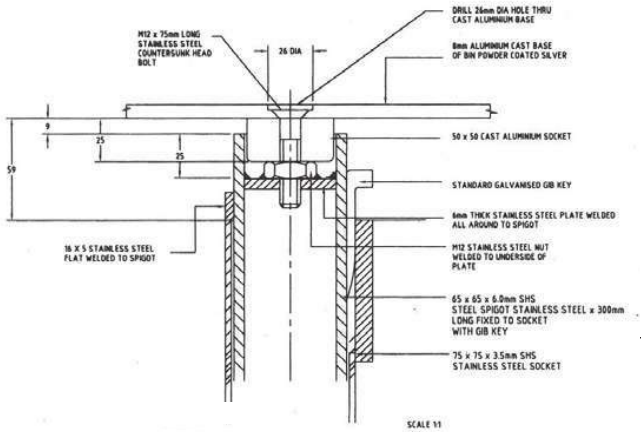
8. Image indicative of style only.



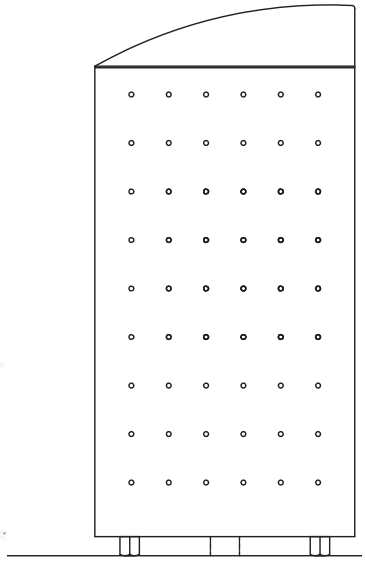
Furniture and Fixtures

Typical metal bin Installation detail





DETAIL 8
SPIGOT CONNECTION DETAIL



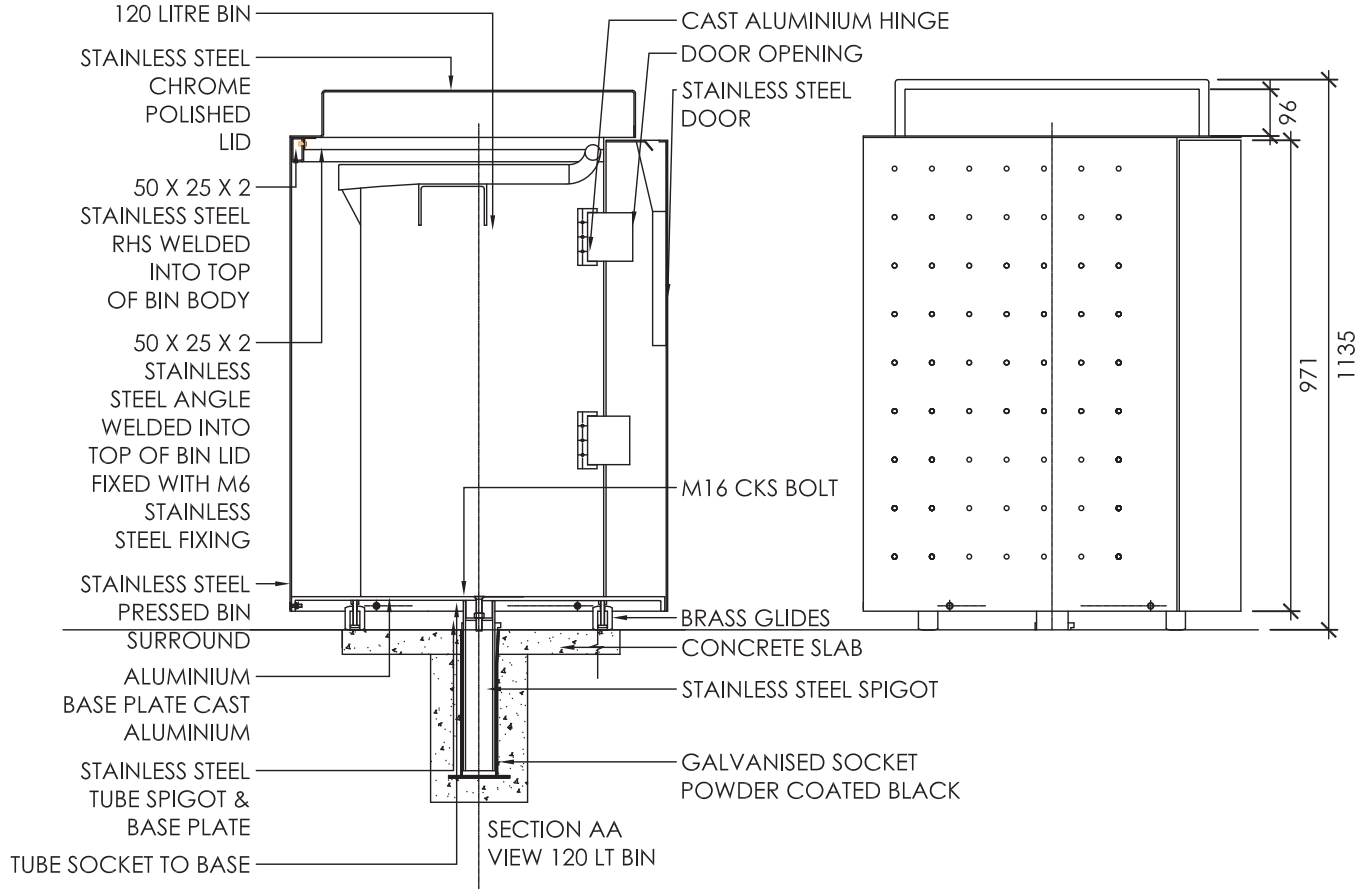
SECTION VIEW 120 LT BIN

Notes

1. All dimensions in mm.

2. Stainless steel finish.

3. Bins are to be sub-surface mounted.



SECTION AA
VIEW 120 LT BIN

Furniture and Fixtures

Typical illuminated bollard

Illuminated Bollard

Notes

1. Fixing: Bolted with a mounting plate onto a foundation.

2. Light fittings shall be directional.

3. Powder coated 'Graphite'.

Typical parking meter

Parking meter

Notes

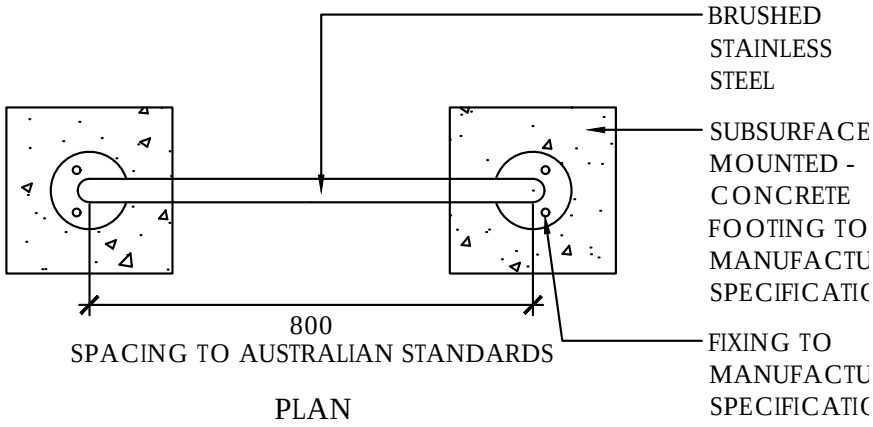
1. Parking meter 1.2m high

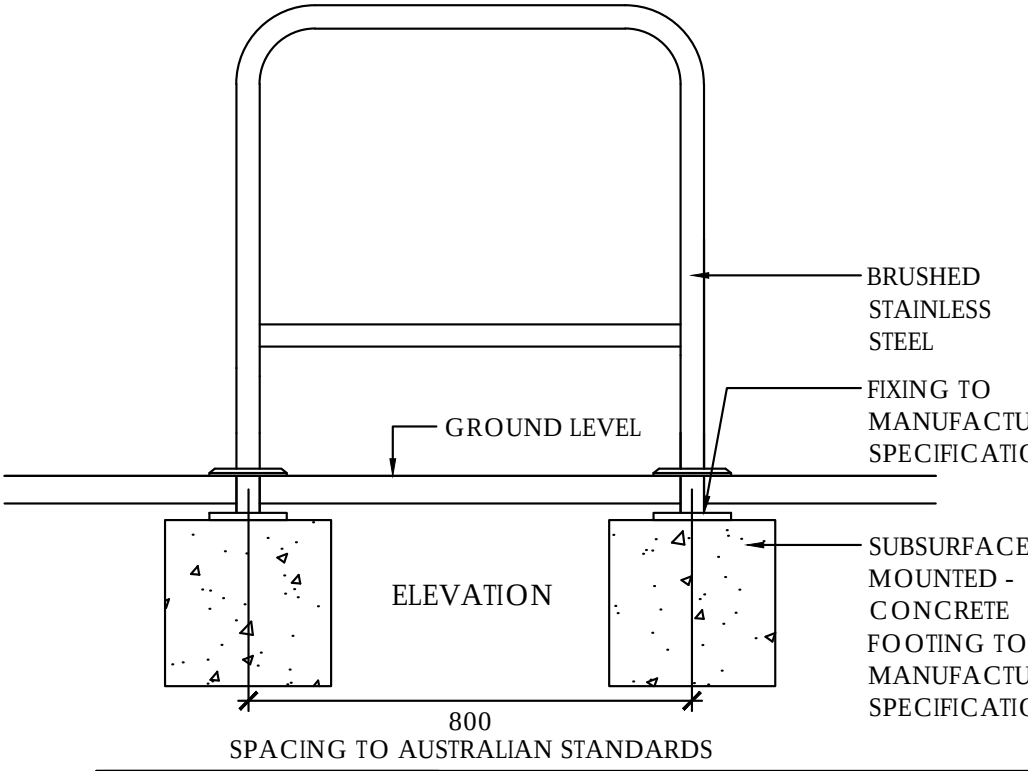
2. Situated 600mm from back of kerb

3. Where finished footpath surface levels do not match existing, contact Council's parking meter services division for further details about footing requirements and repositioning of meter stem.

Furniture and Fixtures

Typical bicycle parking





Notes

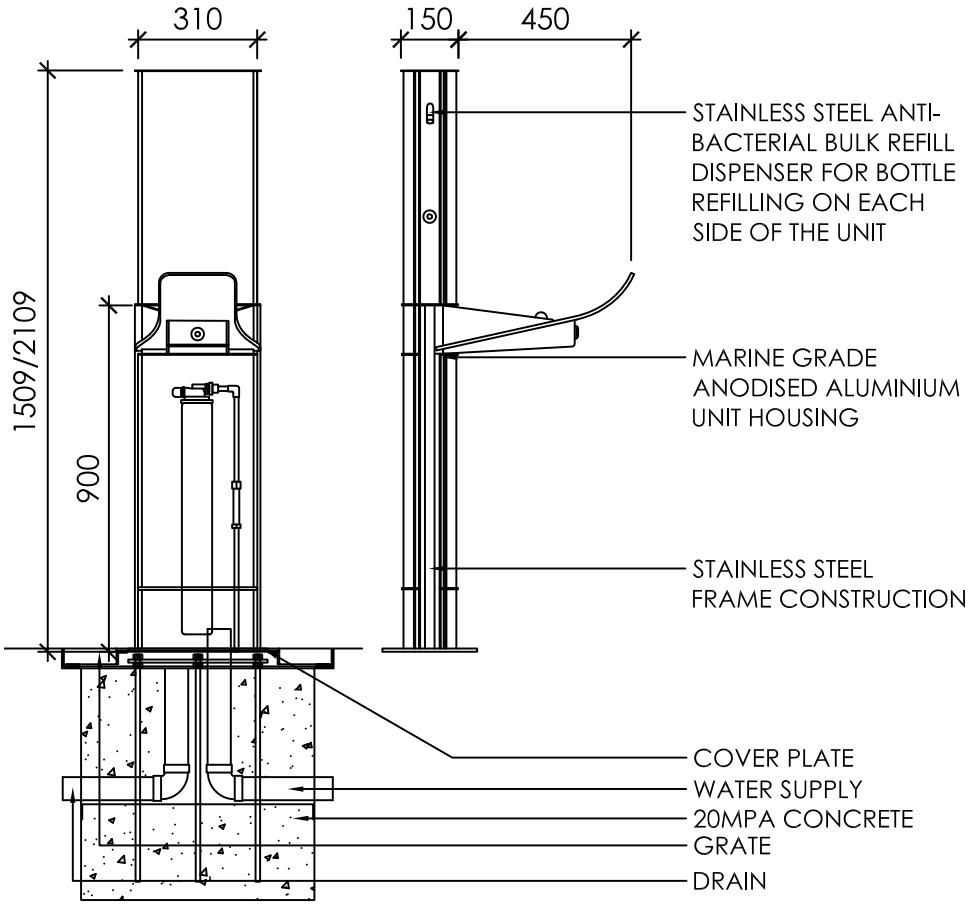
1. Subsurface mounted where possible.

2. Brushed stainless steel (integral finish).

3. Ideally bike racks shall be located in areas where footpaths are widened. Bike racks should also be located where there is a change in transport type - for instance at ferry terminals, bus stops and train stations. They should also be located along cycleways and at cycle destinations.

Stainless steel bike racks

Typical bottle refill station with drinking fountain



Bottle refilling station with drinking fountain

Notes

1. Wheelchair accessible drinking fountain.

2. 1500mm high refill station.

3. Stainless steel bulk refill dispenser for bottle refilling each side of the unit.

4. Stainless steel frame construction.

5. Marine grade anodised aluminium unit housing.

6. Optional filtered water unit.

7. Multiple bottle refill points.

8. Excavate a hole 440 x 730 x 500mm.

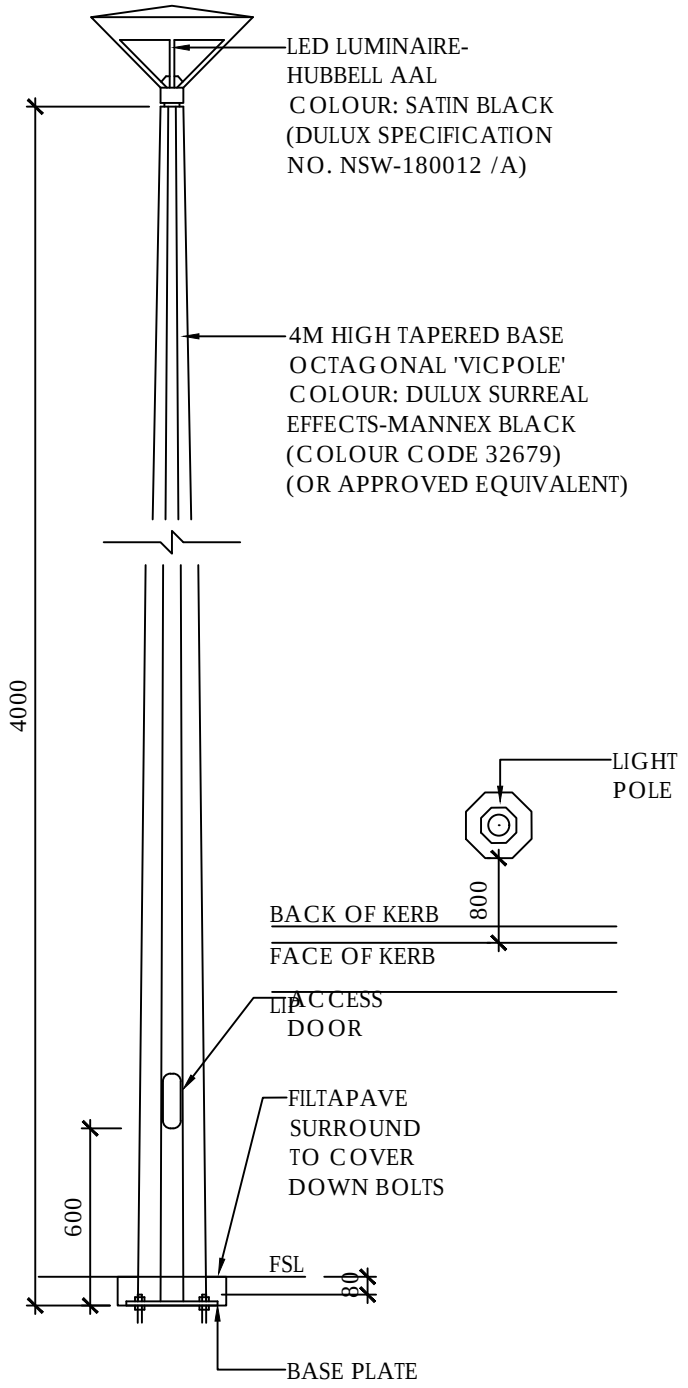
9. Footing cage and drainage tray installed with the top of the drainage tray flush with ground level.

10. Connect plumbing for drainage and water supply.

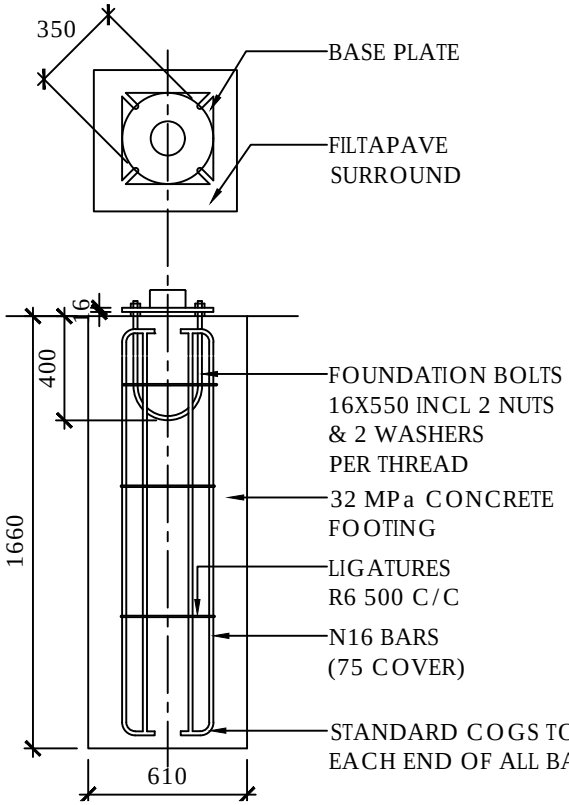
Bottle refilling station with drinking fountain

Furniture and Fixtures

Typical octagonal light pole (Public plazas and spaces)



Post top light (Parks and Plazas)



Notes

1. For installation detail. Refer to manufacturer's specification.

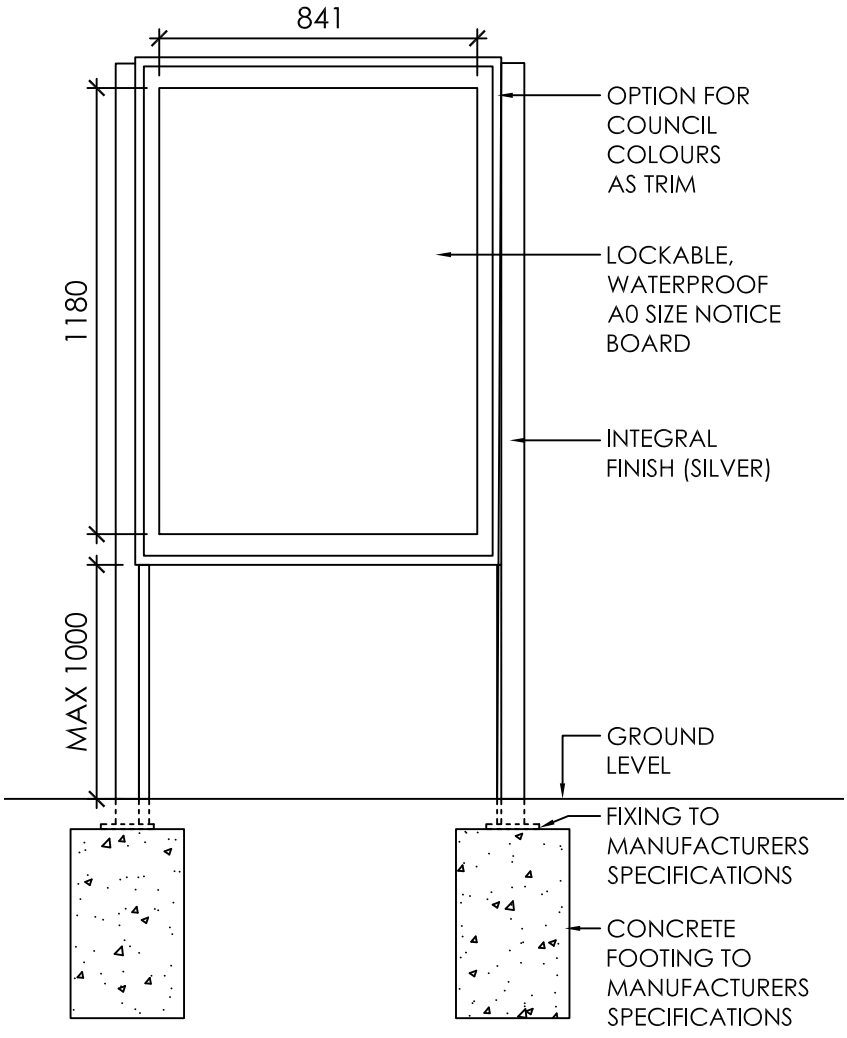
2. Allow for grout packing between the concrete footing and the base plate of the light pole to achieve a vertical alignment when erecting the pole. The grout pack shall have a minimum strength of 32MPa at 7 days. The maximum tolerance for vertical misalignment will be 30mm from the vertical.

3. Light colour warmth to match other fittings.

Furniture and Fixtures

Typical community notice board - free standing

Indicative illustration of free standing community noticeboard



Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Weather proof seals.

9. Stainless steel hinges incorporated into the swing door.

10. Manual or gas struts door stays.

11. 3mm poly carbonate or acrylic cover.

12. Optional anti-graffiti film applied to cover.

13. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Furniture and Fixtures

Typical community notice board - free standing open

Indicative illustration of free standing open community noticeboard

Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Open cork board in the middle. A0 format

9. Awning over open area.

6.3.5 Materials palette

(Approved equal alternative product may also be used)

SPECIAL AREAS: D. BRADFIELD PARK MATERIALS PALETTE	
ITEM	**MAIN STREET/ PARK**
FOOTPATH AND ROAD WORKS DRAWINGS	
KERB AND GUTTER	**Material:** **Concrete** **Finish:** **Finished with a steel trowel**
PAVING - FOOTPATH	**Material:** **Precast concrete unit paver** **Finish:** **Honed** **Size:** **50 x 300 x 300mm** **Colour:** **'Kirribilli Grey'-Mid coloured paving with a fleck of colour for warmth.** **Equal or equivalent to Urbanstone** **Pattern:** **Stretcherbond with header** **Base:** **Rigid base - reinforced concrete slab** **Material:** **Precast concrete unit paver** **Finish:** **Honed** **Size:** **50 x 400 x 400mm** **Colour:** **Gunmetal (Charcoal)** **Equal or equivalent to Urbanstone** **Pattern:** **Stackbond** **Base:** **Rigid base - reinforced concrete slab**

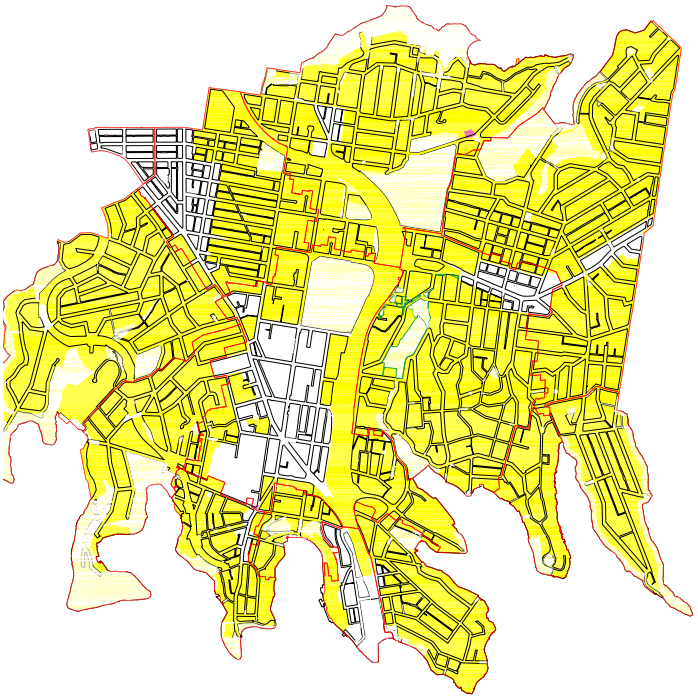
ITEM	MAIN STREET/ PARK
FOOTPATH AND ROAD WORKS DRAWINGS	
PAVING - FOOTPATH TACTILES	Product: Warning tactile terraced black top stainless steel (316) Size: Individual tactile studs Pattern: As per AS1428.1 Colour: Black top silver sides Fixing: Drill and pressure fit or Drill and glue Equal or equivalent to DTAC tactile terraced black top (Stainless Steel (316))
PAVING - VEHICULAR CROSS OVER	Material: Unipave 80 with Brickpave 80 border Finish: Milled Size: Unipave 113x225x80mm, Brickpave 115x230x80mm Pattern: Herringbone Colour: Unipave (Dark Grey 'Charcoal'), Brickpave (Natural) Equal or equivalent to Adbri Masonry Base: Rigid base on Parex System
DECOMPOSED GRANITE	Material: Decomposed granite
KERB RAMPS	Material: Concrete Finish: Wood float

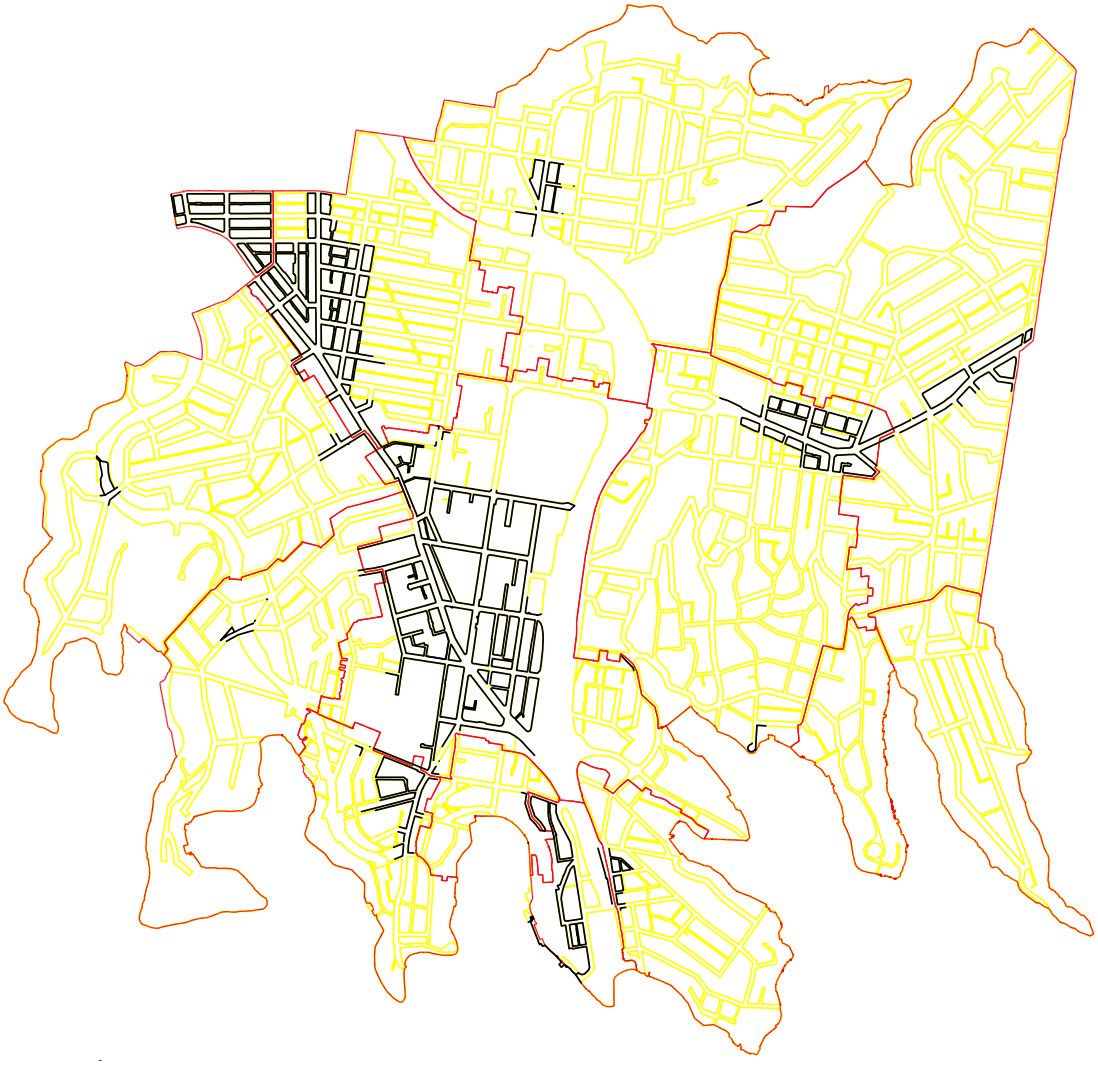
ITEM	MAIN STREET/ PARK
FIXTURES - FURNITURE	
SEATING	2000mm long timber seats, benches and picnic settings Product: Urban Seat Timber: Jarrah Finish: Oiled timber, polished cast aluminium legs Fixing: M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing. Equal or equivalent to Urban Seat with Jarrah timber by Botton and Gardiner. Bench seat Timber: Jarrah Finish: Oiled timber, polished cast aluminium legs Fixing: M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing. Equal or equivalent to Bench seat with Jarrah timber by Botton and Gardiner. Picnic table Timber: Jarrah Finish: Oiled timber, polished cast aluminium legs Fixing: M10 treated rod epoxy grouting to concrete footing below pavement. Install dome nuts to exposed rods to table legs. Equal or equivalent to Picnic table with Jarrah timber by Botton and Gardiner.
RUBBISH BINS	North Sydney standard bin Fixing: Bins are to be subsurface fixed. Spigot and socket mounted Equal or equivalent bin designed by Ian Dryden of Dryden Crute Design Victoria.
BOLLARDS - Illuminated	Illuminated bollard Colour: Grey Equal or equivalent to Kendelier Princeton Bollard
BICYCLE RACKS	Material: Stainless steel Fixing: Bicycle stands are to be subsurface fixed with mass concrete footings. Equal or equivalent to stainless steel Semi bike Stand by SFA

ITEM	MAIN STREET/ PARK
FIXTURES - FURNITURE	
WATER FOUNTAIN	Stainless steel round drinking fountain Finish: Brushed, 304 grade stainless steel with Britex CoastGuard coating Colour: Integral finish Height: 750mm Fixing: Dyna bolt through fixing plate to concrete footing below pavement Equal or equivalent to Britex stainless steel drinking fountain
STREET LIGHTING	Post Top LED with P.E cell Luminaire: Gerard ATB2 (including spigot) Wattage: 215W or as per commissioned lighting design Gerard or approved equivalent Multifunctional Pole Steel core Steel core – 220mm DIA Colour: Anodised aluminium extrusion Cladding: Rimex Height: 9.5m with single 3.0m light outreach arm Banner arm: 2m outreach Assembly: All fixtures (caps, grub screws, rag bolt system/cage etc) Footing: As per manufacturer's specification North Sydney Hub Street Pole 9.5m (HUB-NSP-SL95-S3) or approved equivalent
PEDESTRIAN LIGHTING - (Park / Plaza locations)	Post top LED luminaire on octagonal Vicpole Colour: Refer to drawings Equal or equivalent to Hubbell AAL Largent LED Post top luminaire.
PARKING METERS	North Sydney standard electronic parking meter. Yellow line markings
MISCELLANEOUS COMMUNITY NOTICE BOARDS Free standing community noticeboard / Free standing open community noticeboard	Colour: Silver frame with option for council colours to be incorporated as a trim Key features: Lockable Waterproof A0 (1180 x 841mm) internal dimension Portrait orientation Option for anti-graffiti film on noticeboard Poly carbonate or acrylic cover Noticeboards to be maximum 1m above ground level at the base when freestanding A0 sized open cork board in the middle of open community notice boards Simple awning to open community noticeboards Equal or equivalent to HD1 Harsh Duty Outdoor Lockable Notice Board by Arrow Alpha
BANNER POLE	6063T6 Untapered high tensile aluminium Powdercoat finish Equal or equivalent to Abel Elegance range banner pole

07 Local / Residential Areas

Predominantly residential streets with little or no retail or commercial establishments, ranging from low density residential development adjacent to the harbour foreshore areas to higher density generally on the upper slopes and around railway stations.





Local / Residential Areas
Local / Residential Areas Footpath

07 Local / Residential Areas

Local / Residential areas are those remaining areas that are not villages, activity strips, centres, parks or open space. These areas are generally zoned as residential.

These areas require simple, durable treatments that are cost effective and easy to maintain.

The public domain / streetscape associated with these areas are generally limited to road verges and contain elements such as bollards, footpaths, safety railings and barriers, pedestrian fences, crossings and traffic islands.

7.1 Materials palette objectives

Public domain materials in residential areas should be simple, easy to maintain, durable and cost effective. Approved equal alternative product may also be used of approved by council representatives

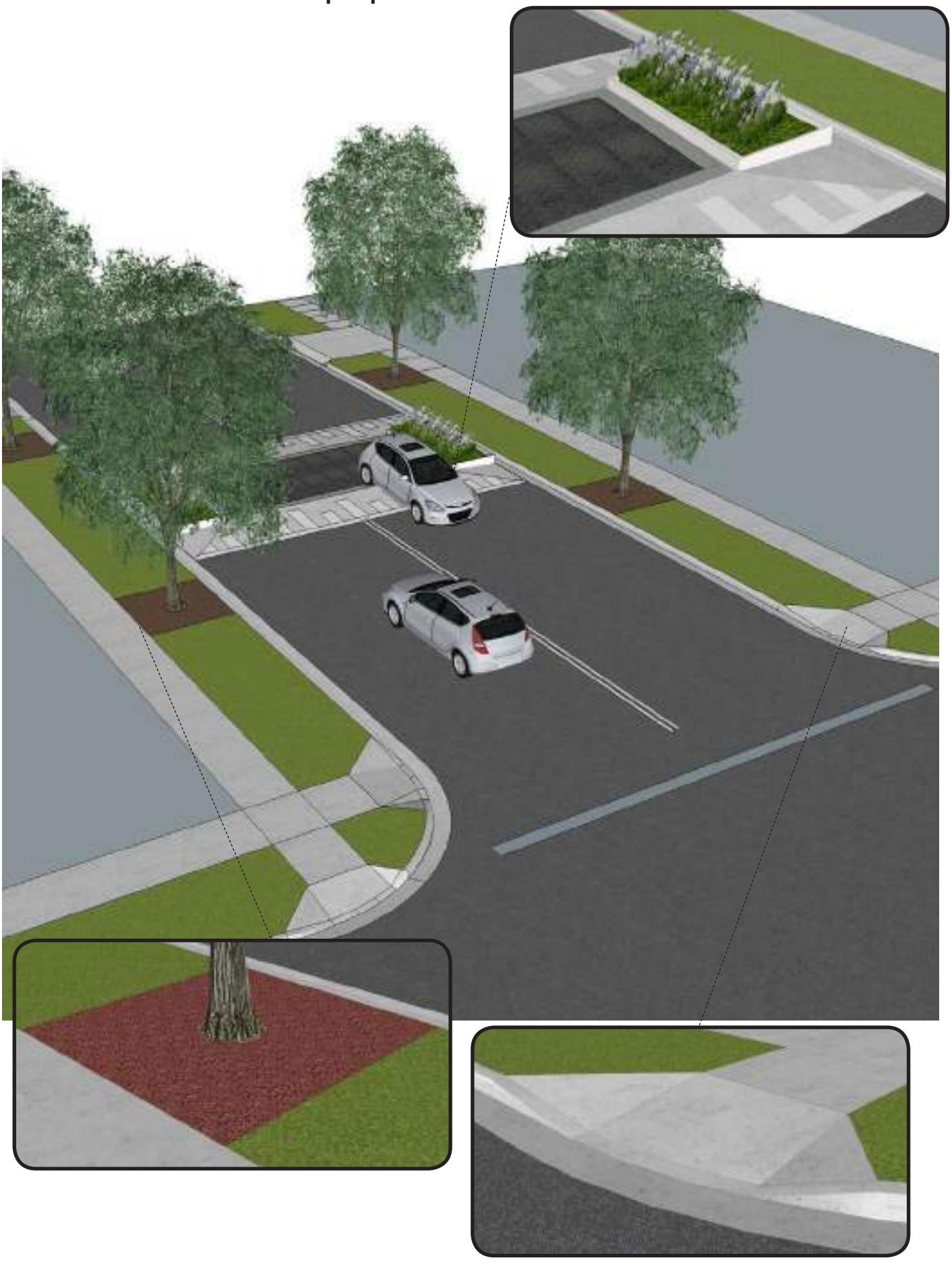
Contents

Hardscape

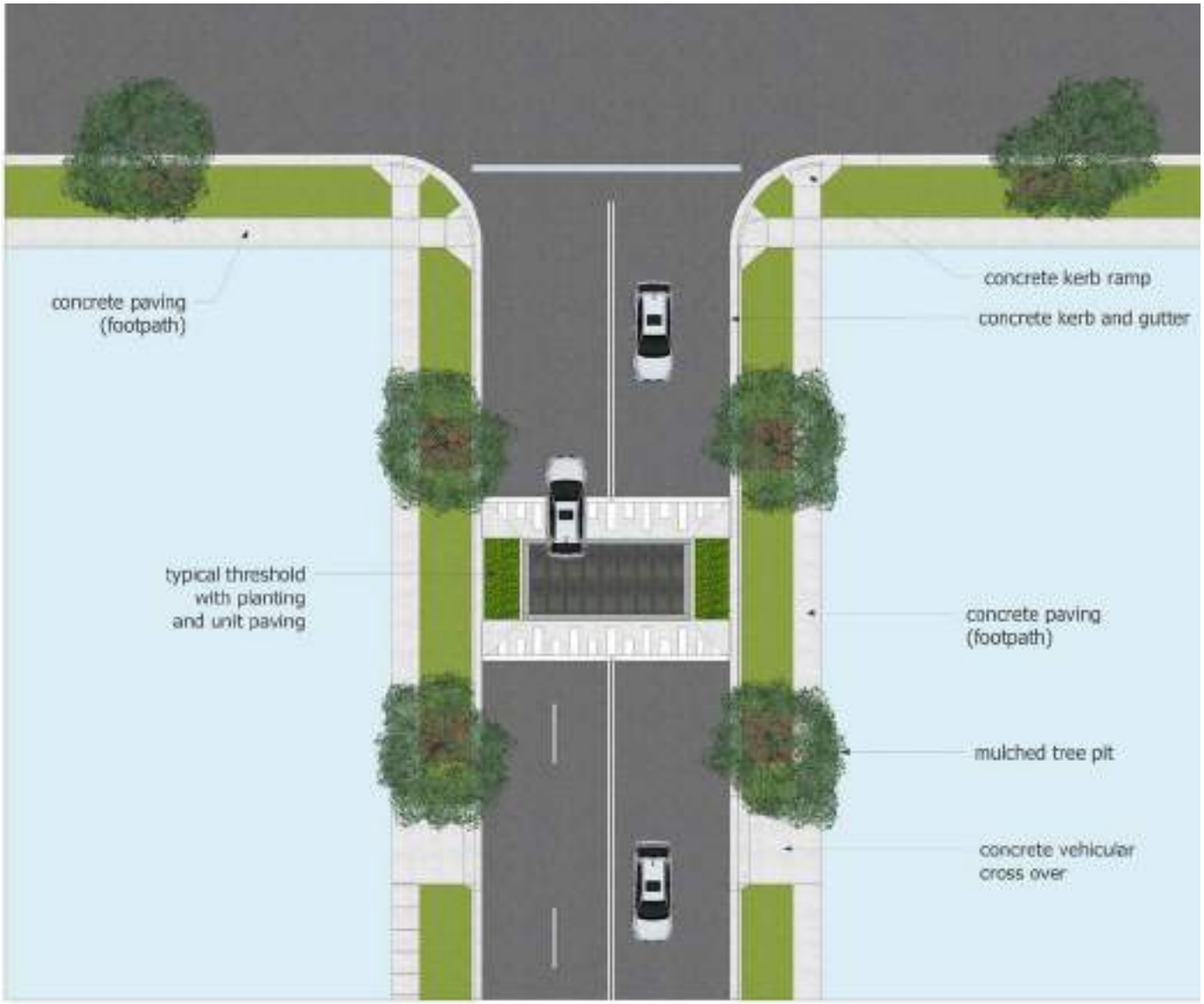
Note: Typical driveway crossing to be constructed in accordance with Council's standard detail S101.A.

Furniture and Fixtures

7.2 Local / Residential streets - perspective views



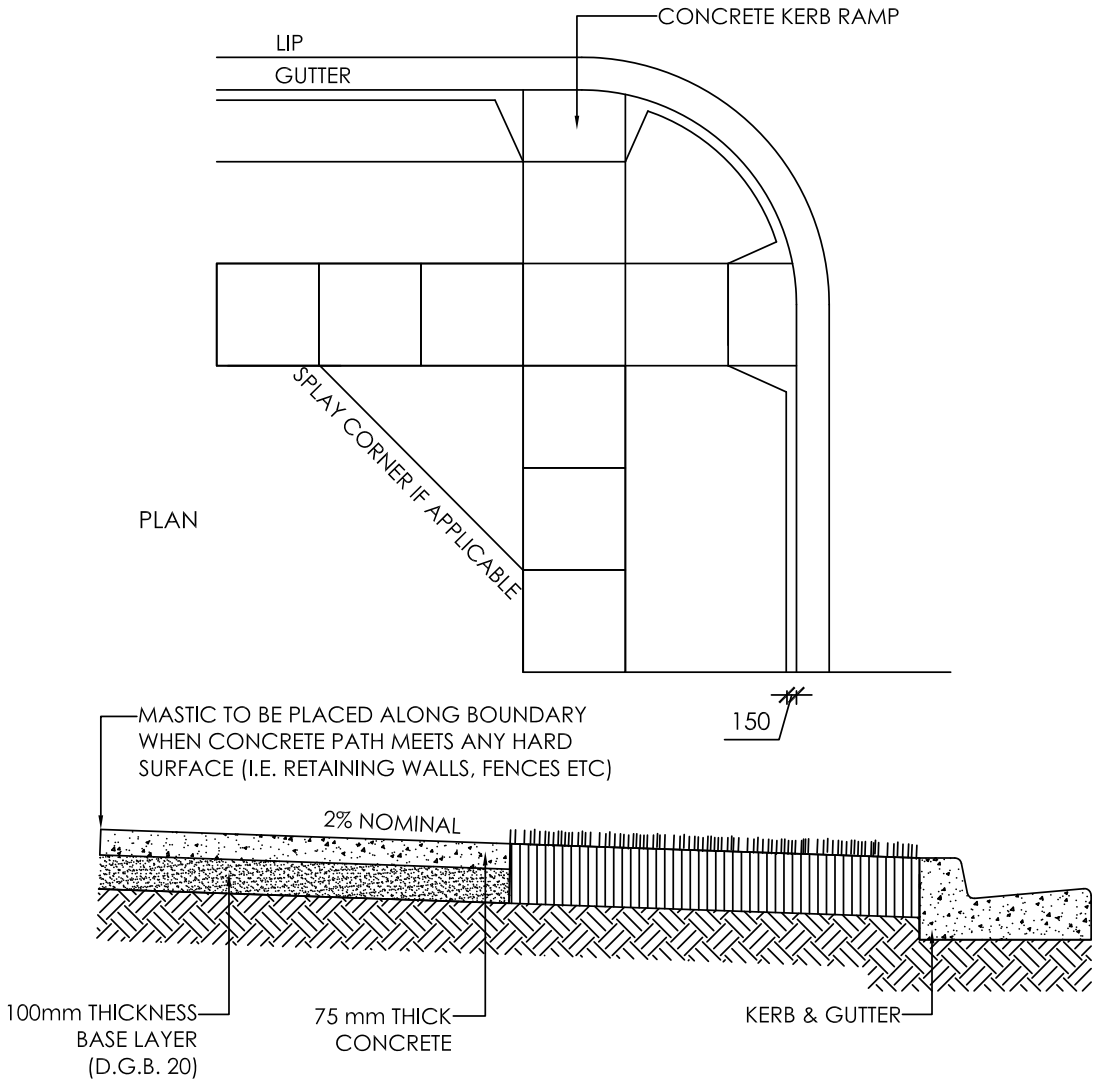
7.3 Local / Residential streets - plan and section view



7.4 Indicative Materials and Furniture

Hardscape

Typical footpath paving pattern plan and cross-section



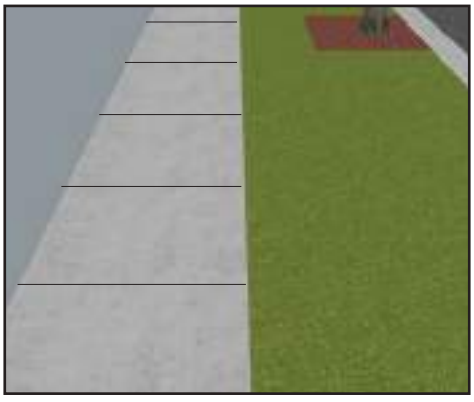
Notes

1. Concrete paving.

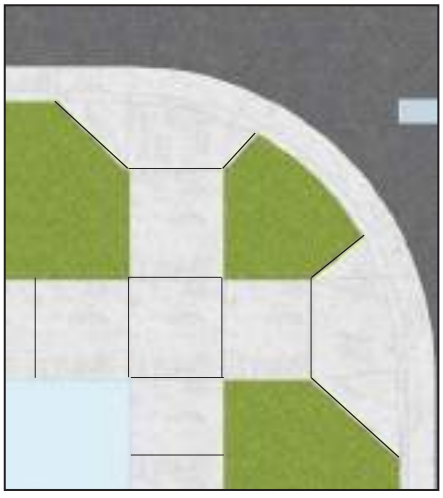
2. Evenly spaced joints, with preferably square shaped segments.

3. Mastic joints located at all boundaries that face a hard surface.

Concrete footpath



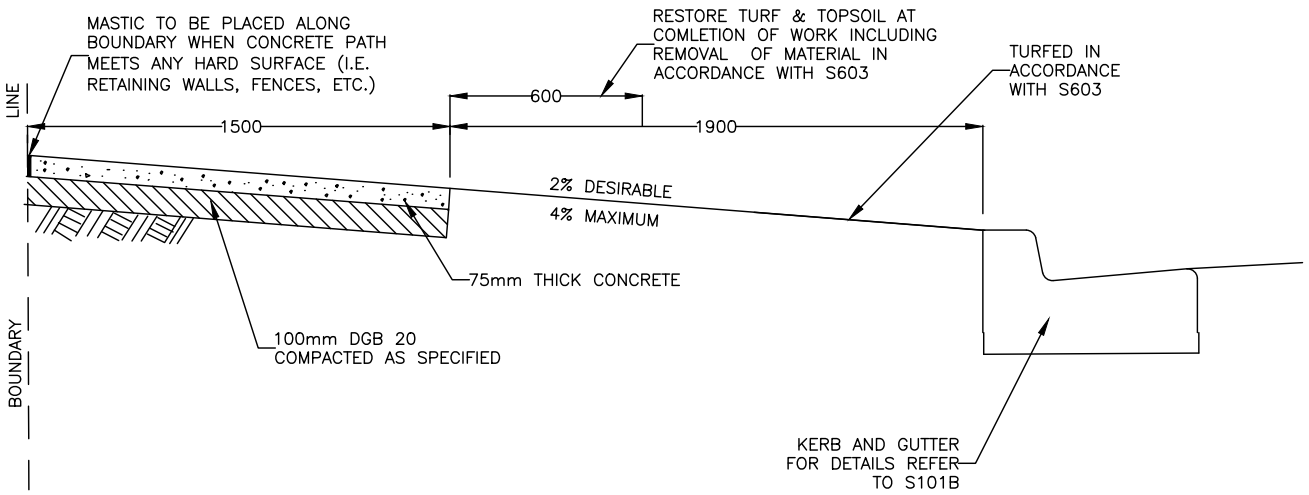
1.5m wide concrete footpath



Kerb ramps align with boundary line

Hardscape

Typical standard concrete footpath detail



1.5m wide concrete footpath

Concrete footpath

Notes

1. Footpath width 1500mm or as otherwise specified.

2. Turf to be selected Buffalo or Couch as directed.

3. Topsoil as per section 18 of council's specification.

4. At footpath crossing, footpath to be constructed as per council 'Standard vehicular crossing and kerb and gutter' detail.

5. Footpath to be constructed in accordance with council specification.

6. Construction joints every 1.5m.

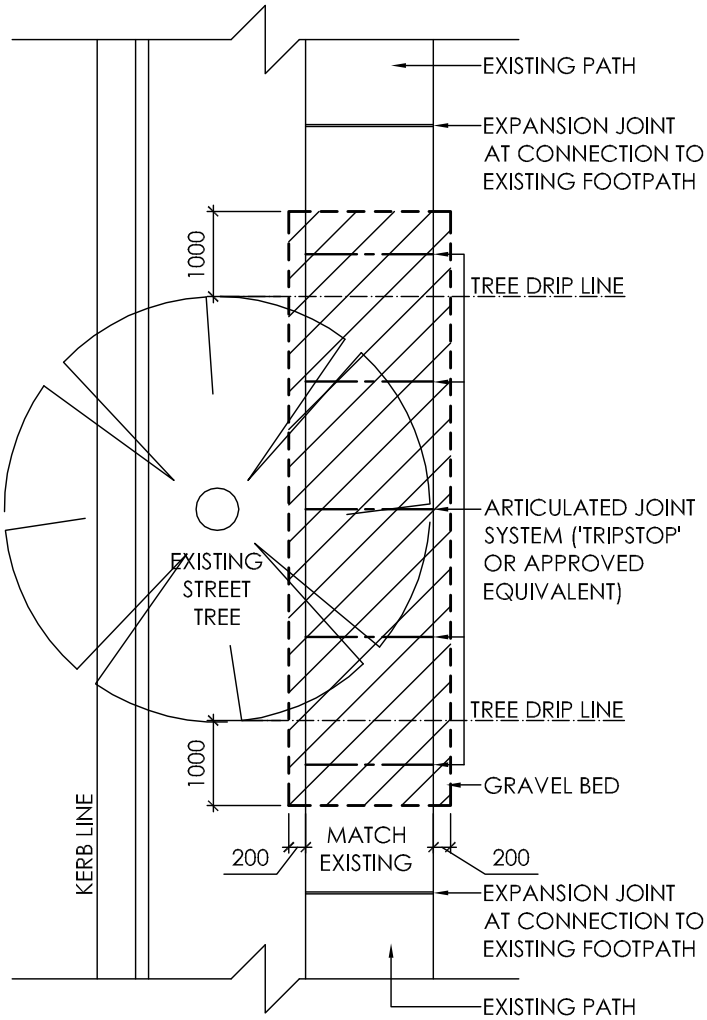
7. Expansion joints every 6m using bitumen impregnated preformed jointing material.

8. Concrete surface shall be finished according to the specification.

9. Mastic to be placed along edge of path when placed against any hard surface.

Hardscape

Typical articulated footpath for roots under concrete paths



Notes

1. Gravel bed to extend minimum 1000 past drip-line of tree and minimum 200 either side of path. Gravel bed installed to allow ease of root travel below concrete path. Material to be nominal 5mm rounded stone/ gravel, uniformly graded. Minimum 100mm thickness.

2. Articulated joint system ('TRIPSTOP' or approved equivalent) at centres to match path width, Minimum five joints or extend one full panel past drip-line of mature tree.

3. For locations with existing street trees, arborist to be consulted to check root system before installation of path. Root trimming or pruning is only to be carried out by councils arborist.

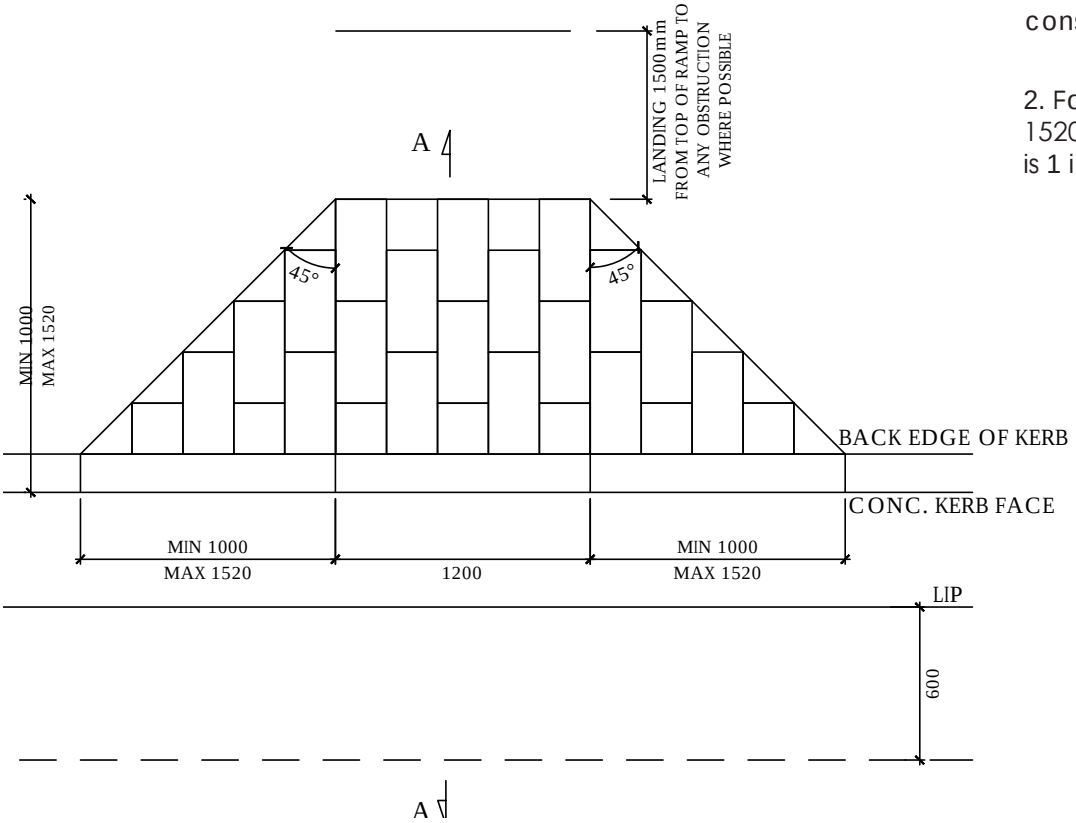
4. Standard does not apply to highly significant trees. Contact councils tree maintenance supervisor - 9936 8100 for special requirements at these locations.

5. Refer to www.tripstop.net for supplier locations and installation requirements.

6. All dimensions in millimeters.

Hardscape

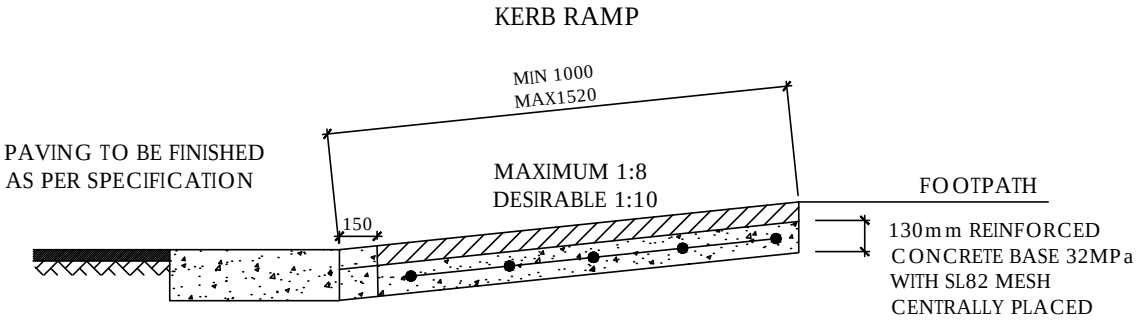
Typical kerb ramp



Notes

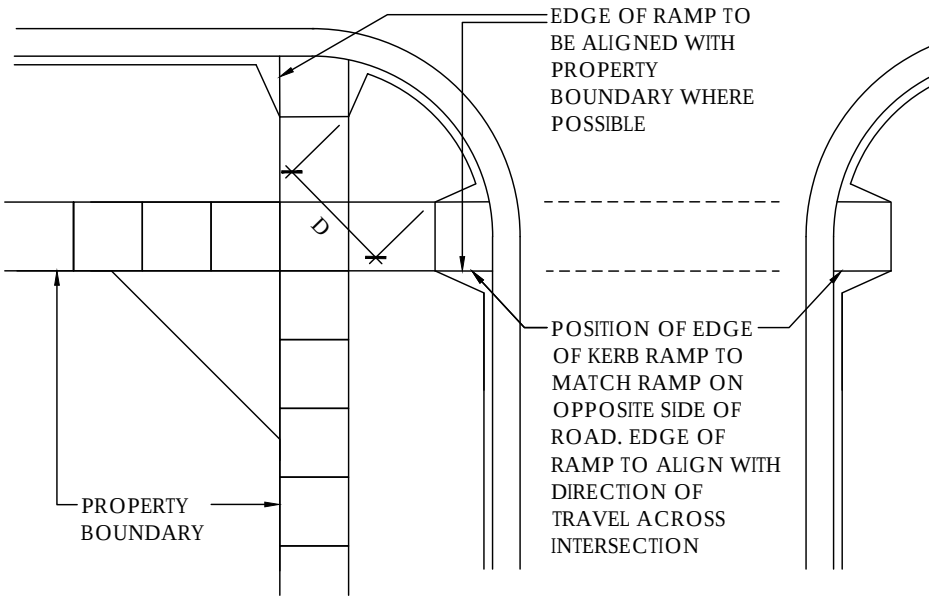
1. All kerb ramps shall be constructed in concrete.

2. For ramps greater than 1520mm, maximum grade is 1 in 14.



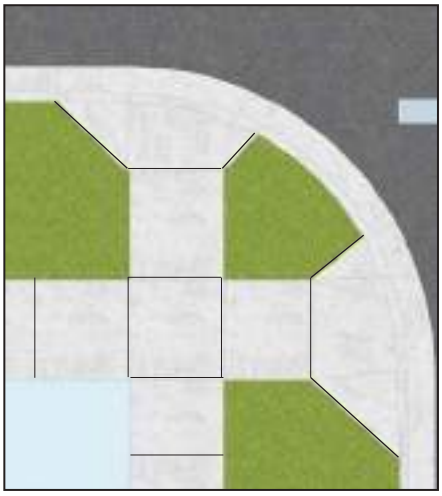
Hardscape

Typical kerb ramp configuration

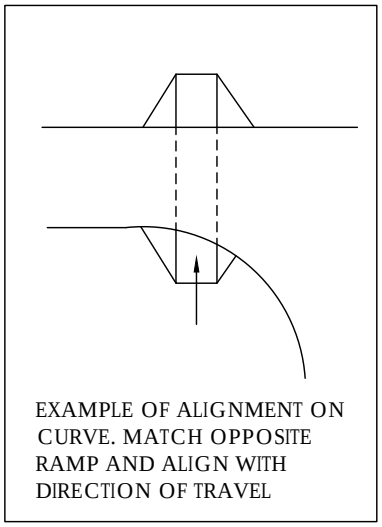


PLAN

Existing kerb ramp in North Sydney Centre



Typical plan



Notes

1. This drawing is to be read in conjunction with drawing 'Typical kerb ramp' detail on page 342.

2. Concrete kerb ramps.

3. Wood float finish.

4. Dummy joints line up with opposite kerb ramp.

5. Kerb ramps align with property boundaries.

6. 1330mm landings at the top of any kerb ramp where possible.

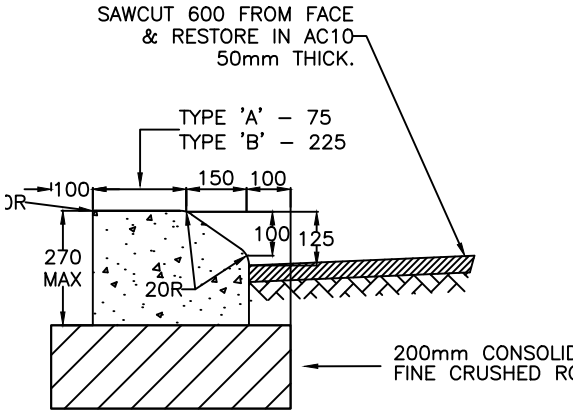
7. 1:10 grade from top to bottom of kerb ramp. 1:8 maximum.

8. Kerb ramp to finish flush with adjacent paving.

9. Kerb ramps to comply with AS1428.1.

Hardscape

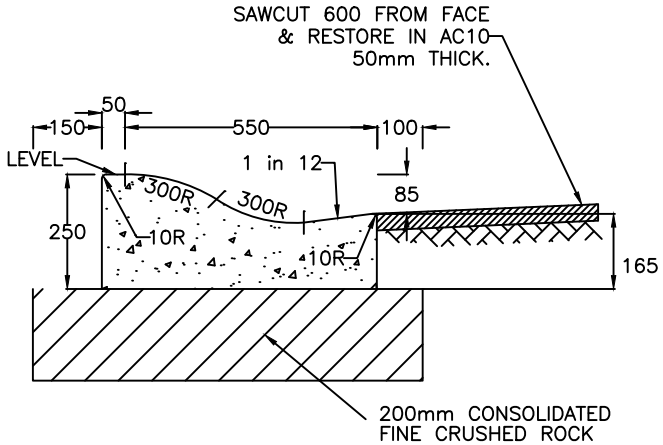
Typical kerb and gutter



MOUNTABLE KERB

Kerb and gutter treatment

Shirley Road existing kerb and gutter treatment



ROLL KERB

Notes

1. Base course

Consolidated fine crushed rock to councils specification.

2. Concrete finish

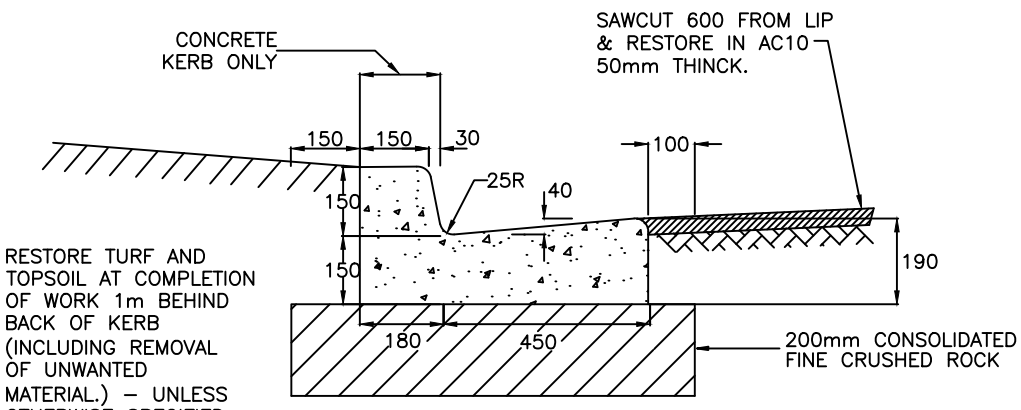
A. All edges shall be tool finished with 12mm rad. 50mm wide edging tool.

B. Gutter and layback shall be finished with a steel trowel.

C. Driveway slab to be finished with wood float.

3. Expansion joints: Expansion joints shall be placed at 6m intervals.

4. Contractors shall conform to councils standard conditions of approval for construction of vehicular crossing / concrete footpaths and to line level and grade fixed by council.



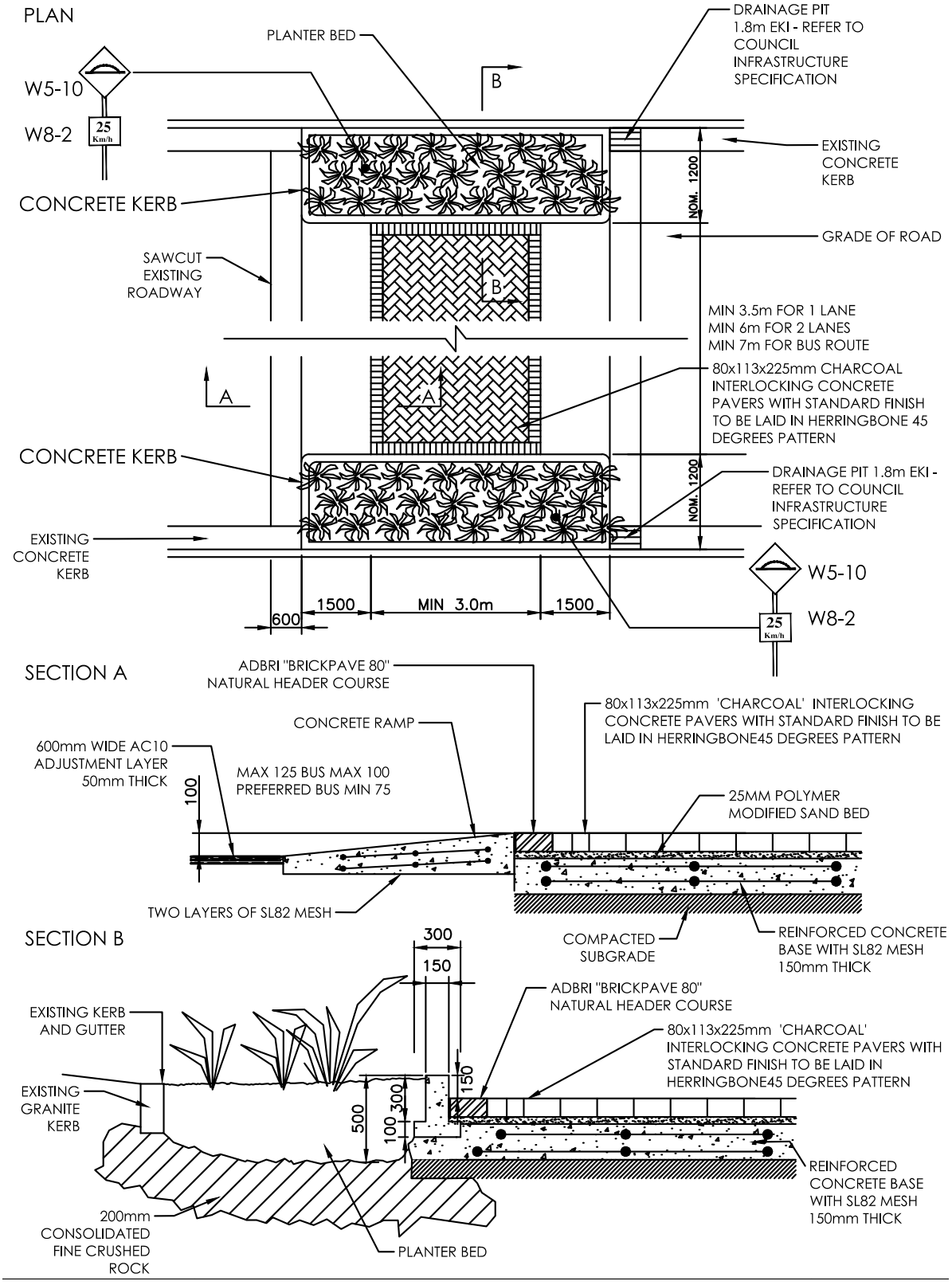
BARRIER KERB

5. All plan dimensions are in millimetres. Unless otherwise noted.

6. AC10mm adjustment: Provide 600mm wide AC10 correction course layer 50mm thick as shown.

Hardscape

Typical threshold with planting and unit paving



Furniture and Fixtures

Typical seating with back

Park Seat

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

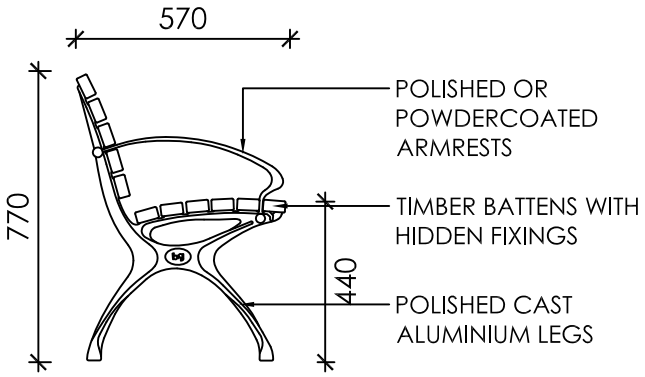
4. Robust design.

5. Simple design with clean lines.

6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

7. Skateboard deterrents optional.

8. Image indicative of style only.



Furniture and Fixtures

Typical bench

Park bench

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

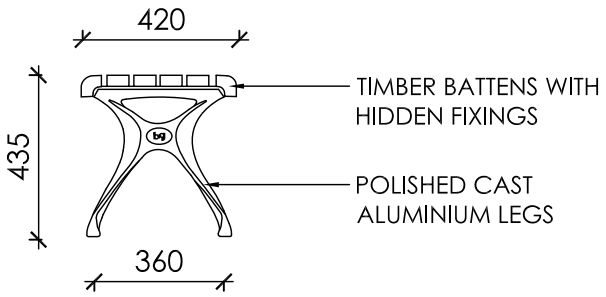
4. Robust design.

5. Simple design with clean lines.

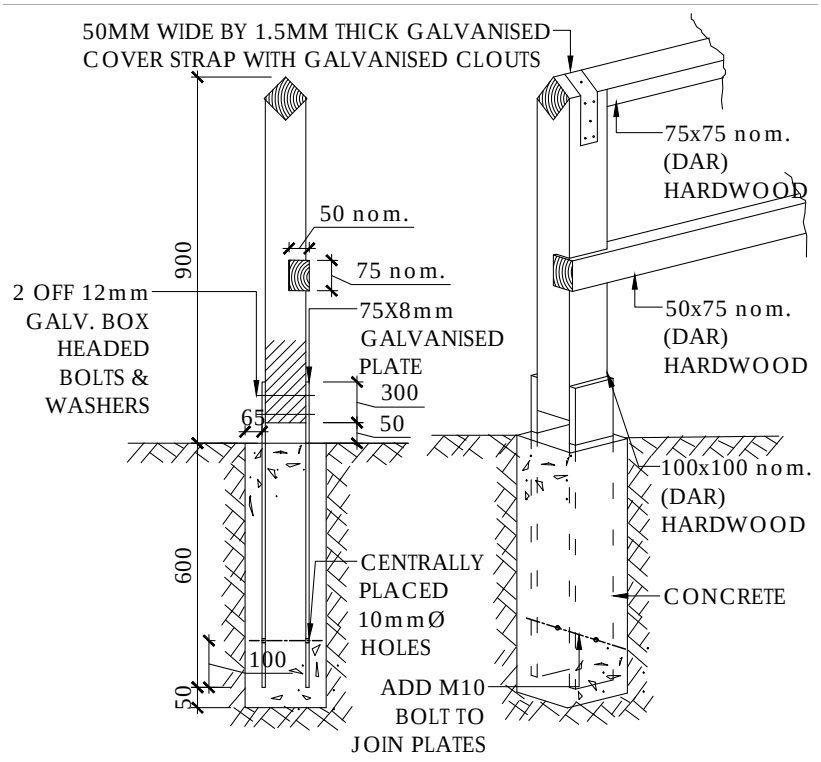
6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

7. Skateboard deterrents optional.

8. Image indicative of style only.



Typical ordinance rail fencing details



Cantolope fencing

Notes

Timber

All exposed sharp edges shall be removed after dressing.

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Fixings

All joints shall be primed before fixing.

All fixings shall be galvanised.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a maximum of 3.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

All top rails to be sanded free of splinters prior to painting.

Wire

PVC coated wire is to be used where needed.

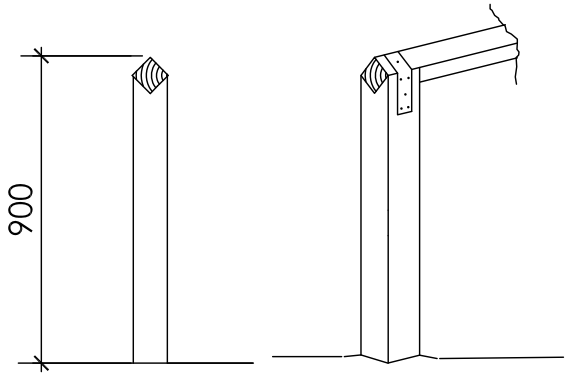
Option to use composite wood / plastic to ensure against rot. Also to alleviate the need to paint. e.g. Cosset 'Evertuff' recycled wood plastic composite post and rail fencing or Moodie 'MoodieR Arris Rail Fence' Code: 73944 Plastic/ wood composite. RoocycleET (Charcoal) (Approved equal alternative product may also be used).

Wood plastic composite can be painted if required.

Furniture and Fixtures

Typical ordinance fence

TYPE 1



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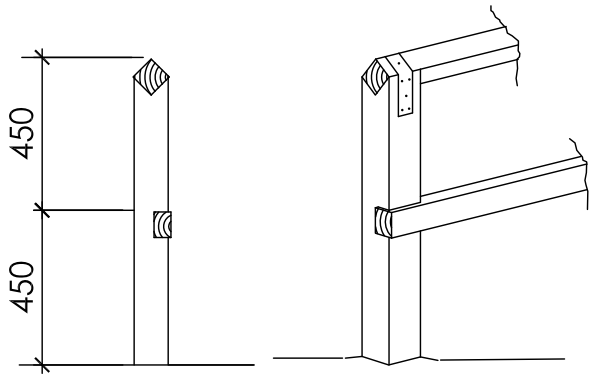

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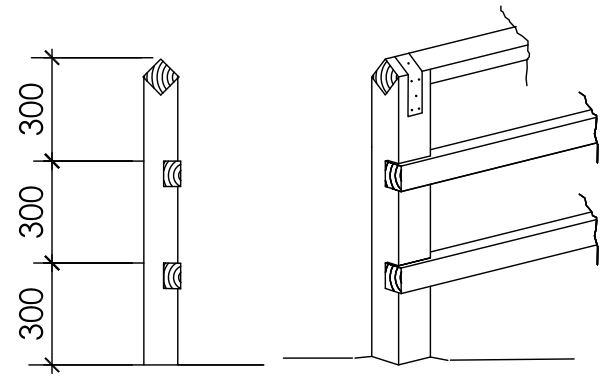
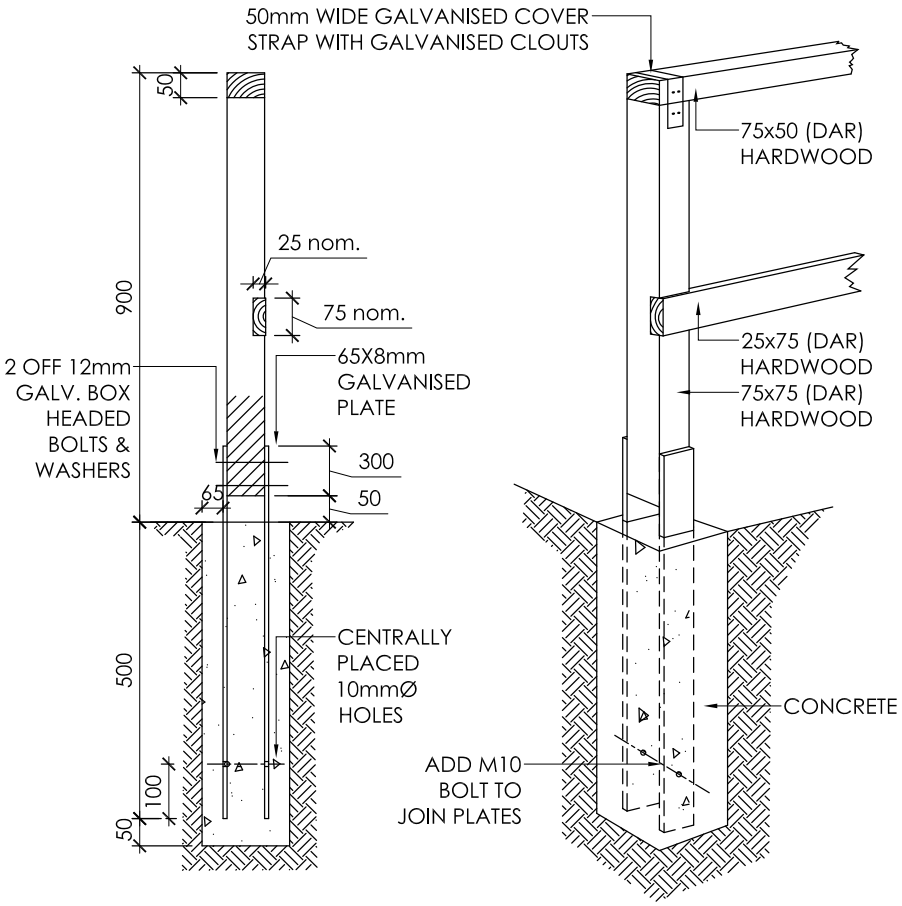


Notes

1. All details as per typical ‘Ordinance rail fencing details’.

Furniture and Fixtures

Typical ordinance handrail detail



Notes

Timber

All exposed sharp edges shall be removed after dressing.

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Fixings

All joints shall be primed before fixing.

All fixings shall be galvanised.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a maximum of 3.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

All top rails to be sanded free of splinters prior to painting.

Wire

PVC coated wire is to be used where needed.

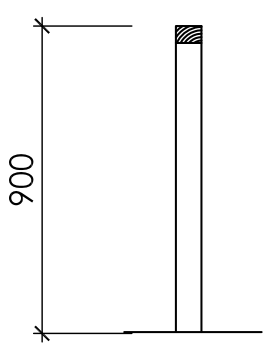
Option to use composite wood / plastic to ensure against rot. Also to alleviate the need to paint. e.g. Cosset 'Evertuff' recycled wood plastic composite post and rail fencing or (Approved equal alternative product may also be used).

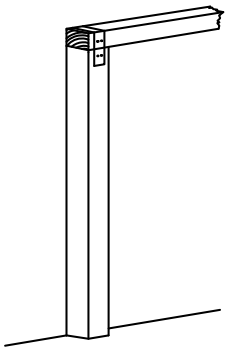
Wood plastic composite can be painted if required.

Furniture and Fixtures

Typical ordinance handrail construction

TYPE 4





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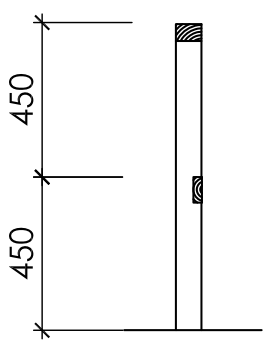

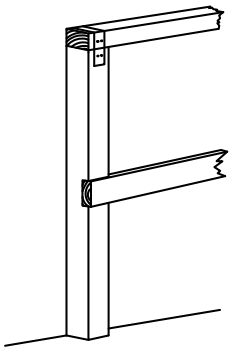

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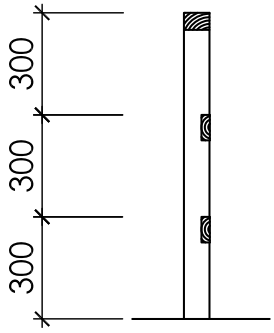
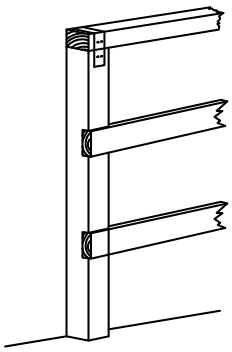




Notes

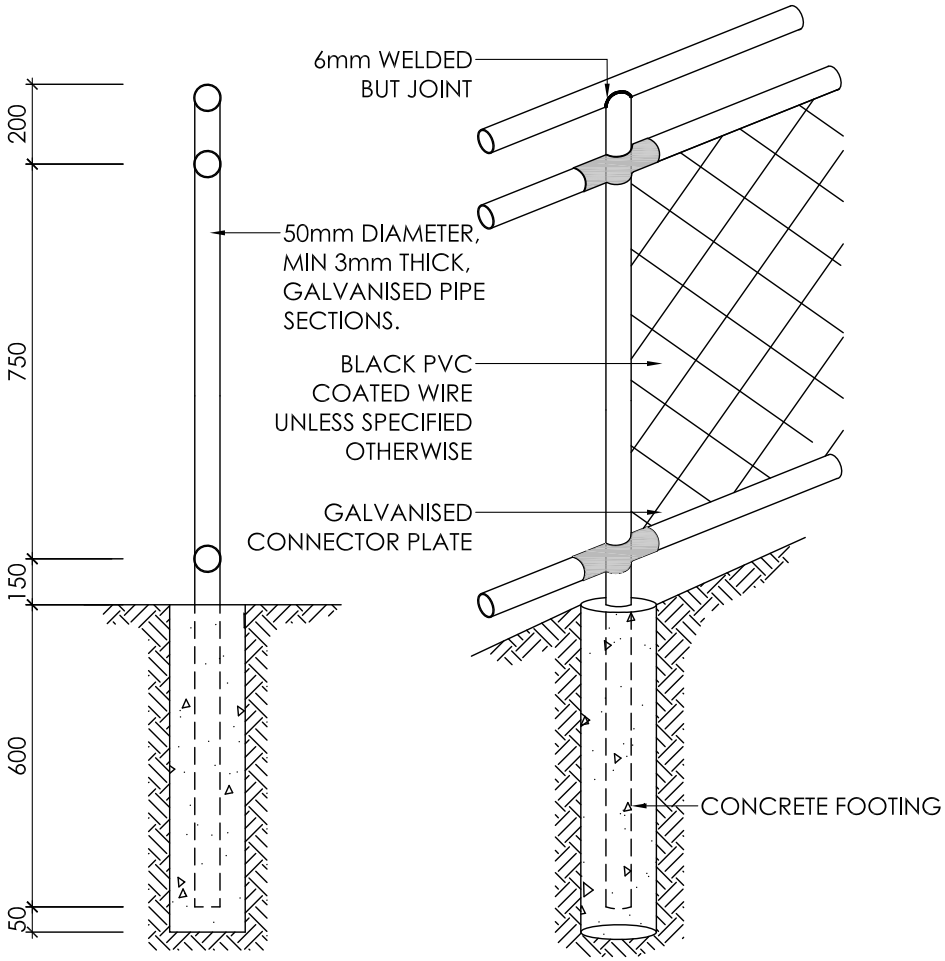
1. all details as per typical ‘Ordinance rail fencing details’.

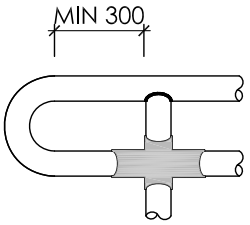
Furniture and Fixtures

Typical pipe and wire pedestrian fence details

Notes

1. All works to be in accordance with AS1428.1.





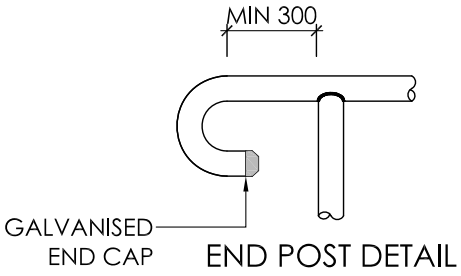
END POST DETAIL

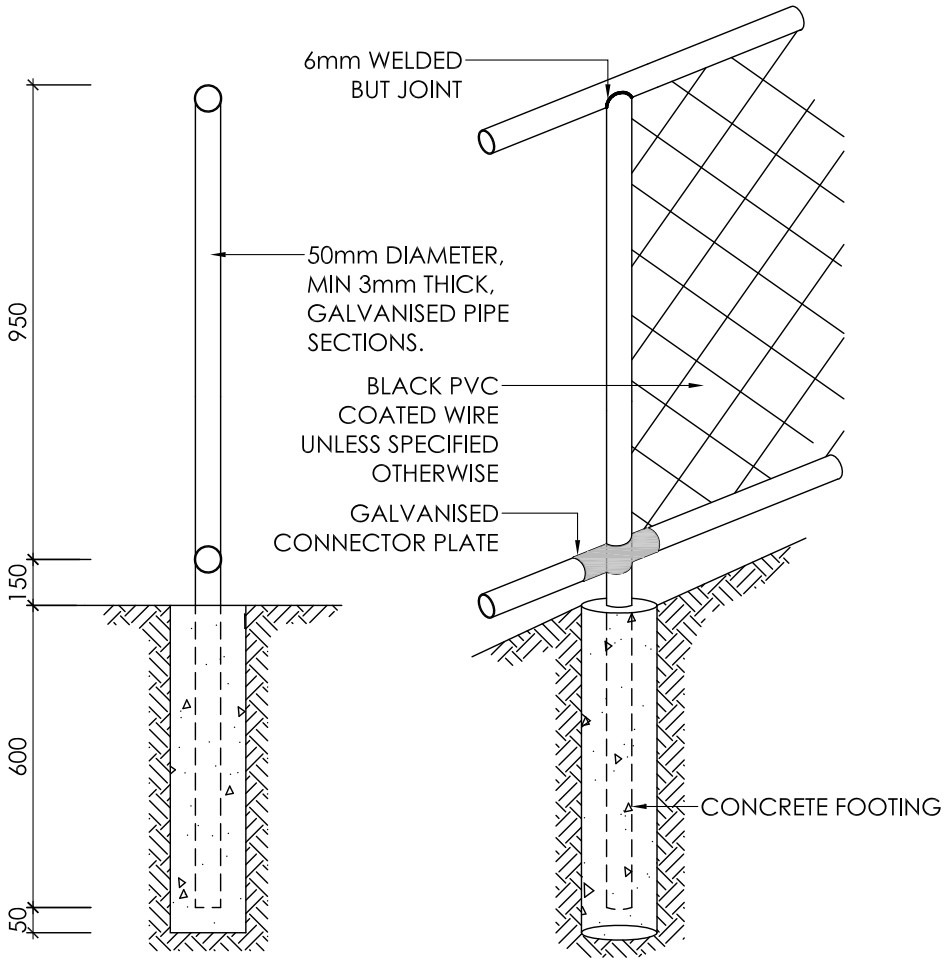
Furniture and Fixtures

Typical pipe and wire fence details

Notes

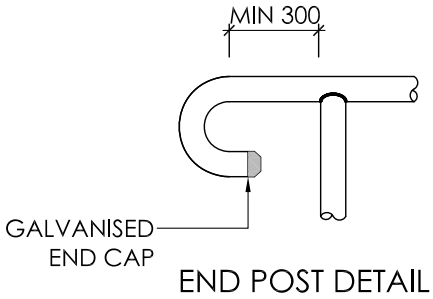
1. All works to be in accordance with AS1428.1.



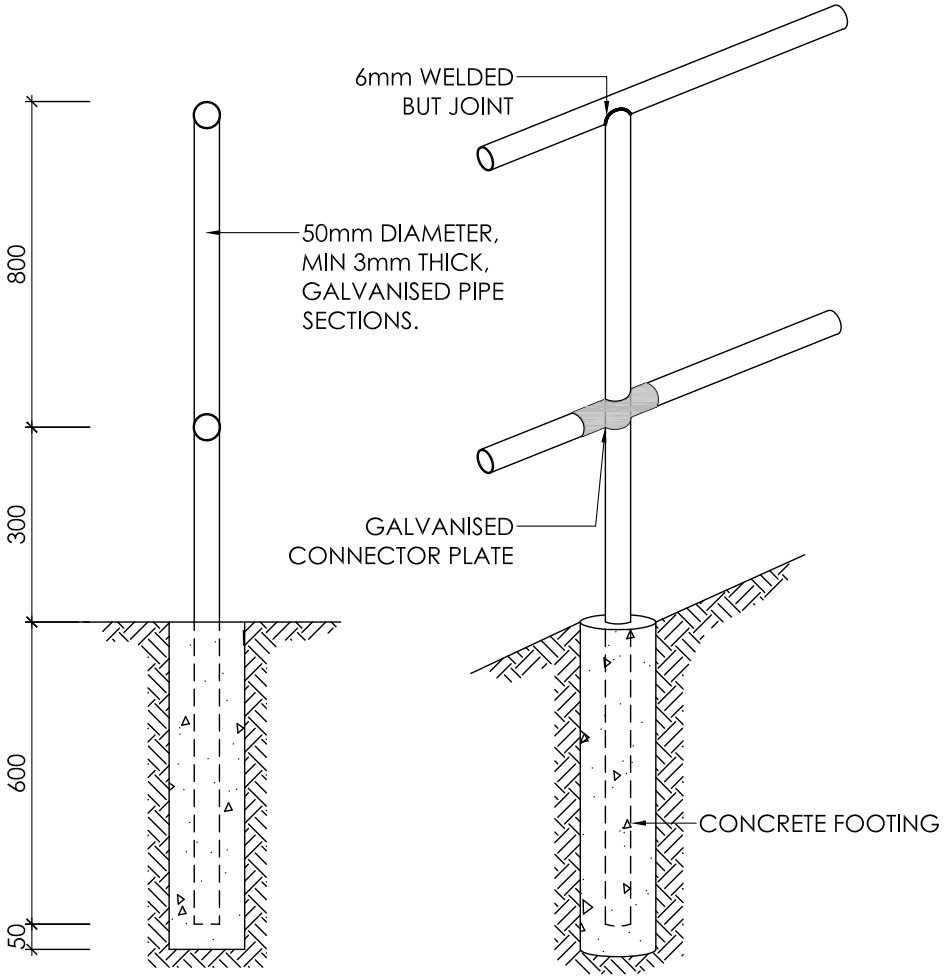


Furniture and Fixtures

Typical pipe fence details



END POST DETAIL

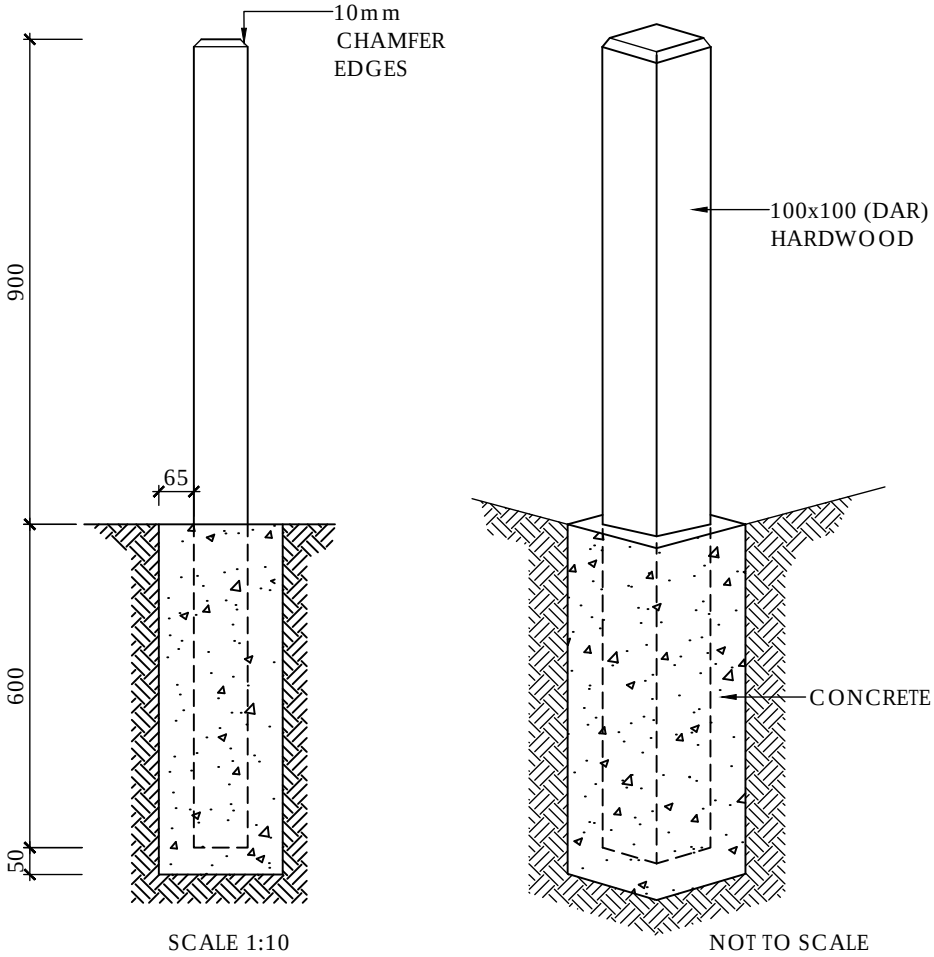


Notes

1. All works to be in accordance with AS1428.1.

Furniture and Fixtures

Typical post fence details



SCALE 1:10

NOT TO SCALE

Notes

Timber

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a minimum of 1.2m and a maximum of 2.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

Furniture and Fixtures

Typical bus shelter

Existing bus stop - Neutral Bay

Existing bus stop - Cammeray

Notes

1. Existing bus shelters to remain in local areas.

2. Seating to be updated to match current manual.

3. Bus shelter to incorporate advertising material and information panels.

4. Size to vary to suit location and demand.

Furniture and Fixtures

Typical community noticeboard - wall mounted

Indicative illustration of wall mounted noticeboard in village bus stop (Portrait)

Example of A0 noticeboard (Landscape)

Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

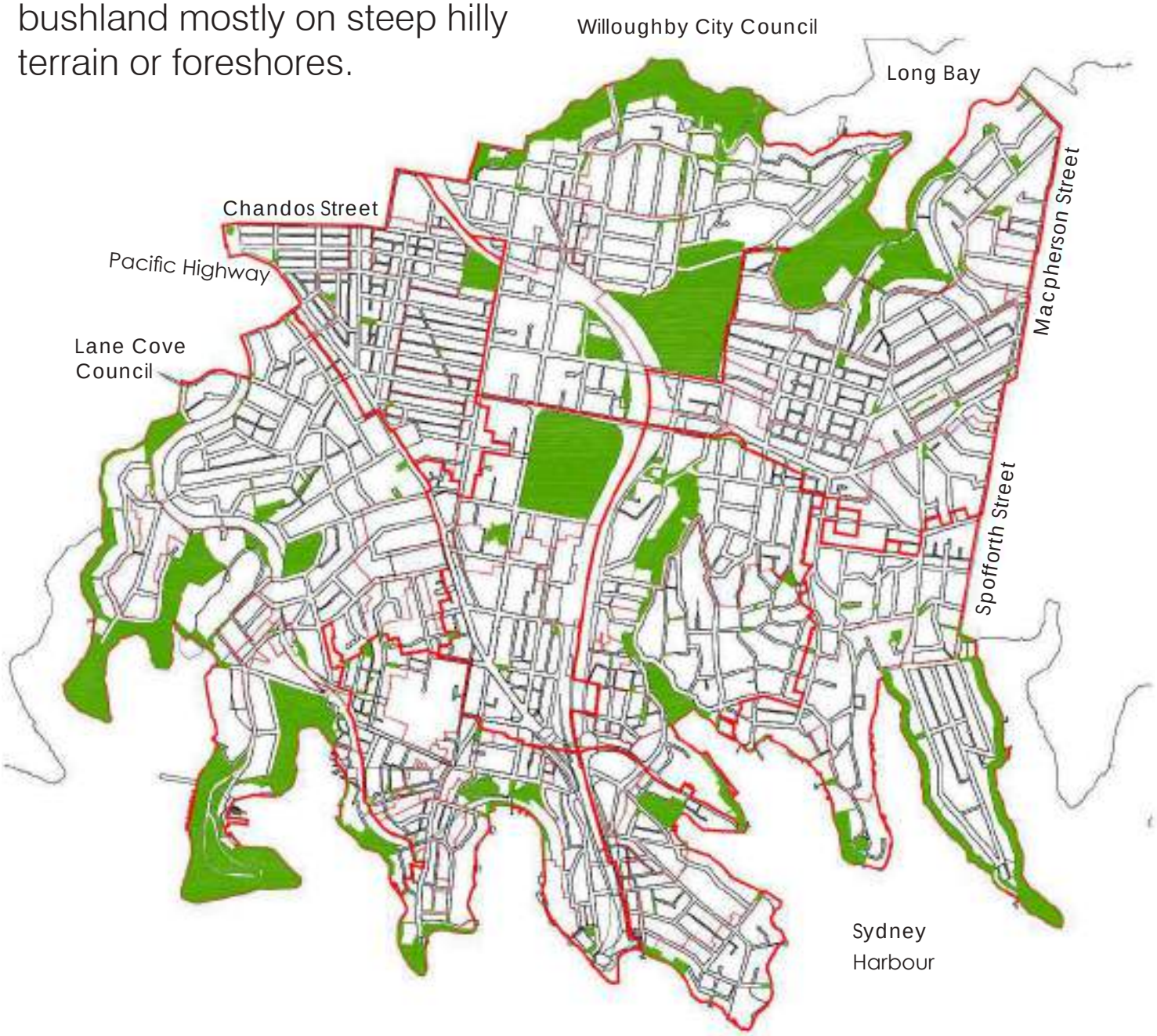
7.5 Materials palette

(Approved equal alternative product may also be used)

LOCAL / RESIDENTIAL AREAS MATERIALS PALETTE	
ITEM	LOCAL STREET
FOOTPATH AND ROAD WORKS DRAWINGS / PAVING DRAWINGS	
KERB AND GUTTER	Material: Concrete Finish: Finished with a steel trowel
PAVING - FOOTPATH	Material: Concrete Finish: Wood float / Cove
PAVING - VEHICULAR CROSS OVER	Material: Concrete Finish: Cove
KERB RAMPS	Material: Concrete Finish: Cove
THRESHOLD TREATMENT	Material: Concrete and unit paving
LANDSCAPE DRAWINGS	
TREE PIT BASE TREATMENTS	Material: Mulched or turf
FENCE DRAWINGS	
FENCES	Materials vary refer details. Option for wood/ composite product to replace timber fence members
FIXTURES - FURNITURE	
SEATING	Timber seating approx. 1800mm long with back rest. Bench seat approx. 1800mm long. Fixing: Seats and benches are to be subsurface fixed. Stainless steel anti- tamper fixing Equal or equivalent to Urban Seat with Jarrah timber by Botton and Gardiner. Equal or equivalent to Bench Seat with jarrah timber by Botton and Gardiner.
BUS SHELTER	Retain existing bus shelters
STREET LIGHTING	Council standard street lighting
FIXTURES - FURNITURE	
MISCELLANEOUS COMMUNITY NOTICE BOARDS Outdoor wall mounted noticeboard	Colour: Silver frame with option for council colours to be incorporated as a trim Key features: Lockable Waterproof A0 (1180 x 841mm) internal dimension Portrait orientation Option for anti-graffiti film on noticeboard Poly carbonate or acrylic cover Equal or equivalent MD6 Keyless Secure Notice Board by Arrow Alpha

08 Parks and Open Space

Category includes regional, district & local parks, sportsgrounds, playgrounds, foreshore parks & reserves, and remnant bushland. Many of North Sydney's recreational parks are fringed by bushland mostly on steep hilly terrain or foreshores.



08 Parks and Open Space

With the exception of plazas and Bradfield Park all other parks, playgrounds, open space and bushland fall within this category.

North Sydney has a number of different scales of parks including regional, district, local parks, sports grounds, playgrounds, foreshore parks and reserves and remnant bushland. The council has 189 parks and open space areas within its LGA.

Due to the hilly terrain and sandstone geomorphology of North Sydney many of its parks are located on steep terrain, some across many levels and many contain large areas of heavily forested remnant bushland. Many bushland pockets and parks are located along the waters edge on peninsulas. Smaller reserves are often located within the streets at changes in level.

The materials palette required for these parks must be simple, durable, cost effective and easily maintained. There must also be a consistency in materials as this assists in maintaining a North Sydney aesthetic. Having a consistent palette also makes it easier to update items over time as in most cases a whole park is not upgraded at one time, but through successive small upgrades.

Category one parks (regional parks) require a greater provision of facilities than other parks which have a base level of facilities.

8.1 Materials palette objectives

The public domain materials palette in Parks and Open Space should be simple, easy to maintain and durable.

It should generate a recognisable visual identity for North Sydney parks and be cost effective for ongoing maintenance.

Contents

08 Parks and Open Space

Parks and Open space

Refer following 'Park Specific Materials Palette Schedule' for furniture, fixtures and materials for numbered parks, reserves, bushland and open space.

Long Bay

Warringah Park

St Leonards Park

North Sydney Civic Park

Bay Road Reserve

8.2 Park Specific Materials Palette Schedule

8.2 Park Specific Materials Palette Schedule Part 1

#	Park	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
1	Ancrum Street Reserve	727	1			1										
2	Anderson Park	21,252	10		1			2		5	1000			300		
3	Anderson Street Road Closure	141	1									20				
4	Anzac Avenue Reserve	4,032										20				
5	Anzac Park	12,394	3		1	4		1			30		20			
6	Badangi Reserve	69,443									300					
7	Balls Head Reserve	92,317	7	8	2	1	1	1			100	30				2
8	Bank Reserve	216	1								100		100			
9	Barry Street Road Reserve	400														
10	Bay Road Reserve	240		4		7		1		2						
11	Bellevue Street Reserve	100									75		50			
12	Ben Boyd Road Park	450									100		70			
13	Bernard Lane Road Closure	160				4										
14	Berry Island Reserve	43,196	4		1	1		2			100					
15	Beulah Street Reserve	297	1								30		100			
16	Blues Point Reserve	14,025	8	1	3	2		2		10	200		950	25		
17	Boatbuilders Walk	1,978														
18	Boulevarde Reserve	1,200										50	100			
19	Boyle Street Road Closure	700														
20	Bradfield Park	51,530	37	13	9	12	1	5	22	45		300				
21	Brennan Park	18,666	7	3	1			1			70			500		

Park Specific Materials Palette Schedule Part 2

#	Park	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
22	Brightmore Reserve	42,000	1	2	2						50					
23	Bromley Avenue Road Reserve	1,000	1						8		6	32		50		
24	Brothers Memorial Reserve	2,470	5					1			180					
25	Browns Lane Road Reserve	47				4										
26	Bydown Street Road Reserve	50				5										
27	Cahill Playground	329	1								100					
28	Cammeray Park	153,481		1	2	4		2			50					
29	Captain Henry Waterhouse Reserve	2,067														
30	Cheal Park	1,500			1								30			
31	Christie Street Reserve	1,122	9		2				2							
32	Clark Park	5,084	17	11	1			1			300			200		
33	Clark Road Island	332	1													
34	Clifton Street Road Reserve	1,000	1								50					
35	Colin Street Road Reserve	300									50		100			
36	Colindia Avenue Road Reserve	200									100		100			
37	Colindia Reserve	350	2								50		20			
38	Copes Lookout	510	1					1								
39	Cremorne Garden Plaza	550	9		1				9	3						
40	Cremorne Reserve	86,295	36	2	5	3		3	21		450	80	3000			
41	Darby Gardens	200	1								25		20			
42	David Earle Reserve	300	2			2										

Park Specific Materials Palette Schedule Part 3

#	Park	Park Size m2	Bench Seats	Picnic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
43	Doris Fitton Park	731	3							5						
44	Doris Street Reserve	500	1										150			
45	Dowling Street Road Reserve	400	2								20	3	100			
46	Dr Mary Booth Lookout	2,674	2	1		5										
47	East Avenue Road Reserve	500										200	200			
48	East Crescent Street Lookout	300	4													
49	Echo Street Reserve	600	2								50		50			
50	Ellis Lookout	400	2								70			40		
51	Ernest Place	750			2	10		1		5					1	
52	Euroka Street Playground	2,118	2			2		1				50				
53	Ex Coal Loader & Caltex Sites	27,593	10				2	1	3	13		400			1	
54	Ex Platypus Site Open Space	4,000														
55	Folly Point Reserve	1,465	1		1	1							1.5			
56	Former BP Site	24,874	9						3	8		1000	10			
57	Forsyth Park	47,860	9		1		2				1000					
58	Four Figs Park	400	1							2	70					
59	Fred Hutley Reserve	7,500	2	4				1								
60	Gannura Reserve	229		1												
61	Glenferrie Avenue Road Reserve	546									100					
62	Gore Cove Reserve	20,964														
63	Grasmere Childrens Park	1,900	4		1			1			200					

Park Specific Materials Palette Schedule Part 4

#	Park	Park Size m2	Bench Seats	Picnic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
64	Grasmere Reserve	9,120	1	1		30					50					
65	Green Park	19,389	2	4	1						3		100			
66	Guthrie Avenue Road Reserve	200	1								16		20			
67	Hamilton Reserve	6,500											300			
68	Harriette Street Road Closure	300	1					1								
69	Harry Howard Reserve	8,330				2										
70	Hayberry Street Road Closure	300	2													
71	Hayes Street Foreshore	550	1	2	1		1			1	30	50	30			
72	Henry Lawson Reserve	4,500	10		2	5				12						
73	Highview Avenue Pedestrian Link	110										20		30		
74	Hodgson Lookout	2,920							8			80				
75	Holdsworth Road Reserve	400									3					
76	Honda Road Reserve	110									3		5			
77	Hopkins Park	200		1							70					
78	Hunts Lookout	930									10		200			
79	Ilbery Park	1,970	5		1			1								
80	John Street Open Space	150				1					30	100	70			
81	Johnston Avenue Road Reserve	400									8	50	80			
82	Judith Ambler Reserve	2,600														
83	Kenneth Bolton Lookout	750														
84	Kesterton Park	4,020	9	2	1						250		20			

Park Specific Materials Palette Schedule Part 5

#	Park	Park Size m2	Bench Seats	Picnic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
85	King George Street Road Reserve	500	3										150			
86	King Street Road Reserve	800														
87	Kurraba Point Reserve	13,502	8							2	400					
88	Kurraba Wharf Reserve	700	3							7		150	150			
89	Lady Gowrie Lookout	348	6	1												
90	Lambert Street Gardens	300								1			40			
91	Langley Place	400								4						
92	Lavender Bay Foreshore	3,220	3							15				500		
93	Lithgow Street Road Closure	502	1													
94	Little Young Street Road Closure	280	1								150		150			
95	Lloyd Avenue Reserve	589				5					50		150			
96	Lloyd Rees Lookout	200	1									20				
97	Lodge Road Island	1,030									30					
98	Lodge Road Playground	2,076	2					1			130					
99	Lodge Road Road Reserve	400			1	2					20		10			
100	Lord Street Road Reserve	748	2													
101	Lower Spofforth Walk Reserve	220						1		1	45	48		400		
102	Manns Avenue Road Reserve	240	3													
103	Margaret Street Road Reserve	1,000									100		100			
104	Mary French Reserve	312														
105	Mater Gardens	1,500	3			1										

Park Specific Materials Palette Schedule Part 6

#	Park	Park Size m2	Bench Seats	Picnic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
106	May Gibbs Place	1,500	3			4				4						
107	McIntosh Lane Reserve	393														
108	Merlin Street Reserve	1,054														
109	Mil Mil Street Road Reserve	50	1													
110	Miller Street Gardens	1,300														
111	Milson Park	13,864	16	5	1	11		2		7	300					
112	Miss Gladys Carey Reserve	1,244	1													
113	Mitchell Street Park	400		1	1											
114	Mitchell Street Plaza	1,000	6		1	6										
115	Moodie Lane Reserve	366	3										300			
116	Mortlock Reserve	3,500														
117	Morton Lane Road Reserve	400									25					
118	Mount Street Plaza	1,300	20	7	3	20	1			9						
119	Neutral Bay Foreshore	240														
120	Neutral Street Road Reserve	200														
121	North Avenue Road Reserve	600									5	20	30			
122	North Sydney Civic Centre	3,500	16	4	3	1	2	2	3	17	60					
123	Nottingham Street Reserve	310														
124	O'Briens Gardens	380	2	1							26					
125	Olympic Park	500														

Park Specific Materials Palette Schedule Part 7

#	Park	Park Size m2	Bench Seats	Picnic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
126	Oyster Cove Reserve	3,000	1	1					5		100	20				
127	Paling Street Road Closure	441														
128	Phillips Street Playground	400	1													
129	Pine Street/Arkland Street Reserve	1,673									160		150			
130	Primrose Park	114,122	12	1	2		2	2			200	300				1
131	Prior Avenue Reserve	1,750	1													
132	Prospect Avenue Road Reserve	210	1			6					8					
133	Quibaree Park	2,030	1		1	3								50		
134	Reserve Street Road Reserve	300	1								30					
135	Richmond/Tobruk Pedestrian Link	1,500									150		200			
136	Ridge Street Road Closure	300	3						2							
137	Riley Street Road Closure	280	1			3					5		20			
138	River Road Pedestrian Link	180	2								100	30	120			
139	Robertson Lane Road Closure	150									20					
140	Rose Avenue Reserve	1,042	1													
141	Ryries Parade Road Closure	230	1										30			
142	Samora Avenue Road Closure	250									25	10	20			
143	Sawmillers Reserve	14,415	7	1	2	2								500		
144	Shirley Road Pedestrian Link	328	2								100					
145	Shellbank Reserve										10					
146	Sinclair Street Pedestrian Link	500									40					

Park Specific Materials Palette Schedule Part 8

#	Park	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
147	Sinclair Street Rose Garden	50									5					
148	Sirius Street Playground	1,061	2								40		40			
149	Smoothey Park	22,773	4					1		6	100		500			
150	Spains Wharf Lookout	293										10	10			
151	Spruson Street Road Reserve	700	1								50			50	1	
152	St Leonards Park	144,955	33	8	14	164	5	5		71				3000		
153	St Peters Park	1,226														
154	St Thomas Rest Park	19,262	7	4	2			1		18			600			
155	Stanton Lookout	660	3			7				3						
156	Sugar Works Reserve	1,407	1						18		150	60	200			
157	Tiley Street Road Closure	1,633	3			2					150		200			
158	Tobruk Avenue Lookout	1,274	3								100					
159	Toongarah Road Reserve	220	1								100		100			
160	Tunks Park	132,700	13		3	1	1	1		8	500		200			1
161	Tye Park	330		1												
162	Victoria Street Playground	385	2					1			35					
163	Victoria/Mitchell Street Junction	437	2													
164	Walker Street Road Reserve	2,087	5			3			4		400	50	300			
165	Walumetta Park	4,767														
166	Warringa Park	3,941	4		1	4		1		2	100					
167	Warringa Road Road Closure	520									500		200			

Park Specific Materials Palette Schedule Part 9

#	Park	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
168	Watersleigh Park	700	3		1					2			20			
169	Watt Park	10,500	4	1	1			2		4	40		150			
170	Waverton Park	40,392	13	2	3	1		3			400		100			3
171	Weaver Park	1,356	2		1					3			10			
172	Weringa Avenue Road Reserve	487									50		50			
173	West Crescent Street Road Reserve	70									10			5		
174	Westleigh Lane Road Closure	50									2	10	10			
175	Westleigh Street Road Closure	220									20		15			
176	Whatmore Lane Reserve	100	3								10	30	100			
177	Will Ashton Lookout	1,232	8	1	1			1					100			
178	Willow Tree Park	2,800									100		30			
179	Wilson Street Road Closure	2,500										60	50			
180	Winnie Street Laneway Reserve	538														
181	Winslow Lane Road Closure	80									10		10			
182	Winslow Street Road Closure	860	1								20		20			
183	Wonga Road Reserve	10,217														
184	Woolcott Street Open Space	140	2	1	1			1				200	30			1
185	Wrixton Park	207	4								40					
186	Wyagdon Street Reserve	2,870				5					80		70			
187	Wyagdon/Alfred Street North Reserve	889														
188	Wyong Road Open Space	1,000	1								100	50	150			

Park Specific Materials Palette Schedule Part 10

#	Park	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
189	Young Street/Earle Street Island	350								1			20			

ITEMS	Park Size m2	Bench Seats	Picinic tables	Rubbish Bins	Bollards	Bike racks	Bubblers	Bollard Lights	Post Top lights	Ordinance fencing/lm	Pipe and Wire Fence/lm	Concrete footpaths/lm	Bitumen footpaths/lm	Notice boards	BBQ
TOTALS	n/a	517	101	86	357	18	55	108	296	10900	3553	10901.5	5650	3	8

8.3 Indicative Materials and Furniture



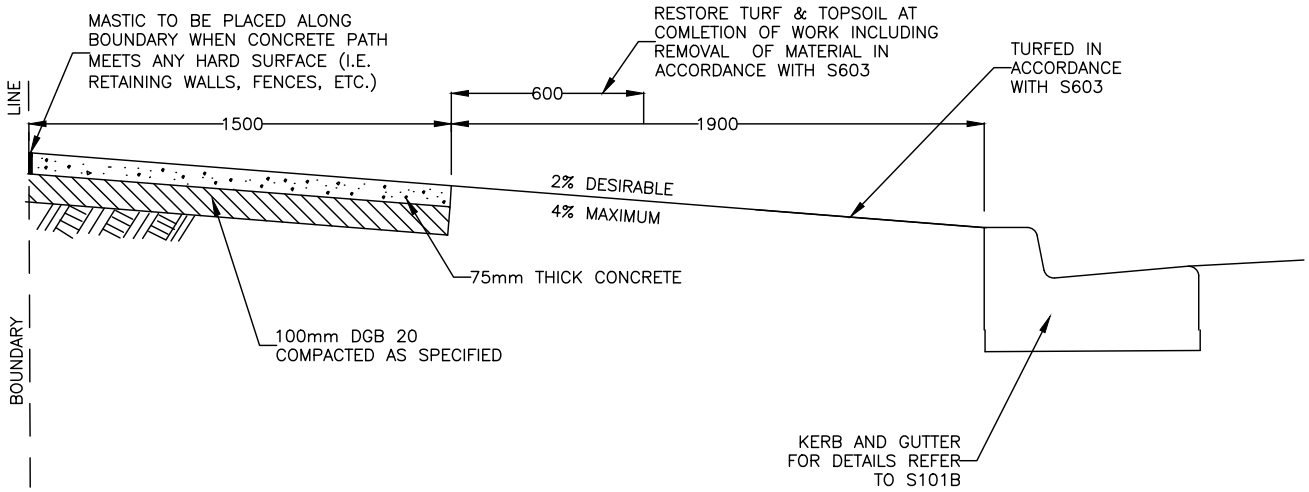






Hardscape

Typical concrete footpath detail



Concrete footpath

1.5m wide concrete footpath

Notes

1. Footpath width 1500mm or as otherwise specified.

2. Turf to be selected Buffalo or Couch as directed.

3. Topsoil as per section 19 of council's specification.

4. At footpath crossing, footpath to be constructed as per council standard vehicular crossing and kerb and gutter detail.

5. Footpath to be constructed in accordance with council specification.

6. Construction joints every 1.5m.

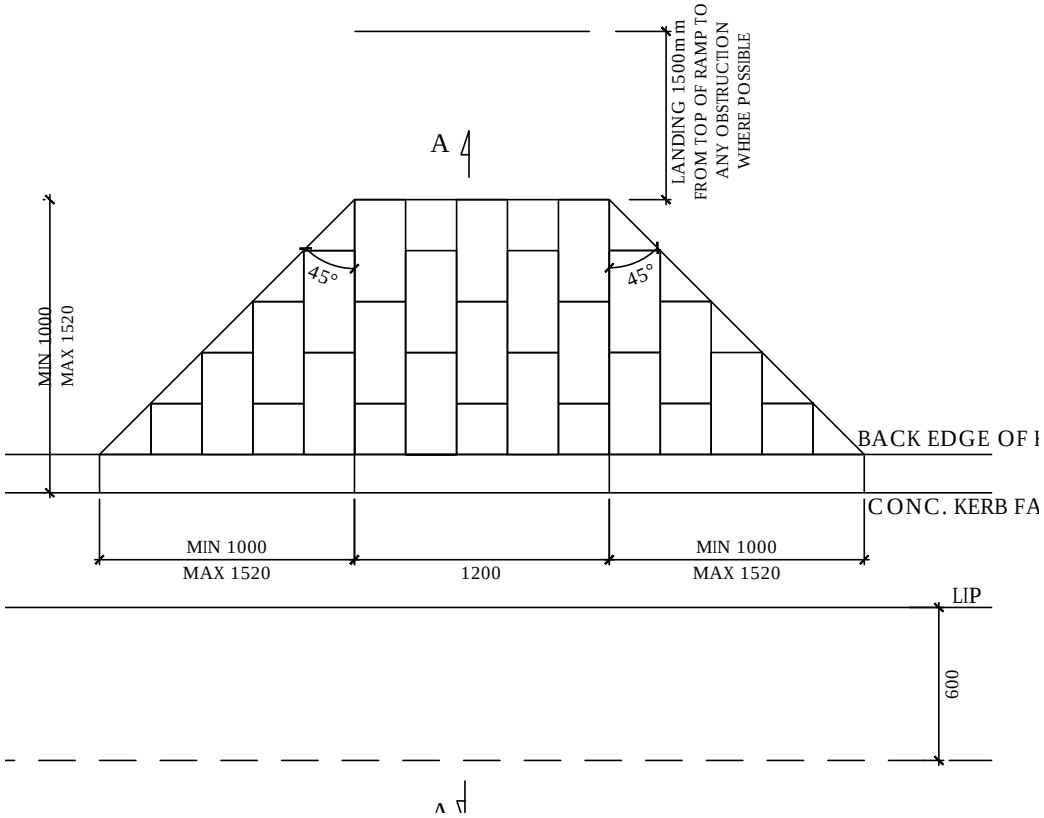
7. Expansion joints every 6m using bitumen impregnated preformed jointing material.

8. Concrete surface shall be finished according to the specification.

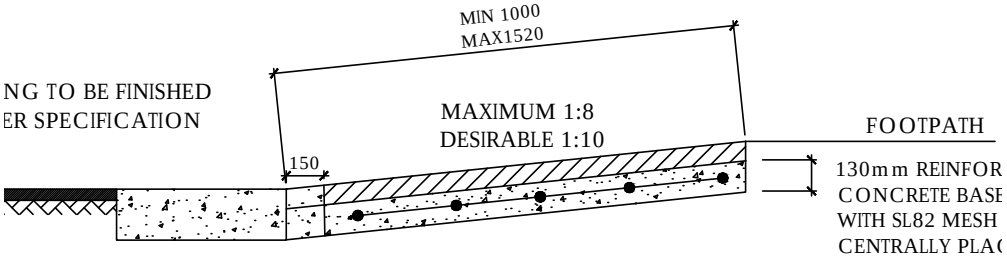
9. Mastic to be placed along edge of path when placed against any hard surface.

Hardscape

Typical kerb ramp



KERB RAMP



Notes

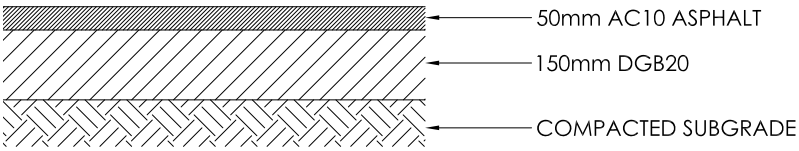
1. All kerb ramps shall be constructed in concrete.

2. CJ refers to construction joint.

3. For ramps greater than 1520mm, maximum grade is 1 in 14.

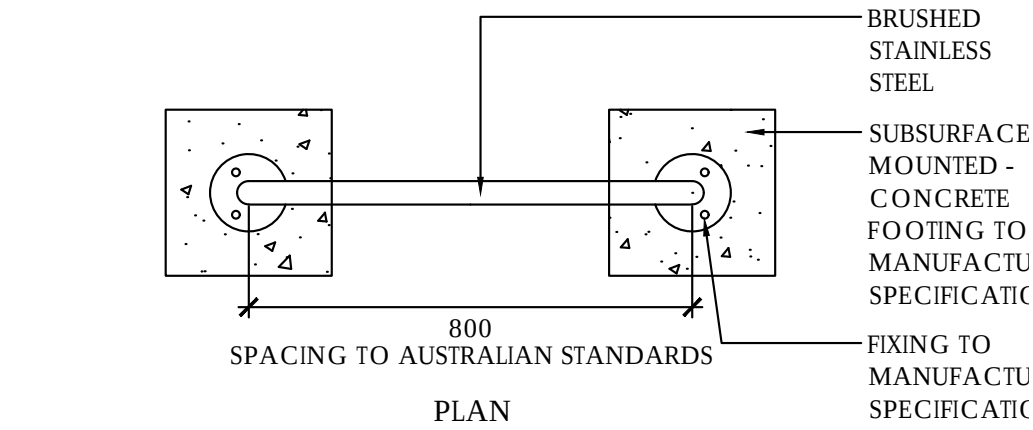
Hardscape

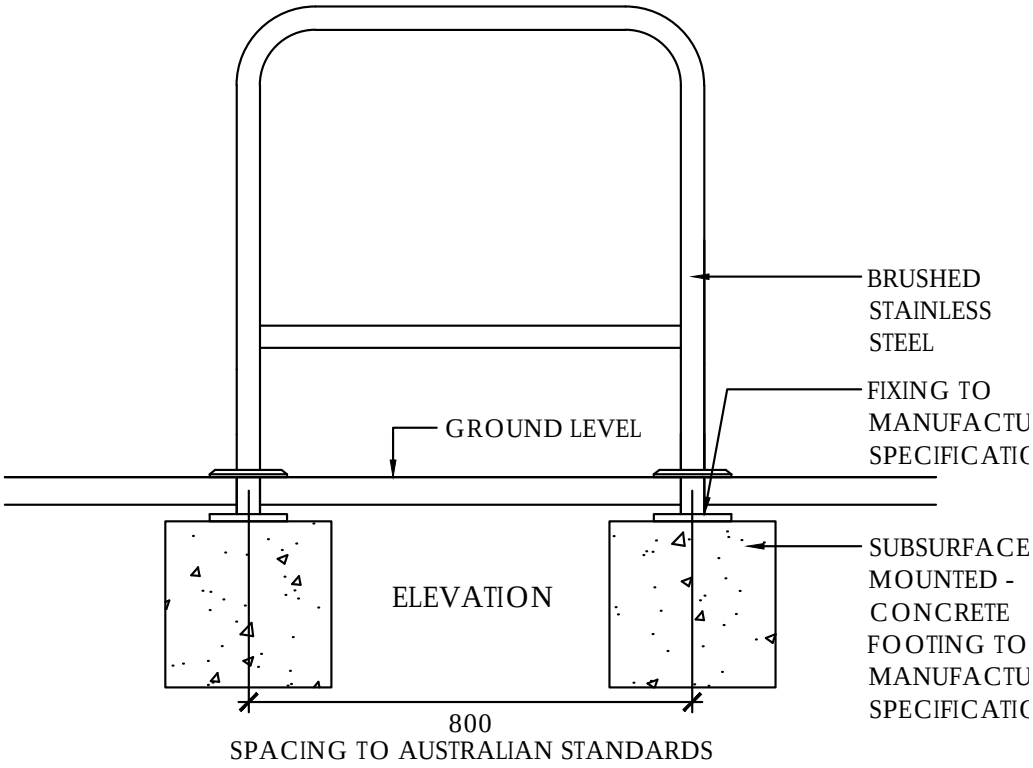
Typical asphalt footpath



Furniture and Fixtures

Typical bicycle parking





Notes

1. Subsurface mounted where possible.

2. Brushed stainless steel (integral finish).

3. Ideally bike racks shall be located in areas where footpaths are widened. Bike racks should also be located where there is a change in transport type - for instance at ferry terminals, bus stops and train stations. They should also be located along cycleways and at cycle destinations.

Stainless steel bike racks

Furniture and Fixtures

Typical picnic seating

Picnic table and benches

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Table and benches - Refer 'Typical bench detail'.

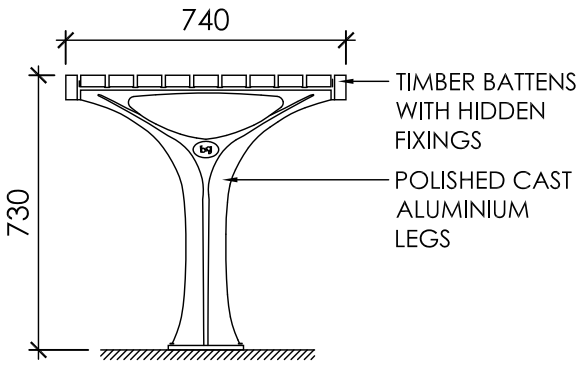
4. Three person seats.

5. Robust design.

6. Simple design with clean lines.

7. Fixed seating. M10 treated rod epoxy grouting to concrete footing below pavement. Install dome nuts to exposed rods to table legs.

8. Image indicative of style only.



Furniture and Fixtures

Typical seating with back

Park Seat

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

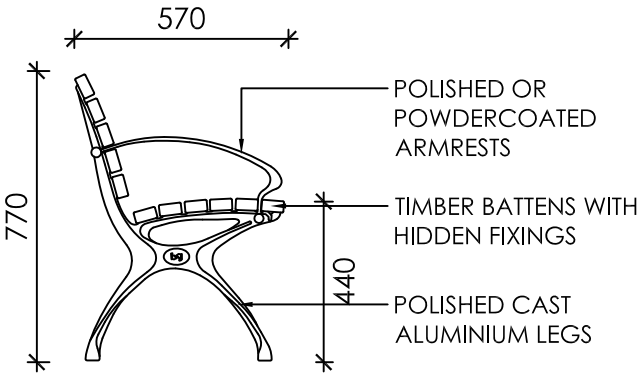
4. Robust design.

5. Simple design with clean lines.

6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

7. Skateboard deterrents optional.

8. Image indicative of style only.



Typical bench

Park bench

Notes

1. Timber battens with hidden fixings. Timber to be oiled. Option for aluminium or reconstituted wood battens.

2. Polished cast aluminium legs.

3. Three person seats.

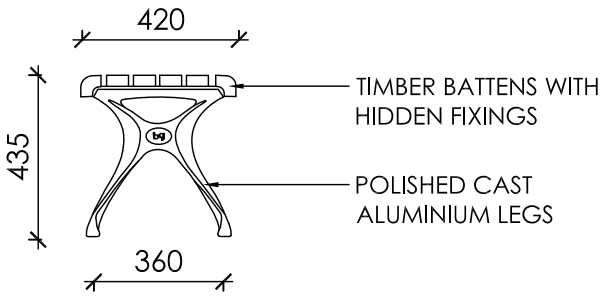
4. Robust design.

5. Simple design with clean lines.

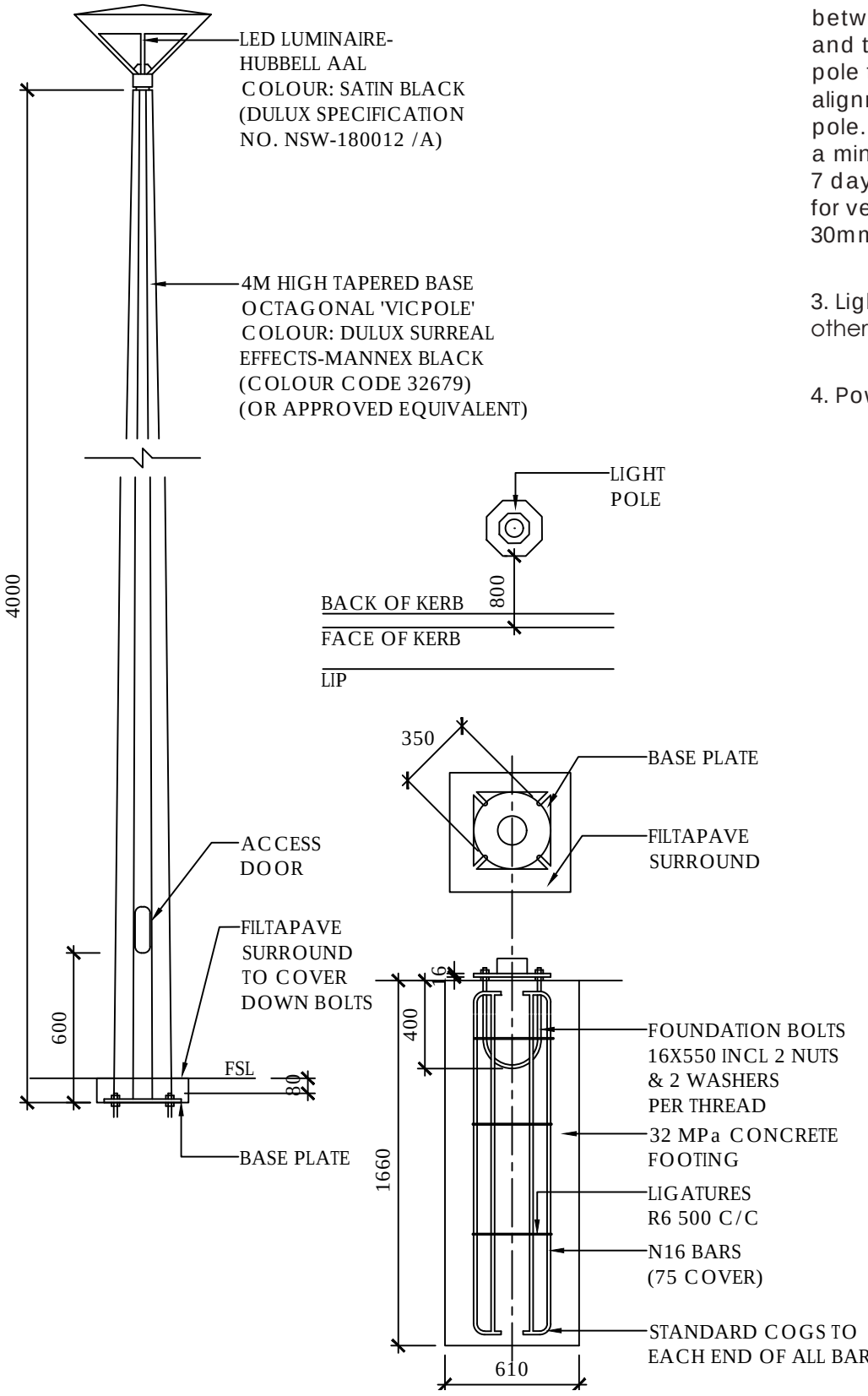
6. Fixed seating preferably sub-surface. M10 treated rod epoxy grouting to concrete footing below pavement. Screw threaded rod into concealed fixing.

7. Skateboard deterrents optional.

8. Image indicative of style only.



Typical octagonal light pole (Public Plazas and spaces)



Notes

1. For installation detail. Refer to manufacturer's specification.

2. Allow for grout packing between the concrete footing and the base plate of the light pole to achieve a vertical alignment when erecting the pole. The grout pack shall have a minimum strength of 32MPa at 7 days. The maximum tolerance for vertical misalignment will be 30mm from the vertical.

3. Light colour warmth to match other fittings.

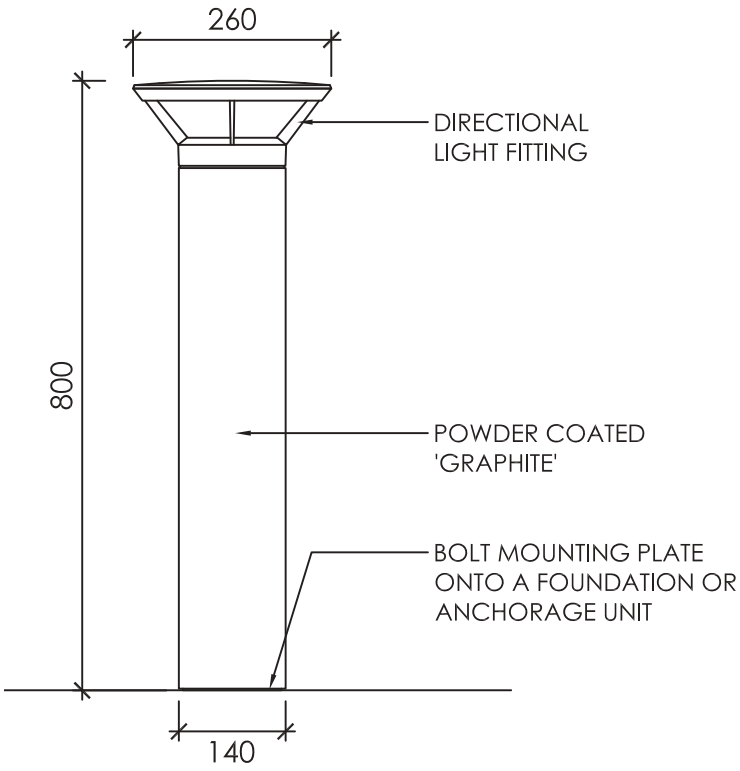
4. Powder coated in 'Graphite'.

Post top light (Parks and Plazas)

Furniture and Fixtures

Typical illuminated bollard

Illuminated Bollard



Notes

1. Fixing: Bolted with a mounting plate onto a foundation.

2. Light fittings shall be directional.

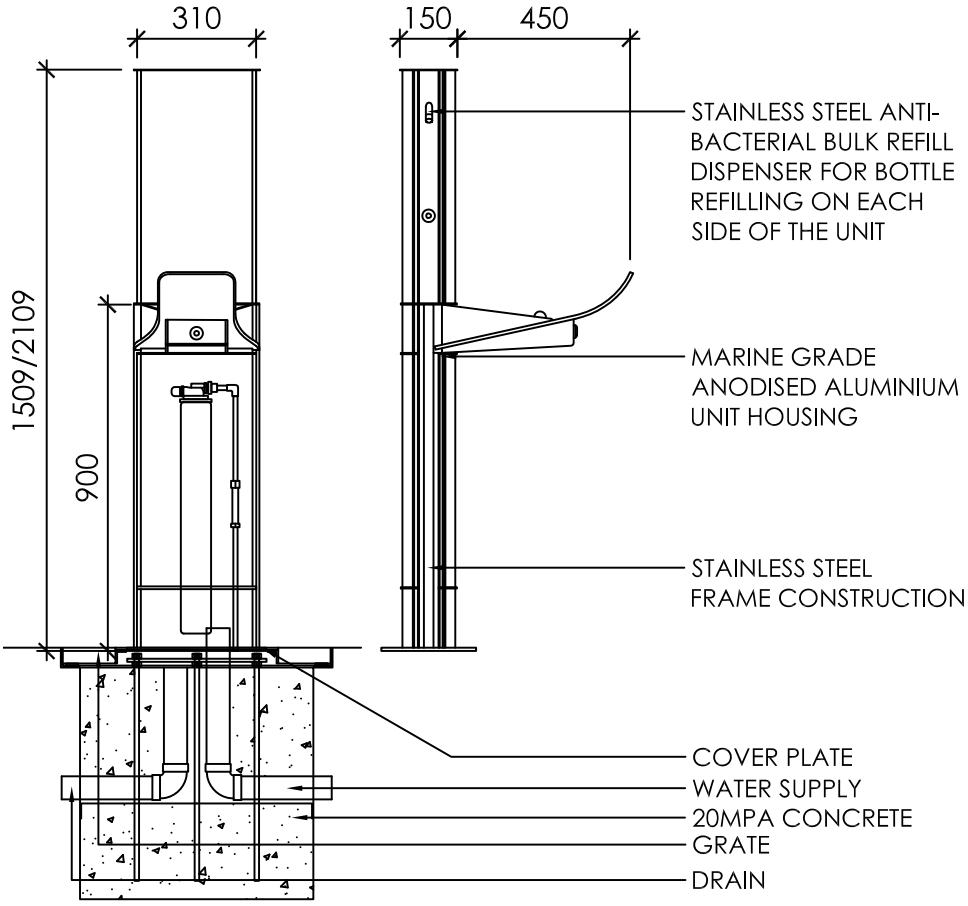
3. Powder coated 'Graphite'.

4. Fitting to match post top (parks and plazas) luminaire range.

5. Bolt mounting plate onto foundation or anchorage unit to manufacturers specifications.

Furniture and Fixtures

Typical bottle refill station with drinking fountain



Bottle refilling station with drinking fountain

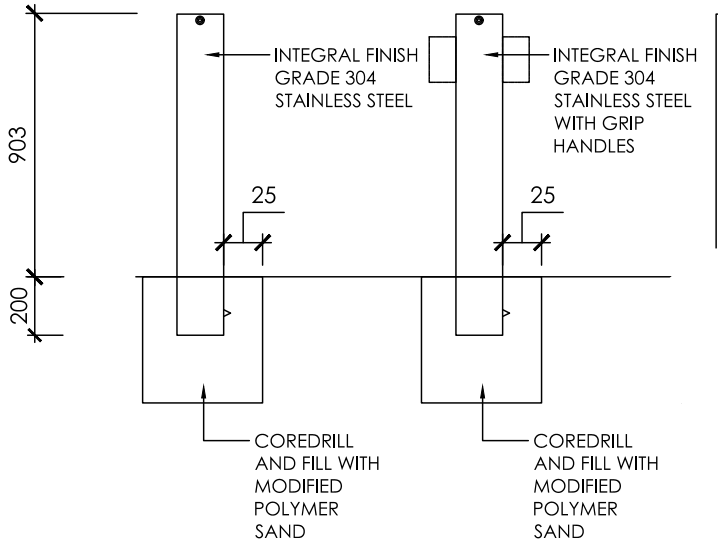
Bottle refilling station with drinking fountain

Notes

1. Wheelchair accessible drinking fountain.
2. 1500mm high refill station.
3. Stainless steel bulk refill dispenser for bottle refilling each side of the unit.
4. Stainless steel frame construction.
5. Marine grade anodised aluminium unit housing.
6. Optional filtered water unit.
7. Multiple bottle refill points.
8. Excavate a hole 440 x 730 x 500mm.
9. Footing cage and drainage tray installed with the top of the drainage tray flush with ground level.
10. Connect plumbing for drainage and water supply.

Furniture and Fixtures

Typical 125mm bollard - Removable



Locking and removable bollard

Locking and removable bollard with grip handles

Notes

1. Integral finish grade 304 stainless steel.

2. Bollards are to be subsurface fixed.

3. Finish: Linished.

4. Optional reflective tape.

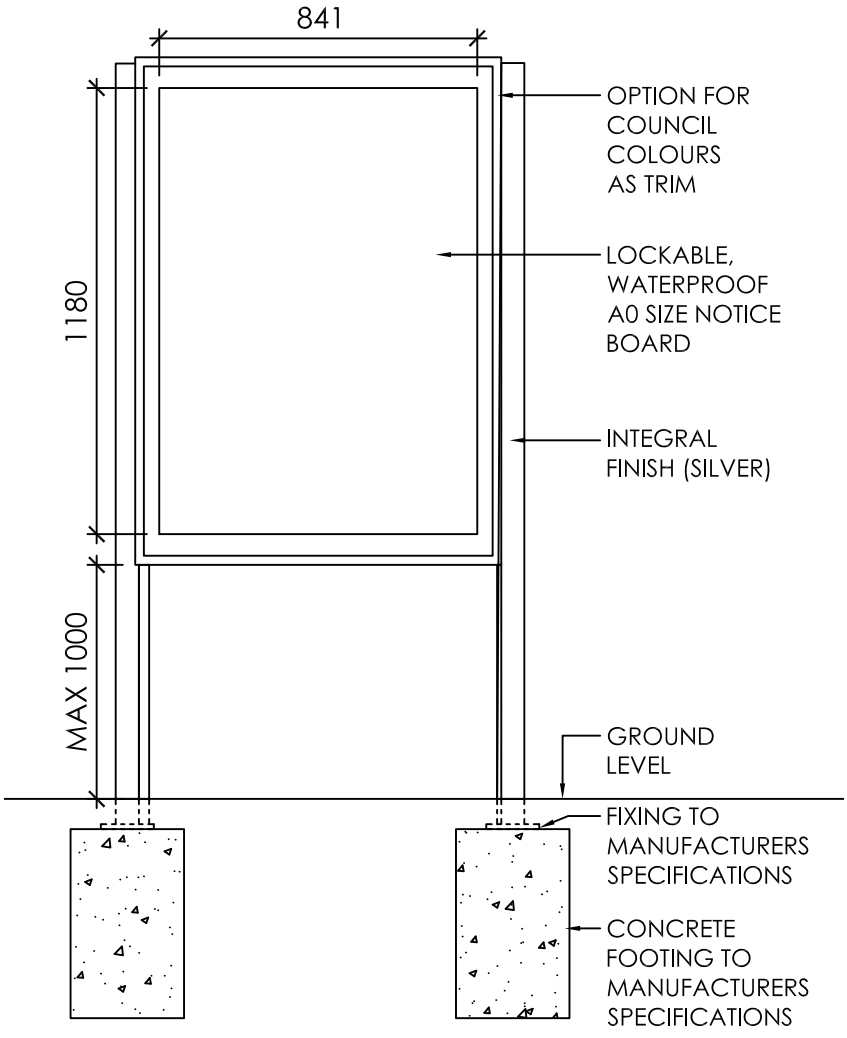
5. 900mm high bollard.

Locking and removable bollard
(With optional reflective tape)

Furniture and Fixtures

Typical community notice board - free standing

Indicative illustration of free standing community noticeboard



Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Weather proof seals.

9. Stainless steel hinges incorporated into the swing door.

10. Manual or gas struts door stays.

11. 3mm poly carbonate or acrylic cover.

12. Optional anti-graffiti film applied to cover.

13. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Furniture and Fixtures

Typical community noticeboard - wall mounted

Indicative illustration of wall mounted noticeboard in village bus stop (Portrait)

Example of A0 noticeboard (Landscape)

Notes

1. Integral finish (silver) to frame.

2. Option for council colours as a trim.

3. Lockable.

4. Waterproof.

5. Internal size A0 (1180 x 841mm).

6. Noticeboard - portrait orientation.

7. Base of noticeboard maximum 1m from ground level.

8. Wall mounted.

9. Weather proof seals.

10. Stainless steel hinges incorporated into the swing door.

11. Manual or gas struts door stays.

12. All fixings to be concealed.

12. 3mm Poly carbonate or Acrylic cover.

13. Optional anti-graffiti film applied to cover.

14. Sign frame finishes range from anodised matt silver to standard powder coat colours.

Furniture and Fixtures

Typical plaques

Proposed plaque

Existing plaque

Notes

1. Brass.

2. Rear hidden fixings.

3. Includes North Sydney Council Logo.

Furniture and Fixtures

Typical bollard - wood plastic composite

'Red earth' bollard

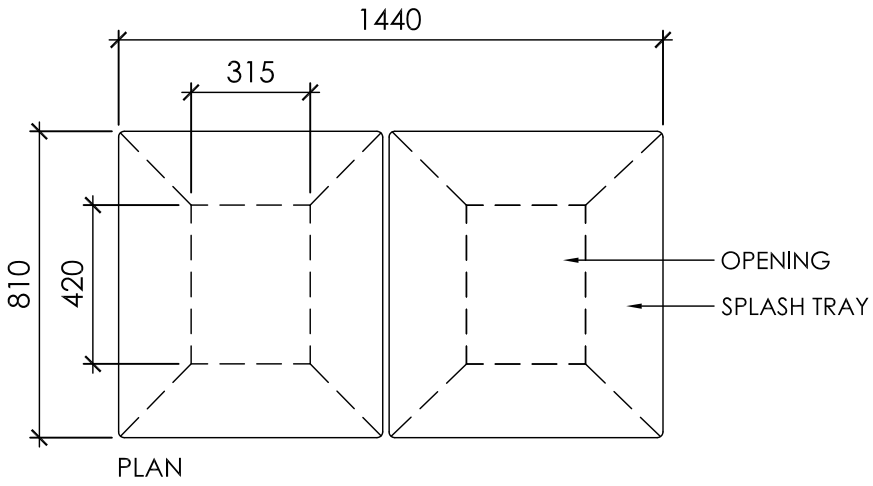
Notes

1. Integral finish 'Red Earth' (warm light brown).

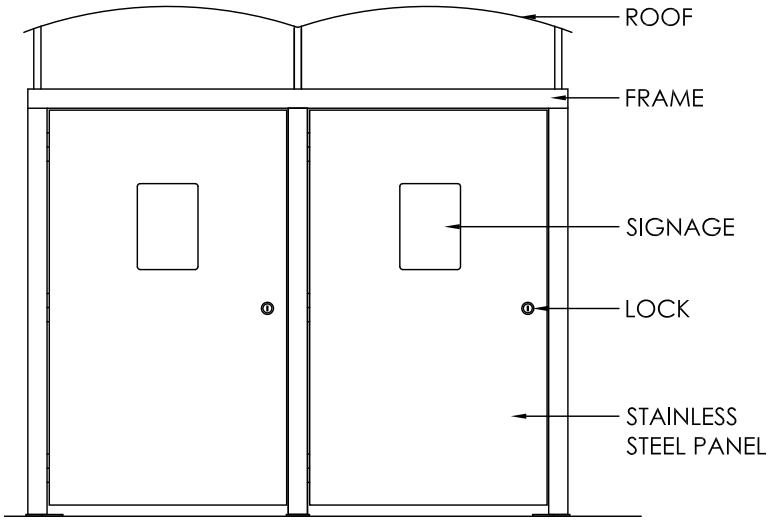
2. Bollards are to be subsurface fixed.

Furniture and Fixtures

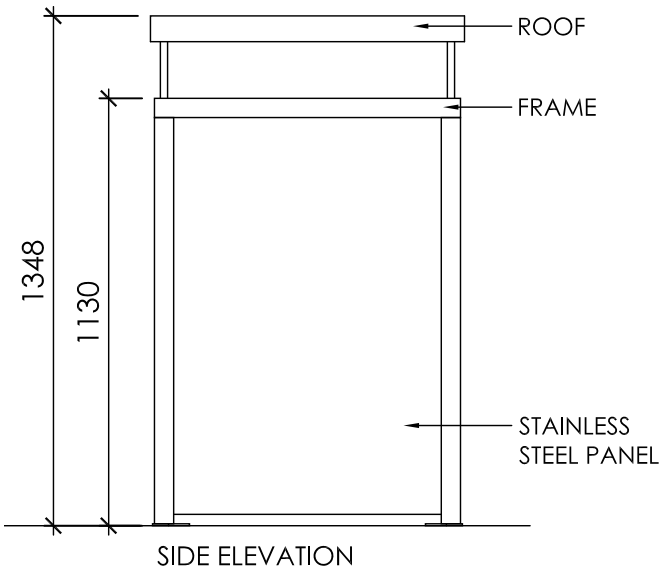
Typical rubbish bins



PLAN



FRONT ELEVATION



SIDE ELEVATION

Notes

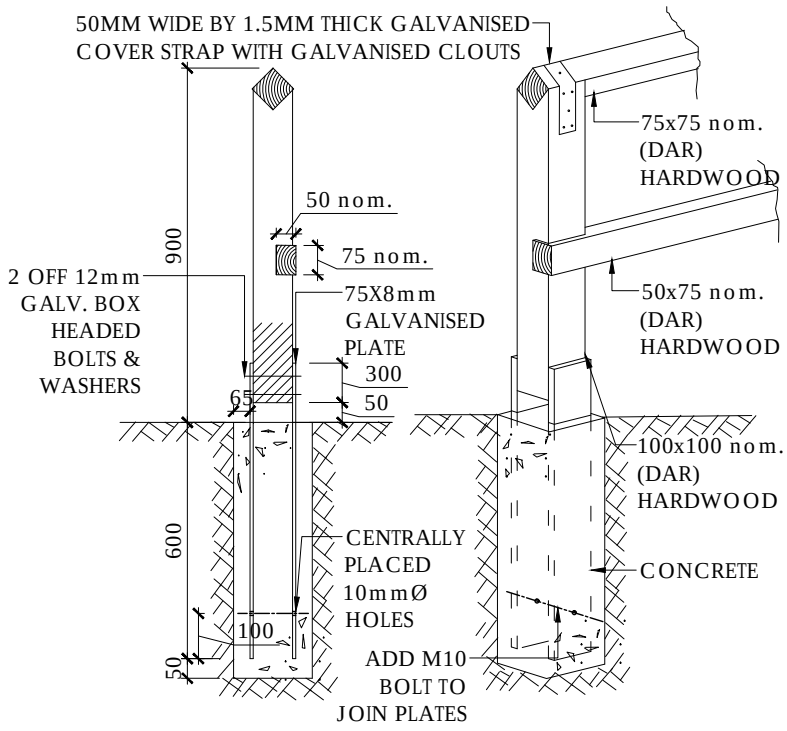
1. Integral finish (Stainless Steel).

2. Bins are to be subsurface fixed.

3. Equal or equivalent to WBE-240L-DUAL Bin by SFA.

Furniture and Fixtures

Typical ordinance rail fencing details



Composite wood (option)

Composite wood (option)

Notes

Timber

All exposed sharp edges shall be removed after dressing.

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Fixings

All joints shall be primed before fixing

All fixings shall be galvanised.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations

Spacing of posts shall be a maximum of 3.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

All top rails to be sanded free of splinters prior to painting.

Wire

PVC coated wire is to be used where needed .

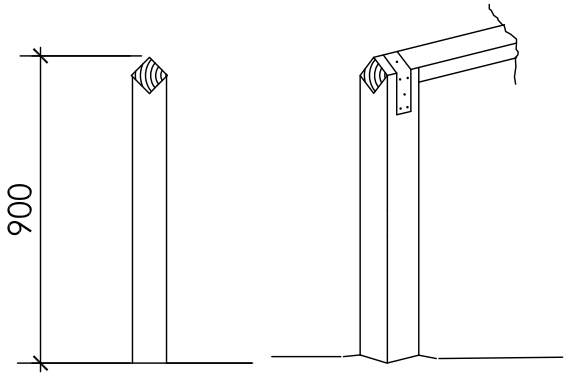
Option to use composite wood / plastic to ensure against rot. Also to alleviate the need to paint. e.g. Cosset 'Evertuff' recycled wood plastic composite post and rail fencing or Moodie 'MoodieR Arris Rail Fence' Code: 73944 Plastic/ wood composite. RoocycleET (Charcoal) (Approved equal alternative product may also be used).

Wood plastic composite can be painted if required.

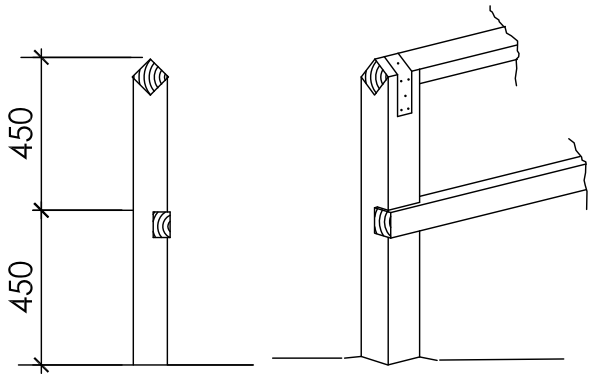
Furniture and Fixtures

Typical ordinance fence

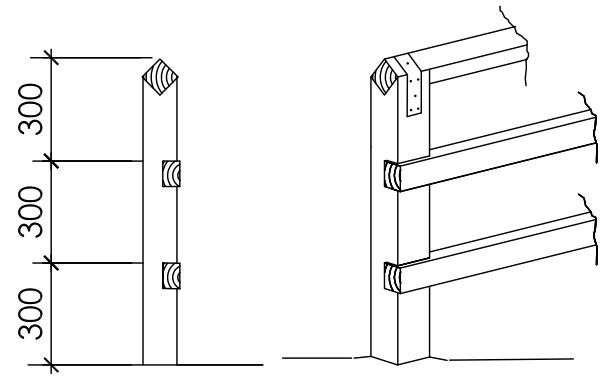
TYPE 1



TYPE 2



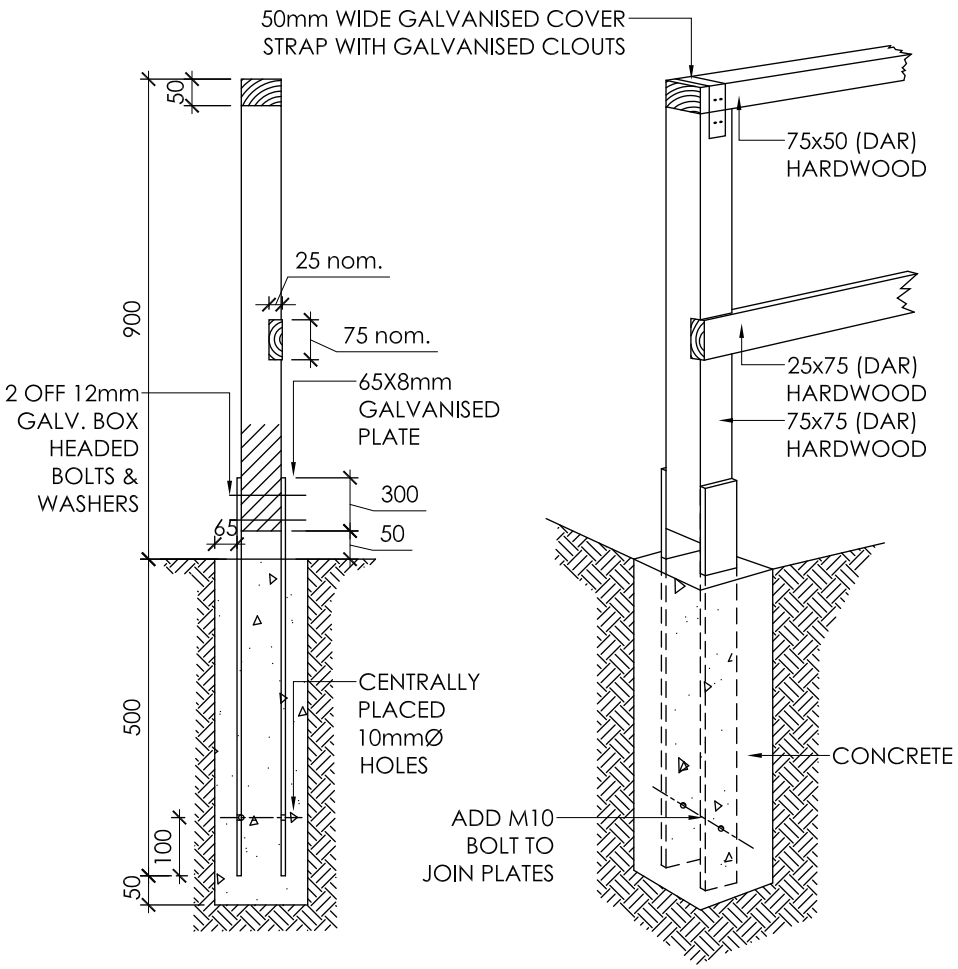
TYPE 3



Notes

1. All details as per 'Ordinance rail fencing details'.

Typical ordinance handrail detail



Notes

Timber

All exposed sharp edges shall be removed after dressing.

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Fixings

All joints shall be primed before fixing.

All fixings shall be galvanised.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a maximum of 3.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of 'North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

All top rails to be sanded free of splinters prior to painting.

Wire

PVC coated wire is to be used where needed.

Option to use composite wood / plastic to ensure against rot. Also to alleviate the need to paint. e.g. Cosset 'Evertuff' recycled wood plastic composite post and rail fencing or (Approved equal alternative product may also be used).

Wood plastic composite can be painted if required.

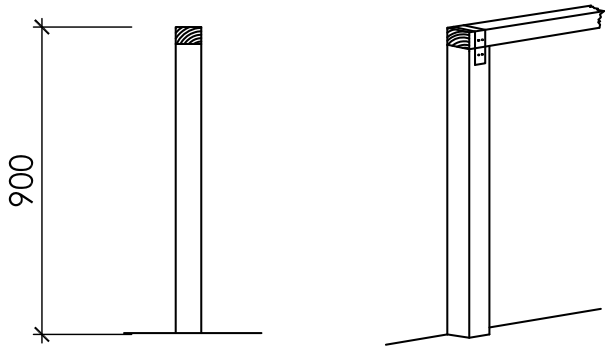
Furniture and Fixtures

Typical ordinance handrail construction

Notes

1. Refer to ‘Ordinance handrail detail’.

TYPE 4



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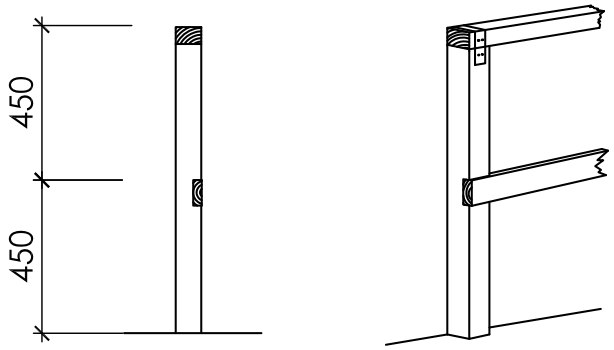

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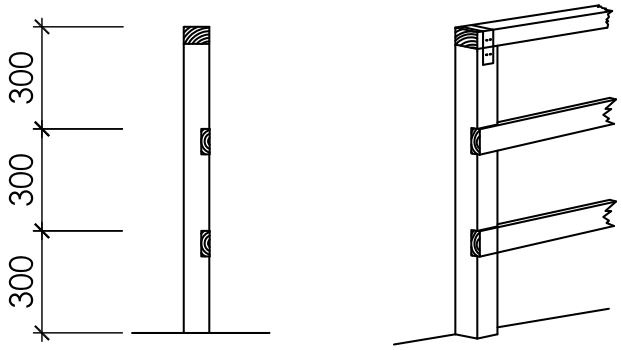
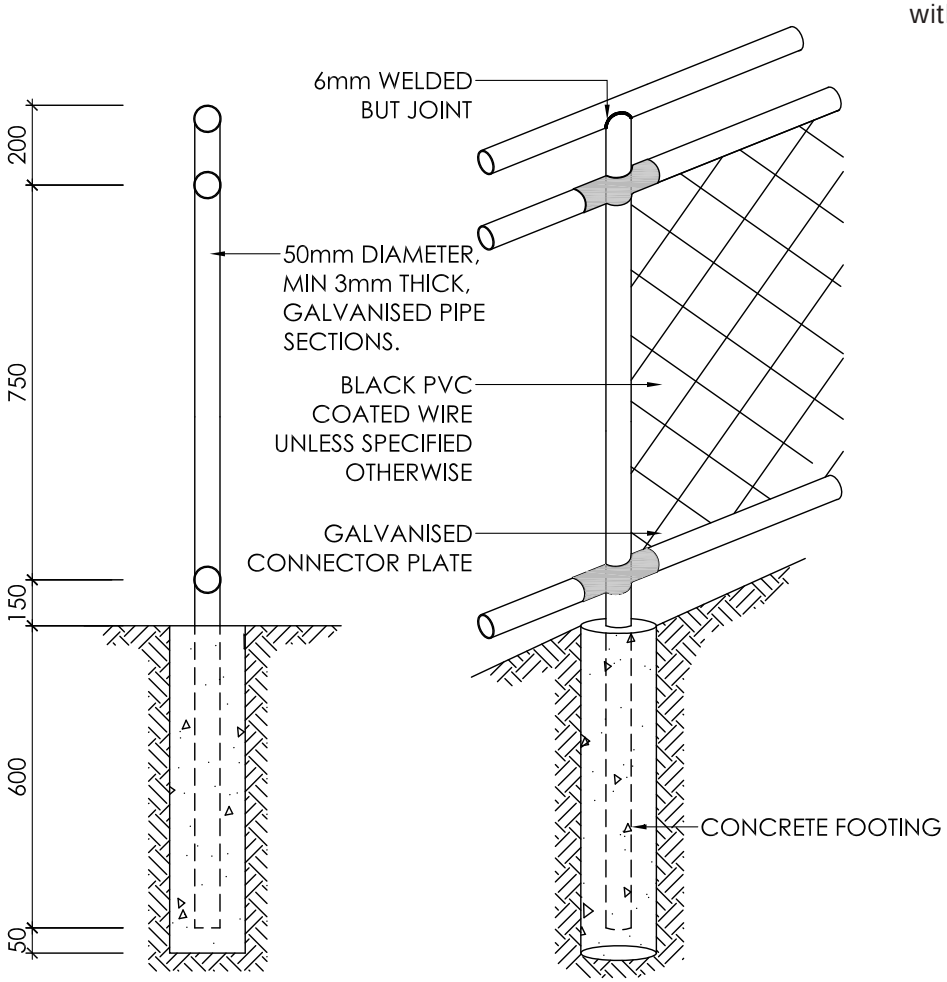


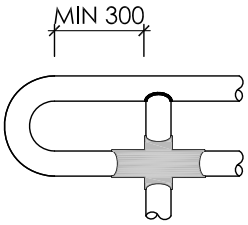
Furniture and Fixtures

Typical pipe and wire pedestrian fence details

Notes

1. All works to be in accordance with AS1428.1.





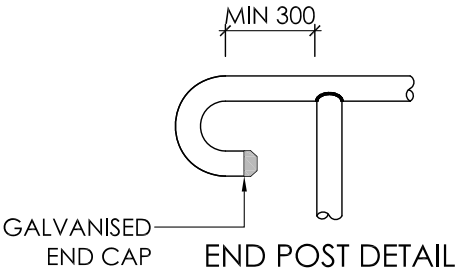
END POST DETAIL

Furniture and Fixtures

Typical pipe and wire fence details

Notes

1. All works to be in accordance with AS1428.1.



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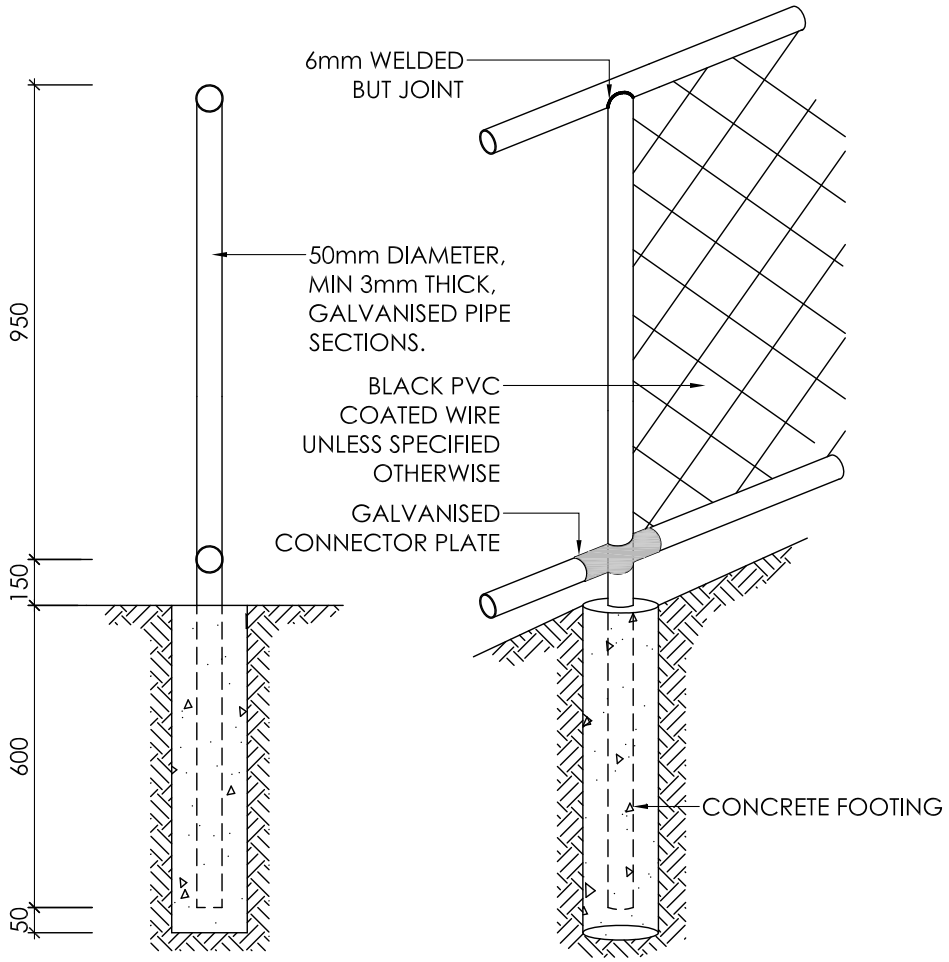
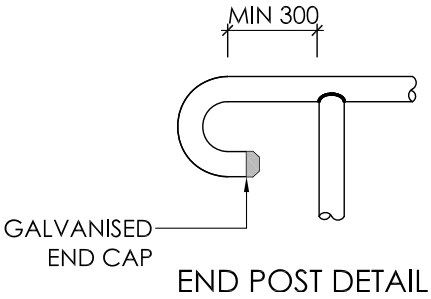


Typical pipe fence details



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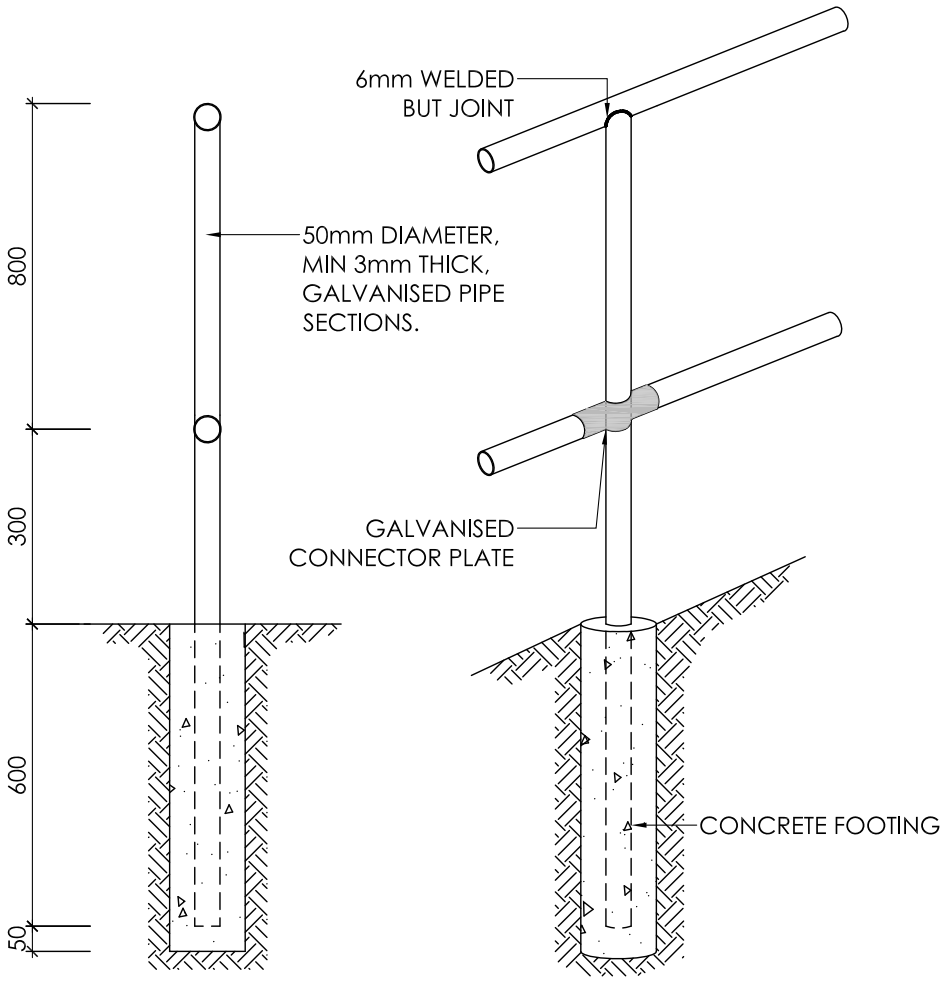
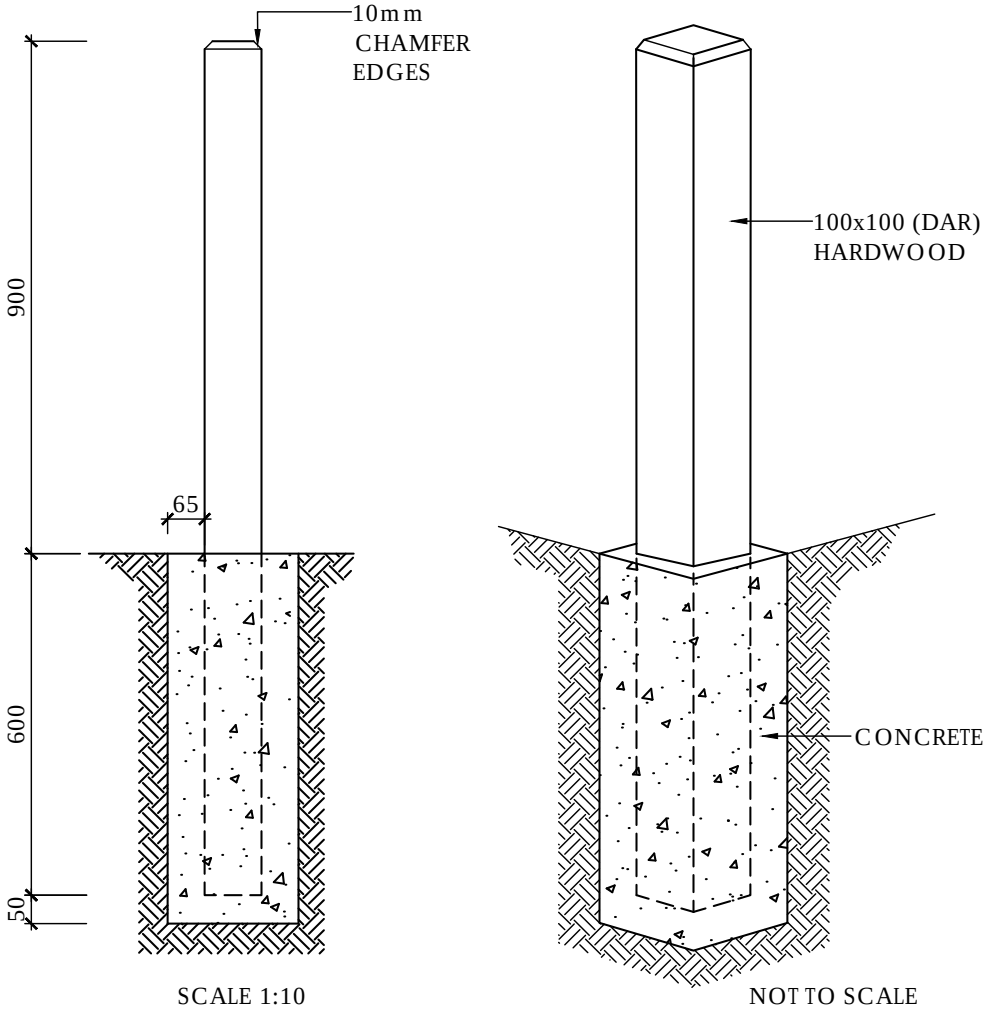


Notes

1. All works to be in accordance with AS1428.1.

Furniture and Fixtures

Typical post fence details



SCALE 1:10

NOT TO SCALE

Notes

Timber

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a minimum of 1.2m and a maximum of 2.0m.

Paint

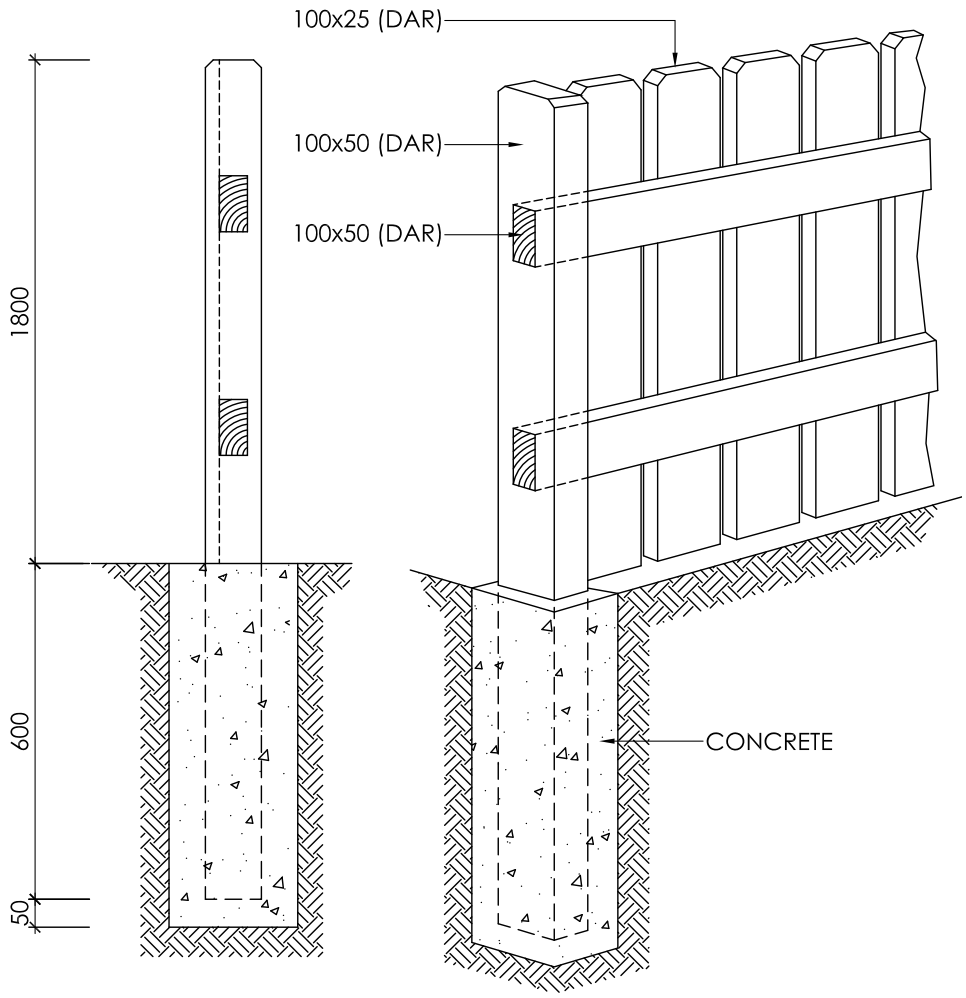
All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of 'North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre..

Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux .

Furniture and Fixtures

Typical paling fence details post footing



Notes

Timber

All timber to be dressed all round with minimum stress grade F17 hardwood.

All timber shall be treated against white ants, termites, rot and other similar pests.

Posts

Posts are to be plumb and embedded into concrete with a minimum cover of 50mm into undisturbed soil foundations.

Spacing of posts shall be a maximum of 3.0m.

Paint

All paint shall be painted on a white sealer primer base.

Street fences shall be painted with two coats of North Sydney Council Paint Formula - Dulux Weathershield Gloss Acrylic Vivid White Base tinted using Dulux Authentic Colour Tinters as EE(Ochre) 13.5; LL (Strong Red) 17.5; XX (Yellow) 62.5. Dosage is per litre.

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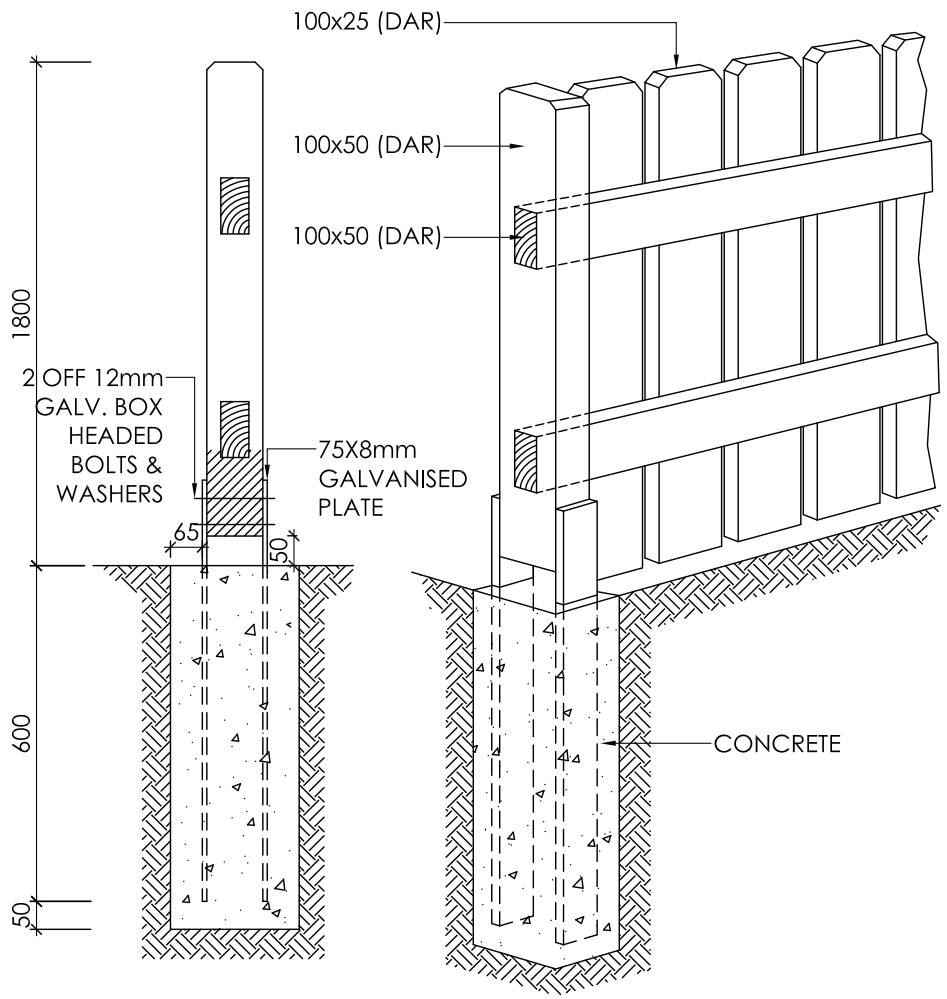
Typical paling fence details steel footing



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All timber shall be treated against white ants, termites, rot and other similar pests.

Posts

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Spacing of posts shall be a maximum of 3.0m.

Paint

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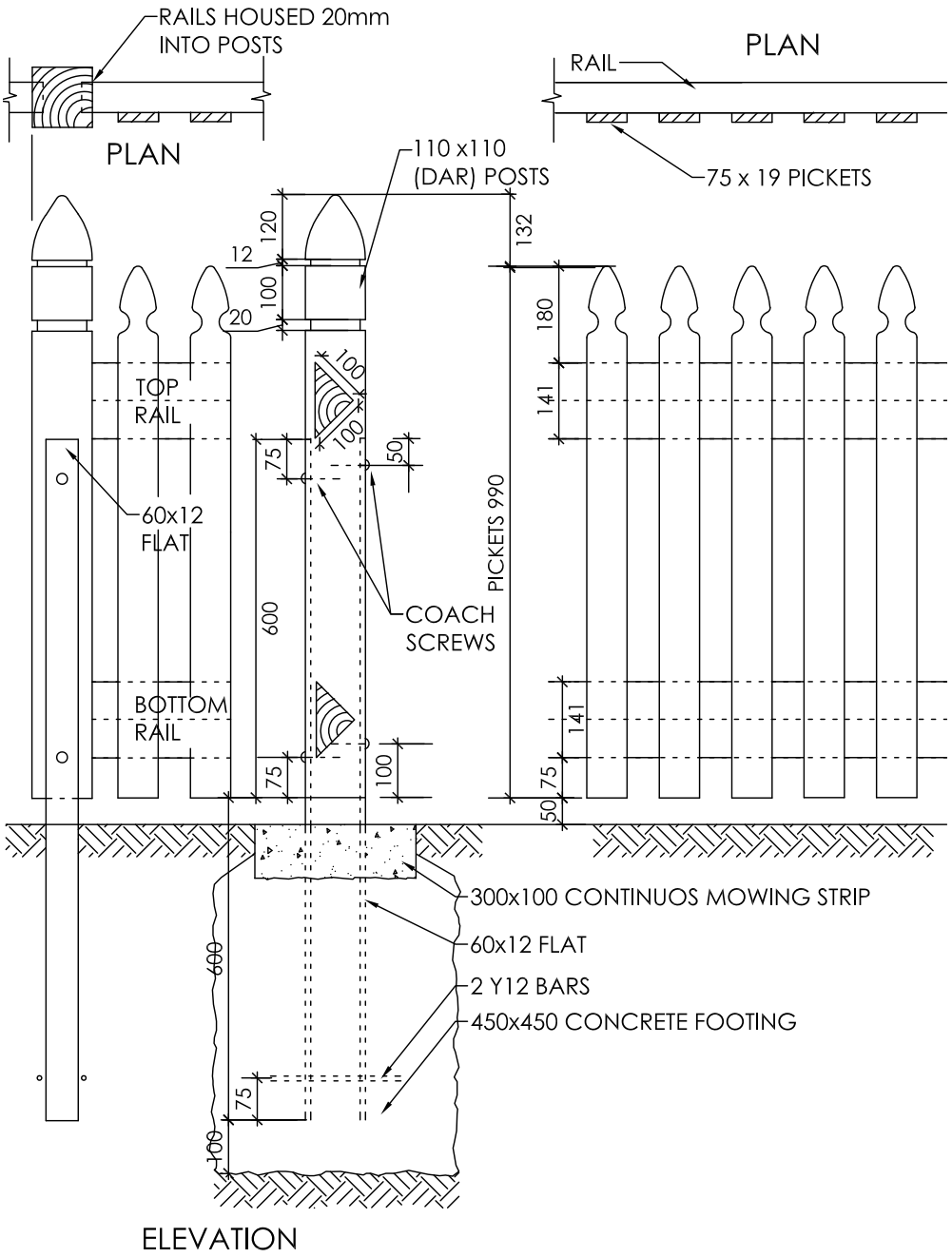
Park fences shall be painted with two coats of 'Deep Brunswick Green' gloss weathershield acrylic by Dulux.

Typical picket fence with concrete footing



Notes

All dimensions in mm.

All timber shall be dar hardwood.

Timber shall be painted with one coat of emery chemicals emer-linseed oil primer or approved equivalent.

Timber shall be painted with two coats of emerguard semi gloss enamel.

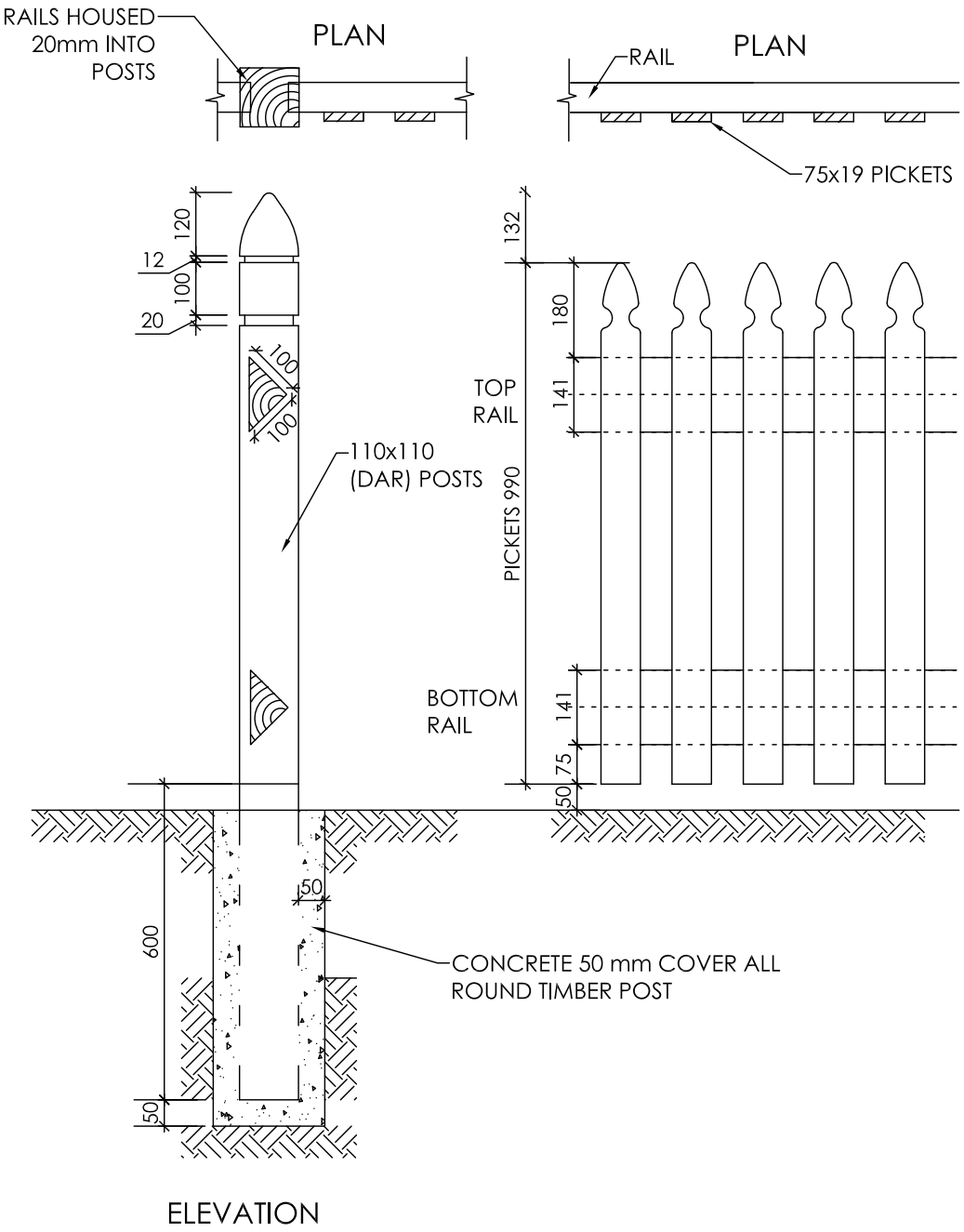
Colour to match Dulux chroma angel dust 3611.

Screws and coach bolts to be stainless steel.

Backs of pickets, face of rails and all joints to be primed prior to assembly.

Furniture and Fixtures

Typical picket fence with timber post footing



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All dimensions in mm.

All timber shall be dar hardwood.

Timber shall be painted with one coat of emery chemicals emer-linseed oil primer or approved equivalent.

Timber shall be painted with two coats of emerguard semi gloss enamel.

Colour to match Dulux chroma angel dust 3611.

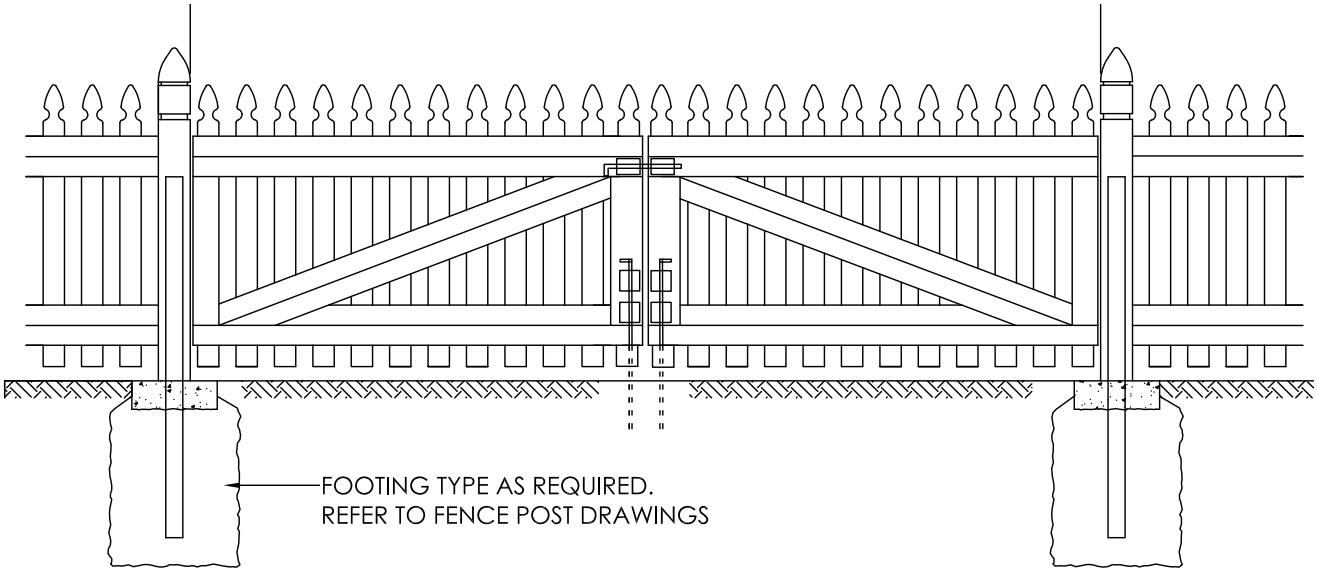
Screws and coach bolts to be stainless steel.

Backs of pickets, face of rails and all joints to be primed prior to assembly.

Typical picket fence gates

Notes

To be read in conjunction with picket fence details. Gate hinges to be 200mm barrel bolts to permit securing in the open position gates to be fitted with a self locking child resistant latch.



8.4 Materials palette

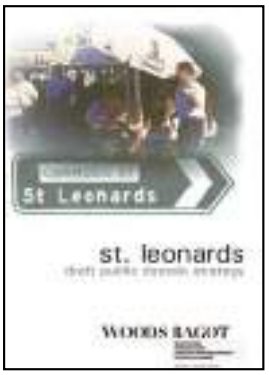
(Approved equal alternative product may also be used)

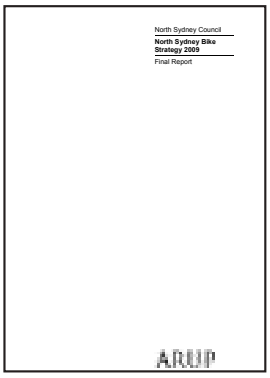
PARKS AND OPEN SPACE MATERIALS PALETTE	
ITEM	MAIN STREET / PARK/ OPEN SPACE
FOOTPATH AND ROAD WORKS DRAWINGS	
KERB AND GUTTER	Material: Concrete Finish: Finished with a steel trowel
PAVING - FOOTPATH	Material: Concrete footpath 1.2m or 1.5m wide. Finish: Cove Asphalt to only be used where it has been used previously nearby or if footings are restricted by tree roots.
KERB RAMPS	Material: Concrete Finish: Cove
LANDSCAPE DRAWINGS	
TREE PIT BASE TREATMENTS - EXISTING TREE	Material: Mulch to base of tree.
TREE PIT BASE TREATMENTS - PROPOSED TREE	Tree pit with steel edge min. 1m x1.6m tree pit.
FENCE DRAWINGS	
FENCE	Ordinance fence Material: Option for composite wood /plastic in addition to timber

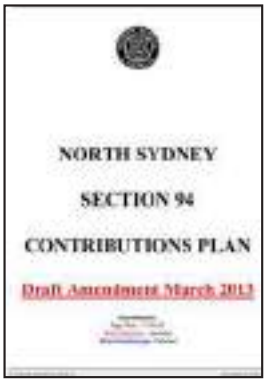
ITEM	MAIN STREET / PARK/ OPEN SPACE
FIXTURES - FURNITURE	
SEATING	Timber Park Bench 2m long with back rest Equal or equivalent to Urban Seat with Jarrah timber by Botton and Gardiner. Fixing: Subsurface fixing Timber Park Bench 2m long Equal or equivalent to Bench seat with Jarrah timber by Botton and Gardiner. Fixing: Subsurface fixing Picnic table setting to match individual benches (timber battens) Equal or equivalent to Picnic table with Jarrah timber by Botton and Gardiner. Fixing: Subsurface fixing
RUBBISH BINS	Material: Stainless steel Fixing: Subsurface mounting Equal or equivalent to WBE-240L-DUAL Bin by SFA.
125mm BOLLARD - REMOVEABLE	900mm high stainless steel bollard Finish: Linished Fixed Bollard Removable Bollard: Socket and cap for when bollard is removed Equal or equivalent to Leda Slimline bollard (Locking and removable)
BOLLARDS	Wood plastic composite Fixing: Bollards are to be subsurface fixed Equal or equivalent to Cosset DuraComp Hollow Square Bollard
BICYCLE RACKS	Material: Stainless steel Fixing: Bicycle stands are to be subsurface fixed with mass concrete footings. Equal or equivalent to Stainless steel Semi bike Stand by SFA.
LIGHTING - PEDESTRIAN	Post top luminaire LED Finish: Powdercoated Colour: Graphite Light fittings shall be directional. Equal or equivalent to LED Luminaire-Hubbell AAL Post top luminaire (4M high tapered base octagonal 'Vicpole').

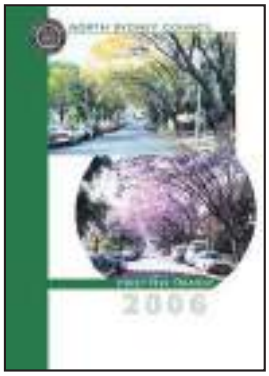
ITEM	MAIN STREET / PARK/ OPEN SPACE
FIXTURES - FURNITURE	
LIGHTING - PEDESTRIAN ILLUMINATED BOLLARD	LED 800mm high illuminated bollard Finish: Powdercoated Colour: Graphite Fixing: Bollards are bolted with a mounting plate onto a foundation. Light fittings shall be directional. Equal or equivalent to BEGA Illuminated bollard. 800mm high. LED
MISCELLANEOUS COMMUNITY NOTICE BOARDS Free standing community noticeboard / Outdoor wall mounted noticeboard	Colour: Silver frame with option for council colours to be incorporated as a trim Key features: Lockable Waterproof A0 (1180 x 841mm) internal dimension Portrait orientation Option for anti-graffiti film on noticeboard Poly carbonate or acrylic cover Equal or equivalent to HD1 Harsh Duty Outdoor Lockable Notice Board by Arrow Alpha Equal or equivalent to MD6 Keyless Secure Notice Board by Arrow Alpha
MISCELLANEOUS - PLAQUES	Material: Brass plaques inlaid into rocks and walls. Fixing: Rear fixed
MISCELLANEOUS FIXTURES -FURNITURE Bottle refill station with drinking fountain	1500mm high refill station with drinking fountain Stainless steel bulk refill dispenser for bottle refilling each side of the unit Marine grade anodised aluminium unit housing Optional filtered water unit Multiple bottle refill points Changeable panels Stainless steel drinking bowl Stainless steel frame construction Fixing: Stainless steel base plate with drainage pit Equal or equivalent to Aquafill product Type C 1500mm high refill station with drinking fountain by Arrow-Alpha Industries
BANNER POLE	6063T6 Untapered high tensile aluminium Powdercoat finish Equal or equivalent to Abel Elegance range banner pole

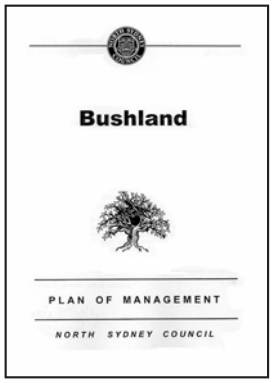
09 Appendices

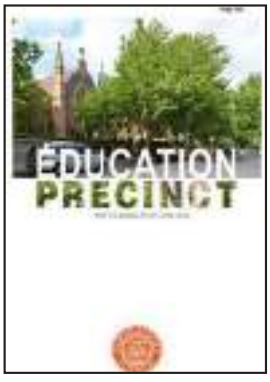


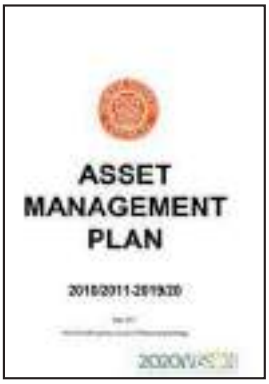












09 Appendices

Existing Strategy and Planning Guides

1. North Sydney 2020 Vision

NSC's 2020 Vision, Community Strategic Plan sets out where the North Sydney community wants to be in 10 years time, how we will get there and how we will know we've arrived.

Council's Mission - to be leading edge in serving the community of North Sydney by caring for its assets, improving its appearance and delivering services to its people in a financially, socially and environmentally responsible manner.

Adopted the tagline of "Living Sustainably" for the new 2020 Vision as sustainability underpins all aspects of the plan. The plan is founded on principles of social justice, ecologically sustainable development and a quadruple bottom line approach that addresses environmental, social, economic and civic leadership considerations.

2. North Sydney Centre Public Domain Strategy 2004

Provides strategic direction for improvement to the public domain to correspond with planned commercial and residential growth in the North Sydney Centre.

Guiding Principles:

- Character
- Access
- Open Space
- Activities
- Pedestrian Comfort

Strategic Approach & Strategies:

- Uniting the Centre
- Balancing the demands of pedestrians and vehicles
- Networking open space
- Activating the laneway network
- Refining the street hierarchy
- Building on cultural assets
- Co-ordinating urban elements

Implementation and management including funding, costs and staging.

3. North Sydney Traffic Management Plan 2005

Further to the North Sydney Centre Public Domain Strategy, Council commissioned a traffic and pedestrian study for North Sydney Centre (NSC) in order to "establish the capacity of the traffic system to accommodate the expected population growth and the proposed public domain improvements.

This Plan identified relevant traffic management and pedestrian issues and established actions to implement the strategy and accommodate growth.

This study provided information and measures on:

1. The current and future traffic situation throughout the Study Area and the identification of deficiencies of the road network and traffic system. It also included measures to improve and overcome these deficiencies.
2. The future traffic management plan aimed to provide an effective and practical road network system that would resolve vehicular and pedestrian conflicts in the North Sydney CBD catering for future traffic growth during the next 10 - 20 years.
3. Development of a Pedestrian Access and Mobility Plan (PAMP) in accordance with RTA's guidelines highlighting the pedestrian desire lines and the necessary pedestrian facilities to cater for the existing and future demands.

The study developed an overall management plan for the centre and individual plans for each street, and then summarised policy and actions.

The recommendations of the TPMP were not implemented due to the non-concurrence of the RTA (RMS) with the majority of recommendations. This in turn had implications for the implementation of other recommendations of both the North Sydney TPMP and the Public Domain Strategy overall.

4. St Leonards Public Domain Strategy 2003

This strategy looked at St Leonards location, physical & natural fabric, social, institutional & built fabric, stakeholder views, strategic approach and strategies & stages.

St. Leonards has emerged as a prosperous railway station and highway based commercial centre that today is experiencing a major transition into a

high density mixed-use urban centre. This transition has resulted from the intensification of both residential and commercial activity centred around the St Leonards railway station, as a result of state government 'urban consolidation' policies and to amended development controls adopted by North Sydney Council.

Vision for St. Leonards public domain is "To provide a strong, vibrant sense of place and community in the streets and public spaces of St Leonards". The strategy's major aims & objectives were centred around the functional, cultural, environmental, quality built form and urban environment, and efficient use of resources. The desired future character for St. Leonards included:

- dense built form coupled with public domain works will establish a sheltered, comfortable, interesting and attractive streetscape at ground level; and
- the Public Domain will exhibit the characteristics of a cosmopolitan village centre, where its spaces are safe, comfortable and inviting. The centre will be a place to stroll, see and be seen, or retreat in the urban environment.

The strategy proposed minimum, medium and maximum intervention 'stages'. One of the major recommendations was downgrading the traffic role of Atchison Street between Christie Street and Mitchell Street to establish a "high street" public domain role and character for the street. Other general recommendations depending on the level of intervention included:

- upgraded paving
- new street tree planting
- new street furniture
- improved lighting
- improved signage
- public art
- burying of powerlines
- converting roundabouts to signalised intersections

5. North Sydney Draft DCP 2012

Contains a suite of Area Character Statements applying to each neighbourhood within the LGA. Statements have been derived from the Area Character Study originally undertaken by Council in 1998. The purpose of the Study originated from the addressing an objective to the North Sydney Strategy (1996) – "to use the desired future character of areas as the basis for urban design planning and implementation". The Study represented the introduction of "place management" as a means of planning the urban environment. Under place management, the focus of planning moves away from controls which apply to particular zones or land uses across a whole Council area to tailored controls which aim to achieve a particular character for each unique place.

The LGA is divided into 9 Planning Areas and generally reflects the extent of each official suburb within the LGA as follows:

- North Sydney Planning Area
- St Leonards / Crows Nest Planning Area
- Cammeray Planning Area
- North Cremorne Planning Area
- South Cremorne Planning Area
- Neutral Bay Planning Area
- Kirribilli Planning Area
- Lavender Bay Planning Area
- Waverton / Wollstonecraft Planning Area

Each Planning Area is further subdivided into a number of Locality Areas, which generally reflects the following hierarchy where applicable:

- Central Business District
- Town Centres
- Village Centres
- Neighbourhoods
- Conservation Areas

The extent of these areas generally reflects one of the following: a heritage conservation area, common land uses under the LEP, or an area exhibiting a generally consistent character.

(i) North Sydney

The North Sydney Planning Area is an iconic, attractive, and sustainable area, with the focus on the North Sydney Centre, which is identified under the Metropolitan Strategy 2036 as a global commercial centre. New development within the Planning Area should result in:

- a viable and attractive employment centre;
- a diverse range of living, employment, recreation and social opportunities being provided that attract both local and regional populations which contribute to the vibrancy of the Centre;
- a high level of amenity for residents, workers and visitors to enjoy;
- a high quality of the built form;

- a high level of public transport patronage which is easily accessible to residents, workers and visitors; and
- the area being linked to the Sydney CBD, other suburban centres and many parts of the Sydney Region by rail and bus as well as by road and is a place of interchange between the various modes.

Quality Urban Environment:

- There are links to the Sydney CBD, other suburban centres and many parts of the Sydney region by ferry, rail, bus and road and the Centre is a place of interchange between the various transport modes;
- Public transport, including walking and cycling, is the main form of access to the Centre;
- Traffic is managed so that pedestrians can move within the area freely and safely, and amenity is maintained;
- Parking is managed in a way that maintains pedestrian safety and the quality of the public realm and minimises traffic generation;
- Rear lanes allow for the primary vehicular access to properties
- The level of public parking within the centre is maintained;
- Limited increase to the capacity of private parking; and
- Pedestrians are assisted to safely cross barriers such as the Pacific Highway.

Public Domain:

- Additional open space is provided to service the increased residential and working population of the North Sydney Centre; and
- Streetscape improvements occur in accordance with the North Sydney Centre Public Domain Strategy.

In addition to the above character statement for the Planning Area, there are also character statements for the following Locality Areas:

- Central Business District
- Eden Neighbourhood
- Hampden Neighbourhood
- McLaren Street Conservation Area
- Walker Street Conservation Area

(ii) St Leonards and Crows Nest

The Planning Area is focussed around the town centres of St Leonards and Crows Nest in the north-west of the area both of which are situated on major traffic routes. The remainder of the Area comprises a number of predominantly low density residential neighbourhoods, much of which is characterised by retention of the historic subdivision pattern.

St Leonards Town Centre, which is identified as a Specialist Centre under the Metropolitan Strategy 2036, is a significant, sustainable and busy urban centre where:

- a diverse range of living, employment, recreation and social opportunities are provided which serve both local and regional populations and contribute to the vibrancy of the centre;
- residents, workers and visitors enjoy a high level of amenity and quality of the natural and built environment; and
- residents, workers and visitors can easily access the Area through excellent public transport links to the Sydney CBD, other suburban centres and many parts of the Sydney Region by rail and bus.

Crows Nest Town Centre is smaller in scale in comparison to St Leonards, with 19th Century, two storey shopfront parapets along Willoughby Road and the Pacific Highway. The Town Centre services the daily needs of residents and visitors, as well as having a lively dining district. Traffic is managed so pedestrians can move freely across Willoughby Road.

The residential neighbourhoods are generally quiet and characterised by wide roads with street tree plantings. Laneways facilitate movement and provide rear lane access to properties. Local shops, dispersed throughout the area, serve both local and regional needs. St Thomas Rest Park, located toward the northern edge of the area, provides much needed open space and complements pocket parks within the area, with access to St Leonards Park on the eastern edge.

(iii) Cammeray

The Planning Area is focussed around Cammeray Village, which is an active, pedestrian friendly shopping area that has small scale shops and provides street level activity with an lively pedestrian environment, where:

- local shops cater to the local community and are balanced between basic needs such as food and grocery, and recreation such as cafes and galleries;

- development on both sides of Miller Street is unified through common elements; and
- there is safe and easy pedestrian movement across Miller Street.

The surrounding residential neighbourhoods are diverse in nature, where:

- most of the existing dwelling houses and dual occupancies are retained;
- capacity exists to accommodate some attached dwellings, multi dwelling housing and residential flat buildings close to existing public transport, services and facilities; and
- the density of residential development generally reduces the further away from Miller and Falcon Streets a property is located.

(iv) Cremorne

Cremorne is a primarily residential neighbourhood providing a diverse range of housing forms for a mixed population. It is bound on its southern side by the Neutral Bay and Cremorne Town Centres, which are bustling places where people live, shop, eat, work and socialise providing a high level of amenity for all users.

Development within the Planning Area should result in:

- residential growth being provided in accordance with Council's Residential Development Strategy, with the growth concentrated within the Mixed Use zones of the Town Centres located on or in the vicinity of Military Road, and the remainder comprising of multi dwelling housing and residential flat buildings in the surrounding residential areas;
- residential densities not being increased in foreshore areas and areas of steep terrain;
- development within the R2 – Low Density Residential zone being of a similar scale to existing characteristic development;
- a wide range of residential types and sizes being distributed throughout the area according to zone; and
- a range of retail and commercial premises, services and facilities being available to the local community within the Town Centres.

(v) Cremorne Point / Kurraba Point

South Cremorne is a green, leafy area sympathetic to its harbourside setting. The design of new buildings is to be sympathetic to the landscape and character of buildings within the locality, complementing existing building forms in respect to massing, composition, materials, colours and maintaining the original subdivision pattern.

Development within the Planning Area should result in:

- no substantial change to residential densities;
- no significant change in intensity of development;
- a wide range of single household residential types being distributed in a number of distinctive built form/landscape areas; and
- the conservation of features which contribute to the local identity.

(vi) Neutral Bay

Neutral Bay is a diverse residential neighbourhood. Lower density development exists in the neighbourhood where there are small allotments, conservation areas and heritage items. Small shops, community and school facilities cater for the local residents. The waterfront and harbour setting of the Neutral Bay Area provide passive and active recreation pursuits, access to transportation, to other parts of the harbour via ferries and contribute to the natural and scenic qualities of the neighbourhood.

Development in the Planning Area should result in:

- residential growth occurring in accordance with Council's Residential Development Strategy, principally in the high density residential zones situated in the vicinity of Military Road;
- a wide range of residential types and sizes being distributed throughout the area;
- a scattered range of shops, services and facilities being available to the local community; and
- any alterations and additions being of a similar scale to existing buildings.

(vii) Kirribilli

Kirribilli is located on the foreshores of Sydney Harbour with spectacular views of the Sydney CBD, the Sydney Opera House and Sydney Harbour Bridge. Bradfield Park, at the base of the Sydney Harbour Bridge, provides unique outlooks and a place for outdoor recreation and softens the dense built form on the foreshores. The focal point of the Kirribilli peninsula is the Kirribilli Village Centre, a compact and lively area with a community centre, local shops and outdoor cafes that serve the needs of the local community. The village is surrounded

by a predominantly residential area with a small number of other uses such as education, transport, maritime activities and community facilities. Conservation areas are often associated with prominent landmarks such as Admiralty House and Kirribilli House.

Development within the Planning Area should result in:

- limited growth with no substantial increase in residential densities; and
- no significant change in low density residential or conservation areas.

(viii) Lavender Bay

The Lavender Bay Planning Area is a diverse area reflected by the very wide range of land uses occurring within the Area, including a mixture low, medium and high density residential accommodation, commercial premises, light industry, education establishments, places of worship and public recreational facilities. Many of these land uses are located in a leafy setting with strong links to Sydney Harbour and are often associated with landmark buildings such as Graythwaite, the Shore School and St Peter's Church.

The Planning Area is noted for its historical character arising from the retention of much of its original subdivision pattern and good examples of largely intact mid 19th century and early 20th Century buildings. Blues Point Road in McMahons Point is a popular village centre enjoyed by local residents and visitors to the area with its outdoor cafes, galleries and small specialty shops.

Milsons Point is on the shores of Sydney Harbour and consists of a large concentration of mixed residential and commercial towers located at the base of the Sydney Harbour Bridge, surrounded by landmarks such as Luna Park, Bradfield Park and North Sydney Pool.

Development within the Planning Area should result in:

- any residential growth being in accordance with the Residential Development Strategy, with high density residential accommodation mainly being accommodated within the mixed use zone at Milsons Point, with no substantial change in the other residential and light industrial areas;
- a wide range of single household residential types being distributed in a number of distinctive built forms/landscape areas;
- any retail premises being of a scale to cater to the local community and which provide a balance between basic (e.g. food and groceries) and recreational (e.g. cafes and galleries) needs; and
- the conservation of features which positively contribute to the local identity.

(ix) Waverton / Wollstonecraft

The Planning Area generally comprises a diverse residential neighbourhood ranging from low density residential development adjacent to the foreshore areas of Sydney Harbour to high density residential development generally on the upper slopes and in close proximity to railway stations. The suburbs of Waverton and Wollstonecraft essentially align with the two ridges/peninsulas that project out into Sydney Harbour. The Area is also physically divided by the North Shore Railway line. Both neighbourhoods are in a pleasant setting, as a result of buildings being setback from boundaries, onsite landscaping, street trees and strong links to Sydney Harbour.

The foreshores of the Planning Area are generally protected from development by recreational and bushland buffers, with the minor exception of maritime industrial activities which are reliant on a land-water interface.

Development within the Planning Area, should result in:

- residential growth being provided in accordance with Council's Residential Development Strategy, predominantly comprising attached dwellings, multi dwelling housing and residential flat buildings in the appropriate zones
- redevelopment of sites respects the existing built form and maintains the character of the area. This includes any alterations and additions to existing buildings;
- a wide range of residential types being distributed in a number of distinctive built forms and landscape areas;
- local shops cater to the local community and are balanced between basic needs of food and grocery, and social needs- such as cafes and galleries; and
- future maritime uses having a minimal impact on residential amenity.

6. North Sydney Bike Strategy 2009

Includes:

- Introduction (Background, Aim and Objectives, Methodology)
- Cycling in North Sydney
- Consultation
- Existing Bicycle Network
- Current Bicycle Network Planning
- Future Bicycle Network
- Implementation (Staging and Priorities, Ongoing Monitoring, Funding Sources)

7. North Sydney Recreation Needs Study 2005

Included sections on Planning Context, Existing Sport, Recreation and Open Space Supply, Demographic Analysis, Sport and Recreation Participation Trends, Community Needs Assessment, and Sport and Recreation Management Plan.

Community priorities for enhancements to parks and open space include additional rubbish bins, shade structures, seating, tables, picnic and bbq facilities.

Key recommendations in relation to neighbourhood parks included:

- Reviewing the location & standard of furniture/ facilities; and
- Improving the basic maintenance of facilities.

8. North Sydney Open Space Provision Strategy 2009

Included review of existing open space system in terms of supply, current & future demand, acquisition principles & strategies, and how to implement the strategy.

Identified categories of open space:

- Neighbourhood parks
- Playgrounds
- Sportsgrounds
- Foreshore parks & reserves
- Bushland

Also established a basic park hierarchy: regional, district, local.

9. North Sydney Water-Based Recreation Needs Study 2006

Study looked at regional context, existing water based recreation supply, demographic review, community needs assessment, and water based recreation strategy. The strategy identified an action plan and funding opportunities.

10. North Sydney S94 Contributions Plan

Includes both public open space acquisition & increased capacity, and public domain improvements. The latter include:

1. North Sydney - references North Sydney Public Domain Strategy and includes:
   - traffic diversions
   - improved lighting
   - public walkway widening, additional pedestrian crossings, improved paving
   - street trees, relocation & tree grates to make footpaths more available for pedestrians
   - increased provision of street furniture & improved functionality of existing
   - public art to improve character and experience for pedestrians
   - undergrounding overhead power lines
2. St Leonards - includes:
   - New paving throughout
   - Street tree planting
   - New street furniture
   - Augmentation of existing street lighting
   - Installing public art
   - New smart poles in key streets
   - Bury power lines in key streets
   - Linear urban park on Oxley St
   - Downgrade Atchison St to establish 'high street' public domain role & character including widening footpaths, new planting, street furniture
   - Clarke Lane – landscaping and pedestrian crossing at Albany St
3. Town & Village Centres – public domain improvements as recommended by 5 streetscape committees (Cammeray, Crows Nest, Cremorne, Kirribilli, Neutral Bay). Master plans prepared for each centre.

11. North Sydney Pedestrian Network and Amenity Study 1999

Included study of present network, strategic issues, improvements to network, and action plan. Many of actions have been encompassed in more recent strategies.

12. North Sydney Foreshore Access Strategy 2007

The Access Vision - To promote and improve access links to the North Sydney foreshore for the local and wider community from both the land and the water to continue sustainable use and enjoyment of Sydney Harbour as a unique waterfront environment.

Fundamental to North Sydney's vision is that provision of access is enhanced both in quantitative terms (as in extent of access) and in qualitative terms (in relation to recreational, visual, and environmental values). The Strategy included:

1. Review of Existing Access System
2. Access Strategies including:
   - Upgrade Existing Links
   - New Tracks
   - Open Grassed Routes
   - Links Adjoining Privately Owned Foreshores (Dedicated Open Space, Rights of Way, Boardwalks)
   - Intertidal Access
   - Roadside Links
   - Craft Access
3. The Foreshore Access Plan: the strategy identifies an overall access plan as a series of precinct plans which identify for each area:
   - Existing access
   - Pressures
   - Opportunities
4. General planning and investigation actions include the following:
   - Ecological mapping
   - Signage strategy
   - Heritage
   - Safety audit
   - Access monitoring and recording
   - Facilitation of intertidal access
   - Community liaison
   - Liaison with transport authorities
   - View conservation / management
   - Planning controls / mechanisms

13. North Sydney Street Tree Strategy 2006

- Includes Introduction, Policy and Policy Implementation & Performance
- No specific recommendations for specific tree species for different areas or streets

14. Plan of Management for Neighbourhood Parks 2010

- Most used facilities in parks and reserves were seats, picnic tables, drinking fountains, bbqs, amenities blocks and playground equipment.
- A lack of signage was identified in some parks.
- Art was suggested to be included in parks where appropriate.

15. Plan of Management for Playgrounds 2009

Involved a review of playground character & resources, planning issues, management objectives, and policy, implementation & performance including play equipment, amenity & character, use, access & circulation, land use planning & management, indicative works program.

16. Plan of Management for Foreshore Parks & Reserves 2010

Involved a review of character & resources, planning issues, basis for management, and policy, implementation & performance including landscape character & heritage, recreation & leisure, access & circulation, land use planning & management, indicative works program.

17. Plan of Management for Sportsgrounds 2010

Involved a review of character & resources, planning issues, basis for management, and policy, implementation & performance including use, access & circulation, infrastructure & amenity, land use planning & management, indicative works program.

18. Plan of Management for Bushland 2007

Involved a review of character & resources, planning issues, basis for management, and policy, implementation & performance including ecological components, recreation, cultural heritage, off-reserve impacts, land use planning & management, indicative works program.

19. Site-Specific Plans of Management (eg. Bradfield Park, Cremorne Reserve, Forsyth Park, North Sydney Oval, Smoothey Park, St Thomas Rest Park)

All involved a review of character & resources, planning issues, basis for management, and policy, implementation & performance including image & character, structures & furniture, recreation & use, access & circulation, land use planning & management, indicative works program.

20. Waverton Peninsula Strategic Masterplan 1999

Set out strategies for future development of 3 ex-industrial sites on Waverton Peninsula (Coal Loader, Caltex and BP sites) for working waterfront and open space use. The masterplan looked at local context, land use, circulation & access, conservation, visual character, management and planning. The key elements of the masterplan were:

- Design & management strategies
- Design, planning & management principles
- Demonstration masterplan
- Implementation recommendations

21. North Sydney Centre Urban Design Project 2005

Analysis and master plan for intersection of Pacific Highway/Mount St/Miller St and Miller Street up to Berry Street.

22. Neutral Bay Shopping Centre Master Plan 2011

Original urban design study from 2000 developed principles and included master plans for:

- Barry Street Plaza
- Young Street
- Wycombe Road
- Grosvenor Road Plaza
- Rangers Road
- Waters Road
- Military Road upgrade
- Typical shop-cafe forecourt

The 2011 master plan provided an update to the 2000 study and proposed new priorities and initiatives including:

- Proposed decorative lighting;
- Possible shared zones; and
- A possible new master plan for Grosvenor Road Plaza

23. 2 Anzac Avenue, Cammeray Masterplan 2012

This master plan included background, built form analysis and masterplan for the site. The preferred option includes a through-site link, community garden dedicated to Council and upgrade to adjacent Bellevue Park.

24. North Sydney Centre Planning Review 2013

Briefing paper has been prepared to give an overview of the recent development, planning and economic history of the North Sydney Centre in order to provide background and context for the consideration of future directions of the Centre.

The Draft LEP 2012 proposed a number of amendments to planning controls within the North Sydney Centre, the most significant of which is the application of height controls for each individual site as opposed to the current composite shadow area control.

Council has reached its target of an additional 200,000 m² of commercial floor space approved under LEP 2001, which triggers a review of planning controls for the North Sydney Centre. Strategic Planning staff are drafting terms of reference for that review. It is expected that the review will be comprehensive and cover all facets of the future of the Centre, including:

- A review of existing public domain strategies;
- A comprehensive urban design and environmental sustainability study;
- Capacity analyses;
- Opportunities to revitalise and activate the Centre;
- Identifying opportunities and constraints for future growth; and
- The drafting of new controls to realise desired future direction.

25. Education Precinct Draft Planning Study 2013

NSC prepared this study to initiate community and stakeholder discussion about the future planning framework for the emerging education

precinct, just west of the North Sydney Centre. The precinct includes the North Sydney Demonstration School, the Australian Catholic University and Sydney Church of England Grammar School, accommodating close to one third of North Sydney's student population.

The study looked at the North Sydney Education Precinct, precedents, vision & principles, access & linkages, image & amenity, land use & activity, and public benefits.

The overarching principles of the study were to:

- Connect people, schools & places;
- Transform streets into valuable civic spaces;
- Respect the heritage & residential character;
- Enhance the education function of the precinct; and
- Deliver public benefits through new development.

The study proposes to enhance the area's character, identity and function as an education precinct and outlines strategies that:

- improve pedestrian connectivity between the centre and the education campuses
- enable more efficient traffic circulation
- protect the amenity of surrounding residential properties and heritage value of the precinct
- improve urban design and street level amenity to reinforce the activity and character of the precinct
- identify any future public benefits that can be delivered with new development.

Key recommendations include transforming the streets into valuable, civic spaces through a new 'Living Campus Program', reducing school-related traffic through a combination of demand management and traffic upgrades, and developing a new area character statement in our development control plan to enhance the precinct's form and function as an urban campus.

26. St Leonards / Crows Nest Planning Study – Precinct 1 (2011)

Planning study aims to develop new strategies and initiatives that will provide for the following:

- New open space in St Leonards / Crows Nest.
- Increased investment in St Leonards and decreased commercial vacancy rates, with particular focus on the rejuvenation of the Pacific Highway between St Leonards train station and the intersection of Pacific Highway and Willoughby Road.
- Improved connectivity, particularly between St Leonards / Pacific Highway and Willoughby Road.
- Improved urban design and street level amenity particularly in St Leonards and along the Pacific Highway.
- Improved building design and residential amenity in St Leonards.

The document gives a general analysis of the study area and its context and provides a more focused analysis and specific recommendations relating to a smaller planning study precinct (Precinct 1) which stretches along the eastern side of the Pacific Highway between Albany Street and Hume Street and extends eastward towards Willoughby Road.

A study area analysis, strategy review and consideration of opportunities and constraints are used to establish principles and priorities of the study relevant to Precinct 1. Those principles and priorities are then used to inform the development of options for open space, pedestrian circulation and amenity, and built form. Built form options are accompanied by feasibility studies. A preferred option, that meets the study objectives, is then presented with recommendations regarding its implementation.

The preferred option for Precinct 1 includes the following main features:

- An expanded Hume Street Park;
- New ground level setbacks on the Pacific Highway redevelopment strip; and
- The introduction of high amenity towers above podium elements on the Pacific Highway redevelopment strip.

An expanded Hume Street Park is consistent with Council's Open Space Provision Strategy and would extend the potential functions of the park so as to better cater for the needs of new populations coming into the St Leonards / Crows Nest area. A new area of open space is proposed for the eastern side of Hume Street with a pedestrian link to Willoughby Road. This would effectively further enlarge Hume Street Park but also provide an important connection within a broader pedestrian network linking St

Leonards and Willoughby Road via Hume Street Park.

The introduction of ground level setbacks in combination with the use of continuous glazed

awnings aims to promote pedestrian circulation and improve pedestrian amenity. Setbacks provide for greater footpath widths thus aiding pedestrian movement, distancing pedestrians from fast moving and noisy traffic and allowing for ground level activation and outdoor dining where appropriate. The setbacks also aim to encourage more prosperous street tree growth thus further improving amenity and reducing the perceived bulk and scale of buildings.

27. St Leonards / Crows Nest Planning Study – Precinct 1 (Addendum 2012)

A planning study of Precinct 1 was undertaken in 2011 which focused mainly on the 'redevelopment strip' along the Pacific Highway. The adopted study noted that further planning study work would be required to facilitate the expansion of Hume Street Park and the link to Willoughby Road. This document presents the findings and recommendations of that additional work.

A study area analysis and strategy review as well as consideration of opportunities and constraints were used to establish principles and priorities relevant to the subject area. Those principles and priorities were then used to inform the development of an Open Space and Pedestrian Masterplan as well as a Built Form Masterplan. When combined with the recommendations from the original study regarding the redevelopment strip, the outcomes of this addendum study aim to provide a holistic approach to the future planning and development outcomes for Precinct 1.

The main element of the Open Space and Pedestrian Masterplan is an expanded Hume Street Park. Ground level setbacks and widened verges aim to improve key pedestrian routes through the precinct. The Built Form Masterplan contains revised building heights for many sites within the Precinct.

The study recommends that implementation occurs via site-specific planning proposals and Council led initiatives. Site-specific planning proposals should propose planning controls consistent with both the Built Form and Open Space and Pedestrian Masterplans as well as contribute towards the expansion of Hume Street Park. Recommended Council led initiatives involve land acquisition, widening of verges, partial closure of Hume Street and staged embellishment of the expanded Hume Street Park.

This St Leonards / Crows Nest Planning Study – Precinct 1 (addendum) was formally adopted by Council at its meeting on 22 October 2012.

28. Asset Management Plan 2010/2011-2019/20

An Asset Management Plan is a written representation of the intended asset management programs for one or more infrastructure networks based on the controlling organisation's understanding of customer requirements, existing and projected networks, and asset conditions and performance.

North Sydney Council previously had in place two plans, one for infrastructure assets and the other for property assets (i.e. buildings). Following periodic review of Council's overarching AMS it was decided to incorporate the two plans into one document to streamline asset management planning and resourcing.

Council's AMP outlines actions and resources to provide a defined level of service in the most cost-effective way; the Plan includes:

- the best available information and random condition/performance sampling;
- a risk assessment to identify critical assets and strategies to manage those risks;
- a description of existing levels of service;
- long-term cash flow predictions for asset operation, maintenance and renewals based on local knowledge of assets and options for meeting current or improved levels of service and for serving the projected population; and
- financial and critical service performance measures against which trends and AMP implementation and improvement can be monitored.

The AMP is complimented by Plans of Management for community land which is a requirement under the Local Government Act. Council also has in place comprehensive strategies and plans for recreation facilities, community centres and facilities and for street trees. These plans draw on the extensive investigation and research into the condition of assets, as well as the timing and required level of input

to renew them. The plans have been developed with community consultation, and the community feedback has been that there is a high expectation that Council's assets will be adequately maintained.

Public Domain Style Manuals and Design Codes Outcomes

1. City of Sydney: Sydney Streets Design Code

- Recent & comprehensive design manual
- Includes 2 parts: Part One - Design Guidelines and Part Two – Technical Details
- Streetscape Context includes following hierarchy City Centre, Village Centres and Activity Strips, Local Areas, Distinctive Places, Urban Renewal Areas and Heritage Context Areas
- Street Typologies include General Streets, Arterial Roads, Laneways and Pedestrian Priority / Shared Traffic Zones
- Some overlapping between sections on Street Context & Types, Street Composition, Materials Palette and Application of Materials Palette
- Clear & legible graphics

2. City of Melbourne: Technical Notes

- Limited section on design principles / guidelines
- Simple, easy to use, single page Tech notes with description, photo and technical drawing(s)

3. Brisbane City: Brisbane Streetscape Design Guidelines

- Includes design guidelines and limited technical details
- Provides 'locality advice' in the form of neighbourhood plans and suburban centre improvement projects – strong relevance to North Sydney
- Streetscape Design section includes streetscape hierarchy and elements & materials sections
- Not particularly strong graphically

4. Gosford City Centre Streetscape Design Guidelines

- Includes sections on Key issues, Strategies & Design Principles and Streetscape Design Guidelines by precinct
- Some repetition in materials and elements across precincts

5. Canberra Central Design Manual

- Includes design principles and technical details
- Design principles broken down into separate elements e.g. paving, signage, street furniture, trees, lighting and public art
- Manual based on single typology / area rather than a hierarchy or a number of different areas / typologies

6. City of Ryde Public Domain Plan

- Includes analysis, principles & strategies, concepts & technical details, costings & implementation plan
- Not particularly well structured or legible
- Not graphically strong;

7. Landcom Street Design Guidelines

- Primarily relates to new street design in suburban residential areas
- Useful sections on Common Design Principles and Model Street Types
- Limited relevance to North Sydney

8. Honeysuckle Foreshore Promenade Design Manual

- Document structure not particularly clear – design principles & general approaches in same section as description of individual elements
- Not graphically strong; lacks photos

9. CABE Publications

CABE offered expert independent design advice to improve quality of built environment in England. It was merged into the Design Council on 1 April 2011. They advised on how to create well-designed buildings, places and spaces and review proposals for major developments. Their website provided resources and publications on design advice, and case studies. CABE has influenced and written extensively about street design in the UK. Influential publications include:

- This Way To Better Streets - 10 case studies
- Transforming Our Streets - produced for the

Department for Transport, Local Government and the Regions and sets out clear recommendations for change

- Paved With Gold - The real value of good street design
- Civilised Streets - briefing designed to stimulate the debate on new street design. It looks at different design approaches and at notions of street safety. It explores recent discussions on shared space and explains the many benefits of the recent change in thinking away from the car and towards the pedestrian. And it presents a common agenda for the future that is about removing the dominance of the car – creating civilised streets that work for all
- Manual for Streets - produced for the Department for Transport, puts people first, identifying streets as major elements of placemaking and emphasising their role in creating successful neighbourhoods

CABE developed 5 key principles that local authorities involved in street design should follow:

- Vision - Maintain strong physical and organisational vision
- Commitment - Be committed to long delivery timescales and management
- Integration - Accommodate people and various ways of travelling on streets. Create connected street networks.
- Adaptation - Take account of climate and culture change to deliver sustainable spaces
- Coherence - Deliver well-conceived projects that are resolved into a coherent design solution.

10. Project for Public Spaces, PPS

PPS was founded to expand upon the work of William Whyte (author of The Social Life of Small Urban Spaces) and is a nonprofit planning, design and educational organisation dedicated to helping people

create and sustain public places that build stronger communities. PPS is based in New York and has completed projects in over 40 countries. PPS focuses on Placemaking and what makes a great space. They have nine program areas, these are: parks, transportation, markets, downtowns, civic centres, multi- use, campuses, squares, and waterfronts and offer a large collection of resources, articles and

critiques on public spaces around the world. Articles relevant to street design include:

- A Guide to Transit-Friendly Streets
- Balancing Street Space for Pedestrians and Vehicles
- Traffic Calming 101

PPS has had a strong influence in street design for New York. They were bought in along with strategic partners to create a bold vision for reinventing NYC streets as vibrant public spaces. The campaign 'Liveable Streets' has seen pilot projects implemented and has raised the profile of progressive transportation and public space issues. Results include 49 acres of road space given back to the public in the form of bike lanes, pedestrian areas and public plazas.

11. Jan Gehl and Gehl Architects

With the human dimension as a starting point Jan Gehl has worked (through the last 30 years) to improve city environments throughout the world. The objective of Gehl Architects is to create a stronger

coherence between life lived and the planned or existing building structures, with a vision to create better cities that improve people's quality of life. Gehl Architects has been involved in the production of city plans and policy all over the world including New York, London, Zurich, and most recently, Sydney with the Public Spaces, Public Life Survey. Gehl Research coordinates lectures and master classes all around

the world with the human dimension within planning as a point of departure. Focus is on:

- Putting humans first
- Creating human and efficient planning processes

How to study city life and city space

- Planning for pedestrians and bicyclists

Influential publications include the books; Life Between Buildings, Public Spaces - Public Life, New City Spaces and New City Life.

Site Analysis and Recommendations

City Centre/ commercial areas

North Sydney
St Leonards

Character Statement

North Sydney is an iconic, global commercial centre with a diverse range of living, employment, recreation and social opportunities. North Sydney is well serviced by public transport including rail, bus and road that cater to both local and regional populations. Highrise commercial and residential buildings dominate the city skyline. Much of North Sydney's' retail centre is located in the underground shopping arcade which connects to North Sydney train station. North Sydney has outstanding views of Sydney City and the harbour.

St Leonards is located in the north-west of the North Sydney council region. It is situated on a major traffic route the Pacific highway. St Leonards Town Centre is a busy urban centre where a diverse range of living, employment, recreation and social opportunities are provided. St Leonards town centre services both local and regional populations and these users contributes to the vibrancy of the centre. Rail and bus provide access to the Sydney CBD, other suburban centres and many parts of the Sydney Region.

Strengths

- Interlocking pavers on vehicle crossovers hold their position well.
- Pavers have been laid in recessed service pit lids which have reduced their impact.
- Softfall has been used at pub loading zones which reduce the risk of pavement damage during loading.
- The use of housed wheelie bins is appropriate for the volume of litter and is easy to maintain. The bins are consistent and appropriate for the city context.
- New tree pits have a softfall that compliment the surrounding paving and main footpath paving well, as the softfall has a colour mix with colours matching the adjacent paving types.
- Interpretive paving has been done well on Mount Street with date engravings in banding pavement.
- Parking meters are slim line and do not disrupt paths of travel.
- Grey and cream paving suits the commercial context at Albany Lane plaza (St Leonards). The tactile pavers are a good example of how tactiles should be implemented in other areas.

Issues

- Inconsistency of street tree surrounds.
- Strong colour palette of street furniture makes it difficult to introduce new elements.
- Tree root barriers appear to be weakening softfall tree surrounds. They often cut a line in the softfall directly above.
- Much of the seating provided does not have arm rests and appears to provide poor back support due to its low profile. Its character is more appropriate for suburban areas rather than the city.
- Painted seating and poles are chipping and require high maintenance to maintain a consistent coat.
- The majority of paving units used in the city centre and St Leonards commercial areas are small in scale. A larger scale unit would reflect the city / commercial context better.
- Sandstone pavers are fragile and have easily become damaged over time. They stain easily and bubblegum is highly visible due to sandstones light colour. Mortar between paving has not always been applied consistently. A random pattern is also difficult to lay. Grinding of sandstone pavement is not a sustainable way to clean the pavement as it wears away over time. This paver selection does not have a particularly civic character.
- The colour of the softfall used at pub loading zones has a high visibility due to its yellow colour. Wear lines are easily visible. Perhaps a colour change that matches nearby paving is appropriate. A darker colour would be preferable.
- The seating provided at bus stops is minimal (2 people can fit). Additional seating may be required in some locations.
- Timber heritage style bus stops require a lot of maintenance and are not constructed of durable, graffiti resistant materials. They are more suited to a suburban context rather than the city.
- Inconsistency in pedestrian lighting.
- Ball shaped luminaries do not limit light to desired pedestrian zones. They contribute to

light pollution as they emit light upwards.

- The bowl shaped design of bubblers collects leaf litter and trash.
- Bollards have a high visibility due to their red colour and heritage aesthetic. They tend to dominate spaces visually. Many have been hit and have not been repositioned upright.
- Many street lights in the city centre and Mount Street plaza have banner poles which are not utilised. A banner program should be designed for these posts so they are utilised. Banners should only be installed in plazas and main streets to ensure they are in priority areas.
- There are two types of red paint in use in street furniture. Dulux 'Bright Red' gloss / Tudor 'Bright Red' and crimson.
- There are quite a few free standing architectural textile awnings in the city centre. A standard for these for consistency may be appropriate. Covering colour, height, location, footings etc.
- Stained timbers on seating are turning grey and require maintenance in some locations in St Leonards.
- Atchison Street alfresco areas are underutilised. More of the street level businesses nearby need to be cafes and restaurants.
- The limited road / street margins in some areas push pedestrians onto the street. This is problematic when not signposted as a shared zone.
- Interlocking pavers on vehicle cross-overs break the continuity of pedestrian paving creating confusion as to who has priority in these areas.

Opportunities and recommendations

- Provide a clearer pedestrian network between Crows Nest activity strip and St Leonards station. This includes signage that shows train users that a village precinct is nearby.
- There are opportunities to consider permeable paving to reduce runoff and provide more surface water to tree pits.
- There should be a consistent approach to tree surrounds that is appropriate for new tree plantings as well as existing mature trees.
- The current street furniture colour palette could be adapted to minimise the amount of painting maintenance required. This includes more durable choices of colour as well as the implementation of new surface finishes such as stained timbers or powder coating. Try to limit painted street furniture to minimise maintenance over time.
- Review the use of root barriers. Are they effective? Can they be laid lower to avoid weakening softfall above?
- Review street furniture with a focus on comfort and usability. Include arm rests for ease of use and consider the use of concrete bases so grass doesn't wear underneath. Also consider the use of skateboard deterrents on front edge of seat where appropriate. Allow for a number of fixing types to suit different locations. For instance surface fixed, sub-surface fixed and wall mounted seating.
- Consider the use of larger paving units to suit the civic scale of the city centre and commercial areas.
- Replace sandstone paving over time with a more durable, larger paving unit.
- C+M 'Sunstone' pavement that is in much of the city centre has a more suburban character and should be restricted to village areas.
- Assess the provision of seating to ensure it is adequate particularly at bus stops.
- Consider the introduction of new propriety bus stops where appropriate that have a more contemporary aesthetic.
- Introduce an appropriate pedestrian lighting module that restricts lighting to pedestrian zone only and reduces excess light. This module should be suitable for parks as well as streets. This light will replace current ball type pedestrian lighting.
- Update the current bubbler selection to a more contemporary design. Avoid a bubbler with a bowl shape that can catch leaf litter.
- Consider a new bollard selection that is not painted to minimise maintenance. Also consider a selection that does not have a heritage aesthetic.
- Consider a banner program to utilise a number of existing banner poles in the city centre. Locate on major roads and plazas as a priority.
- Consider restrictions on floor level programming alongside alfresco dining zones to ensure business adjacent to alfresco areas will be able to utilise these areas as cafe zones.
- More public art to improve character and experience for pedestrians.
- Consider WSUD solutions to act as pedestrian barriers between footpath and roadway rather than fencing
- Group street furniture elements to maximise space on footpaths.
- Laneways require further lighting and activation to ensure safety. Dark areas and concealed spaces should be designed out of laneways to improve pedestrian safety.

- Concrete kerbs. Perhaps a higher quality finish that is more distinctive is more appropriate for the city such as stone.
- North Sydney CBD increasingly is dominated by multi-storey commercial towers. The public domain needs to respond to this.

Village centres and activity strips

Blues Point Road alfresco dining
Cammeray shopping village
Cammeray activity strip Cammeray Road
Clark road precinct
Cremorne activity strip
Kirribilli and Milsons Point
Neutral Bay activity strip
St Leonards/ Crows Nest alfresco dining
Union Street Waverton
Waverton Train Station
Wollstonecraft Train Station

Character Statement

Blues Point Road in McMahons Point is a popular village centre enjoyed by local residents and visitors to the area with its outdoor cafes, galleries and small specialty shops.

Cammeray Village is an active, pedestrian friendly shopping area that has small scale shops and provides street level activity with a lively pedestrian environment. Shops cater to the local community and are balanced between basic needs such as food and grocery, and recreation such as cafes and galleries.

North Cremorne is bound on its southern side by the Neutral Bay and Cremorne Town Centres, which are bustling places where people live, shop, eat, work and socialise providing a high level of amenity for all users. Neutral Bay shopping strip is larger and more comprehensive than Cremorne shops.

The focal point of the Kirribilli peninsula is the Kirribilli Village Centre, a compact and lively area with a community centre, local shops and outdoor cafes that serve the needs of the local community.

Neutral bay has an active town centre along Military Road that provides basic needs such as food and groceries as well as alfresco dining areas.

Crows Nest is located in the north-west of the North Sydney council region. It is situated on two major traffic routes the Pacific highway and Falcon Street. Crows Nest Town Centre is smaller in scale in comparison to St Leonards, with 19th Century, two storey shopfront parapets along Willoughby Road and the Pacific Highway. The Town Centre services the daily needs of residents and visitors, as well as having a lively alfresco dining district. Traffic is managed so pedestrians can move freely across Willoughby Road.

Lavender Bay is a diverse area reflected by the very wide range of land uses occurring within the Area, including a mixture low, medium and high density residential accommodation, commercial premises, light industry, education establishments, places of worship and public recreational facilities.

Wollstonecraft has few retail outlets. Waverton has some retail and dining outlets based close to the train station and on Union Street. Residents have to travel further afield to locate large shopping centres.

Milsons Point is on the shores of Sydney Harbour and consists of a large concentration of mixed residential and commercial towers located at the base of the Sydney Harbour Bridge, surrounded by landmarks such as Luna Park, Bradfield Park and North Sydney Pool.

Strengths

- Good separation between alfresco dining areas and parking/ road carriageway with the use of low fencing.
- Well maintained and effective screening planting around alfresco areas.
- The use of location or suburb logos helps to establish a sense of place and assists way finding.
- Paving unit size is appropriate for the scale of the streetscape. The shotblast finish creates a good slip resistant finish. The colour variation inherent in the paving selection hides stains, bubble gum and wear marks well. (C+M Sunstone with standard finish) The pink colour of the pavers has an inherent warmth that responds to the heritage and brick buildings.
- Tree guards provide a distinctive character e.g. Cammeray
- The use of climbers over pedestrian barrier fences is very effective at Cammeray.
- In Neutral Bay paving has been used to define

alfresco dining areas. This works better then the use of bollards as is done on Blues Point Road as no obstacles are created. Brass alfresco dining markers imbedded in the pavement are also effective as used on Blues Point Road.

- A strong village atmosphere is felt at Cammeray and Neutral bay shopping precincts.
- There are many successful alfresco dining precincts in Kirribillli, Blues Point Road, Neutral Bay and Crows Nest.
- Shrub and tree planting is well maintained along Willoughby Road in Crows Nest.
- Crows Nest, Blues Point Road and Kirribilli are active day and night.
- Traffic calming measures including narrowing of streets, alfresco dining areas, pedestrian fencing and adjacent planting all contribute to creating a human scale, pedestrian friendly street on Willoughby Road, Crow Nest.

Issues

- Inconsistency of street tree surrounds.
- Strong colour palette that makes it difficult to introduce new elements. The 'Cantaloupe' colour of much of the councils seating does not service well due to its light colour. Dirt, mould, graffiti and paint chipping are easily visible with a light coloured paint.
- Mass planting along footpaths is not always successful. Planting bed widths are quite narrow and could be widened. There is inconsistency in the edge treatment of these planting zones. e.g. Neutral Bay activity strip (Here the paving zigzags in and out of the planting bed instead of cutting the pavers to achieve a straight line)
- Some of the low fencing has been damaged by vehicle collisions which weakens the overall aesthetic. Perhaps a modular system is appropriate where individual sections can be easily replaced.
- Heritage style lighting fixtures limit lighting opportunities. For instance the conversion across to LED lighting.
- Bollards demarcating alfresco zones limit freedom of movement. Perhaps extent can be identified by paving treatment or brass markers.
- Footpath garden planters vary widely. e.g Cremorne, Blues Point Road, Neutral Bay Wharf. In some cases perhaps a permanent solution rather than a planter can be considered to ensure consistency and site specific character.
- Generally more cycle racks are required particularly along footpaths on main roads where a multiple rack would not fit. Currently bikes are locked to street poles and pedestrian fence barriers in these narrow zones.
- Multiple bike racks have been located in the middle of plaza spaces e.g. Cammeray and would work better to the side of pedestrian traffic flow.
- The older red softfall tree pits have a tendency to shrink and create a trip hazard between tree pit and footpath.
- Decomposed granite tree pits tend to erode over time.
- There is not a consistent approach to tactile and nosing visibility strips.
- It appears that permanent seating that is provided in alfresco areas is not used as it is not geared towards dining. These areas should have moveable alfresco dining seating only. e.g Kirribilli
- In some places where suspended paving is over tree pits. The openings have reached their capacity and trees are becoming strangled. e.g Kirribilli and Cammeray.
- There needs to be a greater provision for seating at supermarkets as in many cases they are providing their own courtesy seating which doesn't match council street furniture nearby.
- Pedestrian lighting is more dated in appearance than street lighting in general due to red colour of posts and heritage style light poles.
- Some planting treatments reduce visibility of pedestrians to motorists.

Opportunities and recommendations

- Expand out the pedestrian friendly qualities of Willoughby Road into nearby streets. Ensure these surrounding streets have a similar level of streetscape upgrade.
- Reconsider colour palette of furniture and lighting.
- Ensure footpath planting beds are wide enough to sustain plantings.
- Consider a modular system for fencing so sections can be easily replaced.
- Consider LED as a new lighting solution.
- Consider the inclusion of permanent planters rather than moveable planters.
- Include more single bike racks to prevent bikes being locked to inappropriate fixtures.
- Choose a consistent tactile and nosing visibility strip solution.
- Consider a standard outdoor dining barrier or a guideline standard to allow for customisation.

- C+M 'Sunstone' pavement that is in much of the village areas could be updated to a concrete unit paver that is perhaps a smaller version of what is proposed in the city.

Local/ residential areas

Character Statement

Local/ residential areas are restricted to predominantly residential streets where there is no or little retail or commercial establishments and therefore a simple treatment is appropriate.

St Leonards and Crows Nest residential neighbourhoods are generally quiet and characterised by wide roads with street tree plantings. Laneways facilitate movement and provide rear lane access to properties. Local areas are comprised of a number of predominantly low density residential neighbourhoods, much of which is characterised by the retention of the historic subdivision pattern.

Local shops, dispersed throughout the area, serve both local and regional needs.

Cammeray is located to the north of the North Sydney council region. The density of residential development generally reduces the further away from Miller and Falcon Streets a property is located, with most of the existing dwelling houses and dual occupancies remaining. Due to the hilly terrain of Cammeray there are a number of road closures with large level changes that terminate streets. A number of streets also have split level traffic flow.

North Cremorne is a primarily residential neighbourhood providing a diverse range of housing forms for a mixed population. Residential growth is concentrated within the Mixed Use zones of the Town Centres located on or in the vicinity of Military Road, and the remainder comprising of multi dwelling housing and residential flat buildings in the surrounding residential areas.

South Cremorne is a green, leafy area sympathetic to its harbourside setting. It is predominantly residential.

Neutral Bay is a diverse residential neighbourhood. Lower density development exists in the neighbourhood where there are small allotments, conservation areas and heritage items. Small shops, community and school facilities cater for the local residents. The waterfront and harbour setting of the Neutral Bay Area provide passive and active recreation pursuits, access to transportation, to other parts of the harbour via ferries and contribute to the natural and scenic qualities of the neighbourhood. High density residential zones are restricted to the vicinity of Military Road.

Kirribilli is located on the foreshores of Sydney Harbour with spectacular views of the Sydney CBD, the Sydney Opera House and Sydney Harbour Bridge. The village is surrounded by a predominantly residential area with a small number of other uses such as education, transport, maritime activities and community facilities.

Lavender Bay is noted for its historical character arising from the retention of much of its original subdivision pattern and good examples of largely intact mid 19th century and early 20th Century buildings.

Waverton and Wollstonecraft generally comprise a diverse residential neighbourhood ranging from low density residential development adjacent to the foreshore areas of Sydney Harbour to high density residential development generally on the upper slopes and in close proximity to railway stations. The suburbs of Waverton and Wollstonecraft essentially align with the two ridges/peninsulas that project out into Sydney Harbour. The Area is also physically divided by the North Shore Railway line. Both neighbourhoods are in a pleasant setting, as a result of buildings being setback from boundaries, onsite landscaping, street trees and strong links to Sydney Harbour.

Strengths

- Strong network of pedestrian pavements.
- Concrete footpath is easy to maintain and extend. A concrete footpath is a simple treatment that is appropriate to a local neighbourhood context.
- Segments of footpath can easily be removed and replaced if required.

Issues

- Heritage bus stops are not constructed of durable products and are small in scale. However they are more suited to local streets than city areas.
- Council street furniture is dated and could do with an update.
- Timber railings in some areas are failing. There

are problems with termites and general wear of timber railings.
- There are a number of bus stops that are not the heritage style bus stop that have a poor finish.
- There are few Water Sensitive Design Initiatives.

Opportunities and recommendations

- There are a number of split level roads. Revision of timber railing and barrier treatments should be considered in these areas.
- Bus stops should be considered for upgrades.
- WSUD solutions should be considered in more locations particularly at raised carriageway locations and at tree pits.
- It is recommended that insitu concrete footpaths are continued as the standard footpath pavement type in local areas.

Special areas

1. Bradfield Park

Character Statement

Bradfield Park, at the base of the Sydney Harbour Bridge, provides unique outlooks, a place for outdoor recreation and softens the dense built form on the foreshores. Milsons Point station opens directly onto Bradfield Park.

Strengths

- Bradfield Park has a consistent aesthetic unique to its location.
- Planting design is colourful and well maintained
- Interpretive landscape elements and signage give the park a visible history.
- Stone garden bed edging is unusual but reflects the wider use of sandstone in the district.
- Timber seating is classic in design and unlikely to date.
- Cream and grey medium sized paving units suit the high density commercial and high-rise residential context.
- Selective use of sandstone as a detail rather than as an overall pavement treatment is effective.
- Inlaid text in the pavement is subtle and attractive.

Issues

- Skateboard prevention is highly visible on both wall elements and seating.
- Decomposed granite is not an ideal surface treatment as it has a tendency to erode even on flat surfaces.

Opportunities and recommendations

- Steps up to raised turf areas near the station would increase use of this space.

3. Education Precinct

Character Statement

The education precinct is located on the western edge of the North Sydney Centre. It contains the North Sydney Demonstration School, the North Sydney campus of the ACU and Shore's preparatory and senior schools.

The terrain, tree-lined streets and heritage items contribute to the strong sense of character of the area. Despite the precinct's proximity to the high density mixed use and commercial area of the North Sydney, the high terrain and the predominantly low density residential properties give the campuses a quiet, suburban feel.

Strengths

- The topography, tree-lined streets and heritage items contribute to the strong sense of character of the area.
- Quiet, suburban feel due to predominantly low density residential properties.
- Education establishments are, for the large part, well integrated into the surrounding residential area, creating an 'urban campus' typology.

Issues

- Narrow footpaths (1.2m) in places resulting in streets being used as unofficial shared zones.
- Varied condition of pavements, with a key issue

being uneven surfaces created by roots of Plane trees.

- Road safety issues for pedestrians at some of the major arterial road intersections.
- Marked increase in traffic volumes on local road network during school drop off and pick up times.
- Lack of bike parking (including rails & lockers) throughout the precinct.

Opportunities and recommendations

- Integrate recommendations of Education Precinct Planning Study 2013 including proposed 'Living Campus Program', traffic calming measures, new shared zones, new pedestrian footpaths, through-site links, improved pedestrian crossings etc.
- Provide cycleways and other cycling infrastructure (e.g. bike parking) in accordance with recommendations of North Sydney Integrated Cycling Strategy 2013.
- Streetscape improvements, particularly in areas closest to the centre, would provide much needed quality public domain.
- Tree surround treatments should be upgraded in this precinct.
- Paving treatments should be reviewed.
- Street furniture and lighting to be reviewed.
- In the longer term, the relocation of the Telstra Telephone Exchange may provide an opportunity to extend the green space near Napier Street.

Parks and Open space

Character Statement

The foreshores of North Sydney are generally protected from development by recreational and bushland buffers, with the minor exception of maritime industrial activities which are reliant on a land-water interface.

St Leonards is a major regional recreation park along with Primrose Park in North Cremorne.

Many of North Sydney's recreational parks are fringed by bushland. In most cases this bushland is on steep hilly terrain or foreshores.

Sandstone is a dominant element visible in North Sydney parks along with timber shelters, bollards and railings that are painted in council colours.

Strengths

- A strong heritage aesthetic is reinforced by street furniture and lighting in St Leonards Park.
- Low sandstone walls that are used consistently throughout the district provide a unique aesthetic to the North Sydney area. They also have a heritage feel to them and a suburban scale.

Issues

- Timber elements are showing sign of wear, rot and are often in need of a new coat of paint. A more durable equivalent is suggested for timber bollards and timber guard rails.
- Some obscure street furniture such as drinking fountains attached to low walls can be found in many parks.
- A series of wheelie bins for various different kinds of waste are located separately in Primrose Park. They could do with a grouped housing. A similar solution could be used for other parks.
- Many parks require additional bins and doggie bins.
- Often shade structures are required along with tables, seating and BBQ facilities.
- Maintenance to existing street furniture could be improved.
- Additional amenities blocks and playgrounds.
- Cantaloupe painted timber bollards and railings dominate North Sydney parks. This light colour marks easily and requires maintenance painting. Timber is also not as durable as alternative materials such as a metal.
- Low concrete bollards are used extensively at St Leonards park near the memorial. They are difficult for drivers to see.
- Forsyth Park in neutral Bay lacks adequate seating.

Opportunities and recommendations

- There is an opportunity to upgrade the green seats in North Sydney parks to provide seating with better lumber support and arm rests.
- Generally streetscape furniture and lighting should be reviewed in all parks.
- There are a number of different paving materials in park internal paths, mainly concrete and asphalt. These should continue to be used for footpaths. In some cases there are opportunities for feature paving for special areas and deco granite for lower traffic areas.

Road closures

Cammeray: Morden Street, Raleigh Street, Bellevue Street, Colin Street, Cairo Street, Pine Street, Wilson Street, East Avenue, North Avenue, Pine Street East, Tiley Street

Neutral Bay: Bray Street, Doris Street, Highview Lane, Laycock Street, Nook Avenue, Reserve Street, Wyagdon Street

Cremorne North: Prospect Street, Ellalong Road , Levick and Reynolds Street, Pailing Street, Samora Avenue, Wyong Road

Wollstonecraft: Balfour Street, Carlyle Lane, Rocklands Lane

Lavender Bay: French Street, Lord street, Middle Street

Character Statement

There are a number of road closures at level changes in the north Sydney district that act as small parks.

Strengths

- These spaces are often adopted and built upon by local residents, especially when located at level changes, as pockets in the retaining walls and stones allow for decorative planting. This communal ownership of the space is a good thing.
- These sorts of small park spaces are unique to this area due to the hilly terrain of the North Shore and their use should be encouraged.
- Sandstone walls are a common element in these spaces creating a distinctive aesthetic specific to the locality.
- Many of these road enclosures are at prospect points which provide good views of the district and in many cases provide water views.
- As these spaces terminate many streets they provide a highly visible green space for all to enjoy and improve the overall visual amenity of a street.

Issues

- Many of the steps in these spaces are original sandstone blocks and are likely to not meet access codes. Handrails also do not meet access code as they don't return when they terminate.
- Some road closures particularly those with large level changes have a tendency to become overgrown. This causes a problem with safety and security. Overgrowth can also reduce the effectiveness of nearby lighting.
- Tactiles and high visibility nosing strips are not used often in these spaces. Often high visibility paint is used to highlight stair treads. This is not a high quality finish.
- Exotic species and weeds tend to dominate many of these areas.
- These spaces are often not well lit.
- In many cases steep areas are grassed which is difficult to maintain. They should be planted with native groundcovers.

Opportunities and recommendations

- The communal 'ownership' of these spaces provides an opportunity for community involvement. For instance community gardens could be trialled in these areas.
- More seating should be provided in these spaces to encourage use. Especially as people are likely to have just ascended a steep staircase to reach the upper side of a road closure.
- There is an opportunity to introduce more native species in these areas as has been done at Wilson Street Cammeray.
- Road closures at prospect points should have seating provided to make the most of the view.
- Signage could be improved to help pedestrians navigate road closures especially where level changes obscure the other side of the road closure.
- WSUD solutions could be used at these locations to improve general stormwater quality.

Wharfs / Major entry points to North Sydney

Character Statement

North Sydney has many entry points. By rail - four train stations. By road – 5 main roads and many local streets. By harbour 11 wharfs. Many of the road entrances are marked by post top signage identifying the suburb.

Wharfs

Neutral Bay Wharf - Hayes Street
McMahon's Point wharf
Lavender Bay Wharf
Milsons Point Wharf
Jeffery's Street Wharf
Beulah Street Wharf
Kirribilli Wharf
High Street Wharf
Kurraba Wharf
Cremorne Wharf
Old Cremorne Wharf

Strengths

- Neutral Bay wharf and Milsons Point Wharf have recently been upgraded.
- Sandstone is established as a North Sydney trademark material from the moment you disembark the ferry as you can see it in fencing, walling and exposed outcrops.

Issues

- There are a number of different fencing/ railing solutions to waterfront conditions. For instance timber picket and timber railing fencing at Neutral bay wharf, new stainless steel railings at Folly Point and wrought iron railings at Bradfield park.
- Additional bike racks are required at many Wharf locations.
- Sydney buses seating is provided at Neutral Bay wharf where council seating could be provided.
- Jefferey's Wharf requires an upgrade to keep it in line with nearby upgrades to Bradfield Park.
- Location / welcome signs are minimal. Luna Park has an arrival sign painted on the wall at Milson's Point ferry wharf.
- Kirribilli wharf, Beulah Street wharf and Kurraba wharf are not easily visible from the street making navigation to and from difficult for pedestrians. In some cases vegetation is also quite thick which can become a safety issue.

Opportunities and recommendations

- Better location and directional signage with possibly the inclusion of a map.
- Upgrades could be considered for some of the older wharfs.
- Additional bike rack facilities.
- The number of different types of railings should be considered. Is a standard approach suitable for most areas?
- Additional seating.
- Feature paving at ferry wharfs may be successful at reinforcing a North Sydney aesthetic upon arrival. This could include sandstone as a decorative detail but not as the main body paver.

Major Road Entry Points

Military Road Cremorne
Pacific Highway St Leonards
Willoughby Road St Leonards
River Road / Shirley Road Wollstonecraft
Strathallen Avenue Cammeray

Strengths

- Suburb signs help to locate you and establish a boundary to the suburb.
- Distinctive North Sydney street furniture such as the 'heritage' bus stop quickly establishes the north Sydney character when you enter the district from road.
- Cremorne location signage is a suitable scale and used consistently throughout the activity strip.
- The use of logos helps to establish a set of branding for the suburb.
- Post top entry signs have a paragraph on the history of the suburb which is an interesting point of difference.

Issues

- Post top entry signs are small and don't read from a distance. They are focused on a pedestrian scale rather than for motorists.
- In many cases planting now obscures post top signs.
- Many boundary points are difficult to locate larger suburb signs at due to narrow footpaths and existing vegetation. Also a large sign at a quiet boundary point could look out of place and is better suited to built up areas with activity strips.

Opportunities and recommendations

- Larger suburb signs that will cater to both pedestrians and motorists could be considered.

- Sandstone should be considered as a material for these entry signs as it is a dominant material within the suburb.

Train Entry Points

Milsons Point Station
North Sydney Station
Waverton Station
Wollstonecraft Station

Strengths

- Waverton and Wollstonecraft stations have a strong garden or green aesthetic which reflects their suburban surroundings. St Leonards and North Sydney have a more urban look which is appropriate for their commercial context.

Issues

- North Sydney and St Leonards stations are hidden away from street level so are harder to locate.

Opportunities and recommendations

- Improved signage to nearby activity areas. For instance clear signs to Crows Nest at St Leonards and upgraded pedestrian access to Crows Nest.