

5.7 Local road upgrades

Local roads around the St Peters interchange and the intersection of Campbell Road and Euston Road would be upgraded to ensure safe and efficient connections with the New M5, and to cater for additional traffic demands. Local road upgrades would include:

- Upgrade and widening of Euston Road, from the upgraded Campbell Road / Euston Road intersection to the intersection with Maddox Street to the north of Sydney Park
- Upgrade, widening and extension of Bedwin Road / Campbell Street / Campbell Road from the railway bridge near Camdenville Park to a new intersection with Bourke Road, Mascot
- Upgrade and widening of Bourke Road / Bourke Street, Mascot between Church Street and the Campbell Road extension
- Widening of Gardeners Road
- Other minor local road changes (such as tie-in works)
- New and upgraded bridges and structures
- Access arrangements for heavy vehicles
- Provision of pedestrian and cycle infrastructure
- Changes to bus infrastructure.

Local road upgrades would include modifications to existing intersections, construction of new intersections, localised tie-in works on connecting streets, cutting and embankment works and works to impacted utilities and drainage. Details of the local road upgrades are provided in the following sections and shown in **Figure 5-29** to **Figure 5-30**.

Modified additional local road arrangements have been included in the traffic modelling for May Street / Princes Highway intersection and Mitchell Road / Sydney Park Road intersection. Roads and Maritime will monitor the traffic movements at these locations closely upon opening of the New M5 and, if required and subject to the successful outcome of further consultation with the local councils, stakeholders and community, plan to implement localised schemes. Further detail can be found in Section 4.1.3.2 of the Technical working paper: Traffic and transport (**Appendix G**).

5.7.1 Euston Road

Euston Road would be widened between the upgraded Campbell Road / Euston Road intersection and the intersection with Maddox Street, to the north of Sydney Park. The widening and upgrade of Euston Road would affect three main areas:

- Euston Road between Campbell Road and Sydney Park Road / Huntley Street
- Euston Road between Sydney Park Road / Huntley Street and Maddox Street
- Intersections of Euston Road with Campbell Road, with Sydney Park Road / Huntley Street, and with Maddox Street.

Details of the widening works are shown in **Figure 5-29** and **Figure 5-30**.

Euston Road between Campbell Road and Sydney Park Road / Huntley Street

North of Sydney Park Road, Euston Road is currently one lane in each direction, with the kerbside lanes providing parking. Between Campbell Road and Sydney Park Road, Euston Road is marked as a single lane in each direction, with space for kerbside parking.

As a result of the project, Euston Road would be widened to three northbound and three southbound lanes between Campbell Road and Sydney Park Road / Huntley Street. All lanes would be between three and 3.5 metres wide.

The northbound and southbound lanes would be separated by a central turning lane, which would allow right-hand turning movements for traffic travelling in both directions. Near the intersection of Sydney Park Road / Huntley Street, the central turning lane would be replaced with a median and a right-hand turning lane for northbound traffic. This right-hand turning lane would allow movements into Huntley Street for northbound traffic.

Parking in the kerbside lanes of Euston Road would be permitted during off-peak periods.

A shared pedestrian and cycle path would be provided on the western side of Euston Road (northbound carriageway). A pedestrian footpath would be provided on the eastern side (southbound carriageway). Pedestrian and cycling facilities to be provided along the upgraded Euston Road would tie-in to existing facilities, where they exist.

The majority of works required to widen Euston Road would be conducted in land designated as road reserve along the western side of Euston Road (northbound carriageway), next to Sydney Park.

Euston Road between Sydney Park Road / Huntley Street and Maddox Street

North of the intersection with Sydney Park Road / Huntley Street, Euston Road would be widened to provide single turning lanes at Sydney Park Road / Huntley Street. The additional turning lanes at Sydney Park Road / Huntley Street would connect with an upgrade of that intersection (refer below). An additional left-hand turning lane would be provided at Maddox Street for northbound traffic.

Euston Road intersection upgrades

As part of the Euston Road widening and upgrade works, the following intersections would be upgraded:

- The Euston Road / Campbell Road intersection
- The Euston Road / Sydney Park Road / Huntley Street intersection.

Upgrade works at these intersections are summarised in **Table 5-4** and shown in **Figure 5-29** to **Figure 5-30**.

Table 5-4 Euston Road intersection upgrades

Intersection	Upgrade works
Euston Road / Campbell Road	• Upgrade from an un-signalised three way junction to a signalised four way junction • Tie-in works to connect with the on and off ramps for the main alignment tunnels and the local road network • Additional lanes, including dedicated right-hand and left-hand turning lanes would be provided.
Euston Road / Sydney Park Road / Huntley Street	• Upgrade to a signalised intersection.



Figure 5-29 Euston Road widening and upgrades - map 1

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Figure 5-30 Euston Road widening and upgrades - map 2

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5.7.2 Realignment, widening and extension of Bedwin Road / Campbell Street / Campbell Road

The upgrade of Bedwin Road / Campbell Street / Campbell Road would comprise the following key components:

- Realignment of Bedwin Road between the railway bridge and the Unwins Bridge Road / Campbell Street / May Street intersection
- Widening of Campbell Street / Campbell Road between Unwins Bridge Road and Burrows Road
- Extension of Campbell Road eastwards over the Alexandra Canal to connect to Bourke Road, Mascot
- Upgrades to intersections along Bedwin Road / Campbell Street / Campbell Road.

Realignment of Bedwin Road

Bedwin Road would be realigned between the railway bridge near Camdenville Park, and the intersection with Unwins Bridge Road / May Street / Campbell Street. The realignment would remove two existing tight curves and improve the overall alignment of Bedwin Road.

The realignment of Bedwin Road would result in the intersection of Bedwin Road with Unwins Bridge Road / May Street / Campbell Street moving about 20 metres to the south of its current location. Further details of the intersection upgrade works are provided below.

Details of the realignment works are shown in **Figure 5-31**.

Widening of Campbell Street / Campbell Road

Campbell Street / Campbell Road is currently one traffic lane in each direction with the kerb side providing parking along Campbell Road. Campbell Street / Campbell Road would be widened in three sections:

- Between Unwins Bridge Road and the Princes Highway to provide two traffic lanes in each direction, separated by line marking or a median in some places
- Between the Princes Highway and Euston Road to provide three traffic lanes in each direction. Eastbound and westbound traffic lanes would be separated by a median, which would be provided at variable widths to accommodate turning lanes at intersections
- Between Euston Road and Burrows Road to provide two lanes in each direction, separated by a median.

All traffic lanes would be around three metres wide. A parallel parking lane of around 2.5 metres would be provided in both directions along Campbell Street between Hutchinson Street and St Peters Street. Additional on-street and off street car parking spaces would be provided between St Peters Street and Church Street.

Pedestrian footpaths would be provided in each direction along Campbell Street / Campbell Road. Between the May Street and Barwon Park Road, a separate cycle path would be provided along the northern side of Campbell Street / Campbell Road as part of a broader series of works to improve pedestrian and cyclist accessibility around Sydney Park (refer to **Section 5.7.9**).

Campbell Road would be realigned between Euston Road and Burrows Road, moving it around 50 metres to the south of its current location. This realignment would be required to connect to the extension of Campbell Road over the Alexandra Canal (refer below).

The majority of works required to widen Campbell Street / Campbell Road would be conducted in the existing road reserve along the southern side of Campbell Street / Campbell Road (westbound carriageway). The kerbside lanes on Campbell road have been designed such that they could be converted to bus lanes if and when required in medium to long term. Details of the widening works are shown in **Figure 5-32** to **Figure 5-34**.

Extension of Campbell Road across the Alexandra Canal

Campbell Road would be extended eastwards to provide a direct connection to Bourke Road, Alexandria via a bridge over the Alexandra Canal (the Campbell Road bridge). The extension of Campbell Road would terminate at a new intersection with Bourke Road and would comprise two eastbound lanes, two westbound lanes and a median. The westbound carriageway of the Campbell Road extension would include an 80 metre long right-turn lane for vehicles to turn right into Euston Road.

Traffic lanes in both directions would be about three metres wide. A shared pedestrian and cycle path would be provided on the northern side of Campbell Road (eastbound carriageway). A pedestrian footpath would be provided on the southern side (westbound carriageway). A separate pedestrian and cycle bridge would also be provided along the southern side of the Campbell Road bridge as part of a broader series of works to improve pedestrian and cyclist accessibility around Sydney Park (refer to **Section 5.7.9**).

Bedwin Road / Campbell Street / Campbell Road intersection modifications

As part of the Bedwin Road / Campbell Street / Campbell Road upgrade, widening and extension works, the following intersections would be modified:

- The Bedwin Road / Campbell Street / Unwins Bridge Road / May Street intersection
- The Campbell Street / Brown Street intersection
- The Campbell Street / Hutchinson Street intersection
- The Campbell Street / Florence Street intersection
- The Campbell Street / St Peters Street intersection
- The Campbell Street / Church Street intersection
- The Campbell Street / Princes Highway intersection
- The Campbell Street / Crown Street intersection
- The Campbell Street / Albert Street intersection
- The Campbell Street / Campbell Road/ Barwon Park Road intersection
- The Campbell Road / Harbor Street intersection
- The Campbell Road / Euston Road intersection (also detailed in **Section 5.7.1** in relation to intersection upgrades along Euston Road)
- The Campbell Road / Burrows Road intersection
- The new Campbell Road (extension) / Bourke Road intersection
- The new Campbell Road (extension) / Southend Distribution Centre.

Modification works at these intersections are summarised in **Table 5-5** and shown in **Figure 5-31** to **Figure 5-34**. An assessment of the traffic and transport impacts associated with these intersection upgrades are provided in **Chapter 9** (Traffic and transport) and **Appendix G** (Technical working paper: Traffic and transport).

Table 5-5 Bedwin Road / Campbell Street / Campbell Road intersection works

Intersection	Modification works
Bedwin Road / Campbell Street / Unwins Bridge Road / May Street	• Realignment of the intersection to the north east of its current location • Construction of a new left-hand turn from Campbell Street into Unwins Bridge Road • Extension of the left-turn lane from Unwins Bridge Road into Bedwin Road • Construction of a new shared left and through lane on May Street southbound • Removal of the high angle left turn from May Street into Campbell Street and replacement with a shared through/ left turn lane • New right turn from Campbell Street into May Street.
Campbell Street / Brown Street	• Left-in, left-out (westbound) turning provisions only • Alternative access would be available via Conway Place and Unwins Bridge Road.
Campbell Street / Hutchinson Street	• The existing left-in one way arrangements would be maintained with realignment of the intersection
Campbell Street / Florence Street	• Left-in, left-out (westbound) turning provisions only • Inclusion of a median along Campbell Street to reinforce turning movements • Alternative access would be available via Silver Street and Unwins Bridge Road.
Campbell Street / St Peters Street	• Upgrade to signalised intersection, catering for all turning movements from and to Campbell Street • Additional northbound lane to provide for left-turn and right-turn movements onto Campbell Street.
Campbell Street / Church Street	• Left-in, left-out (westbound) turning provisions only • Inclusion of a median along Campbell Street to reinforce turning provisions • Alternative access via Victoria Street.
Campbell Street / Princes Highway	All turning movements would be provided, including: • One southbound through lane of the Princes Highway would be converted to a right-turn lane for vehicles to turn into Campbell Street (westbound) • Two high-angle left-turn lanes from Campbell Street westbound into Princes Highway (southbound) • Additional right-turn lane from Princes Highway (northbound) into Campbell Street (eastbound) • Conversion of Princes Highway (northbound) kerbside lane from through lane to shared through and left-turn movement into Campbell Street (westbound) • One additional westbound and eastbound through lane along Campbell Street • One additional right-turn lane from Campbell Street (westbound) into Princes Highway (northbound) • Two new right-turn lanes from Campbell Street (eastbound) into Princes Highway (southbound).
Campbell Street / Albert Street / Albert Street / Princes Highway	• Upgrade to a signalised intersection to cater for the future M4-M5 Link construction • Right-turn (eastbound) turning provisions into Albert Street • New right-hand turn lanes on Campbell Street (eastbound) to provide access for future M4-M5 Link construction works in the St Peters interchange site • Left-in, left-out (westbound) turning provisions only.
Campbell Street / Campbell Road / Barwon Park Road	• Barwon Park Road would become one way, with only left in permitted.

Intersection	Modification works
Campbell Road / Harber Street	• Closure of Harber Street to the south of Campbell Road • Left-in, left-out turning provisions only for eastbound traffic.
Campbell Road / Euston Road (refer also to Section 5.5.2)	• Upgrade from an un-signalised three way junction to a signalised four way junction • Tie-in works to connect with the on and off ramps for the main alignment tunnels and the local road network • Additional lanes, including dedicated right-hand and left-hand turning lanes would be provided.
Campbell Road / Burrows Road	• Left-in, left-out only • Alternative access to Burrows Road north of Campbell Road via Huntley Street • Alternative access to Burrows Road south of Campbell Road via Canal Road.
Campbell Road (extension) / Bourke Road	• A new signalised T-intersection at the junction of the Campbell Road extension and Bourke Road • Bourke Road northbound would include two through lanes and one right-turn lane • Bourke Road southbound would include one left-turn lane and one right-turn lane • Campbell Road would include one left turn lane and two through lanes.
Campbell Road / Southend Distribution Centre	• A new T-intersection at the junction of the Campbell Road extension and the distribution centre access road • Campbell Road eastbound would include two through lanes and one right-turn lane • Campbell Road westbound would include one through lane and one shared through and left-turn lane • Distribution centre egress would be left-out only.



Figure 5-31 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 1

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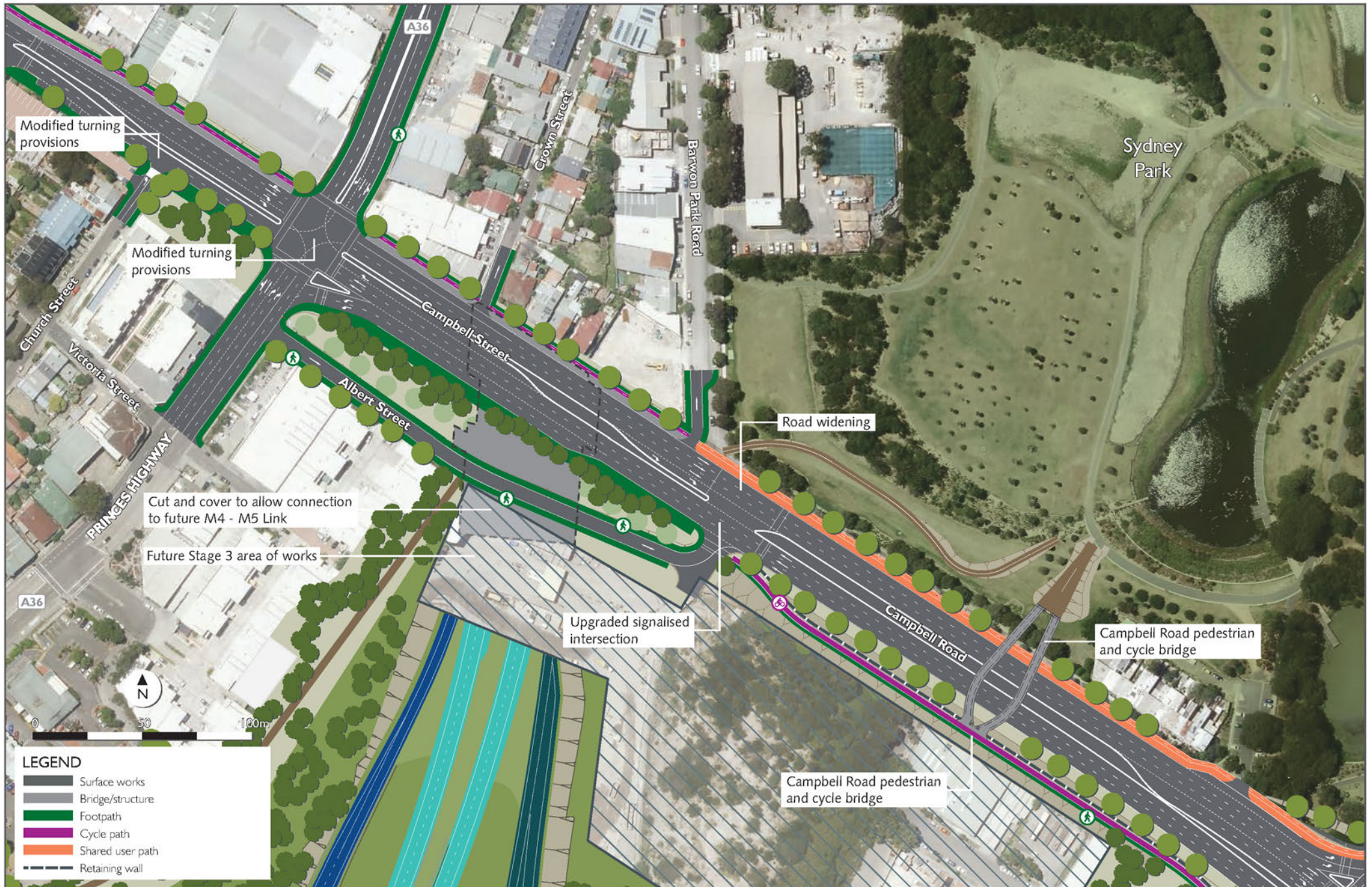


Figure 5-32 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 2

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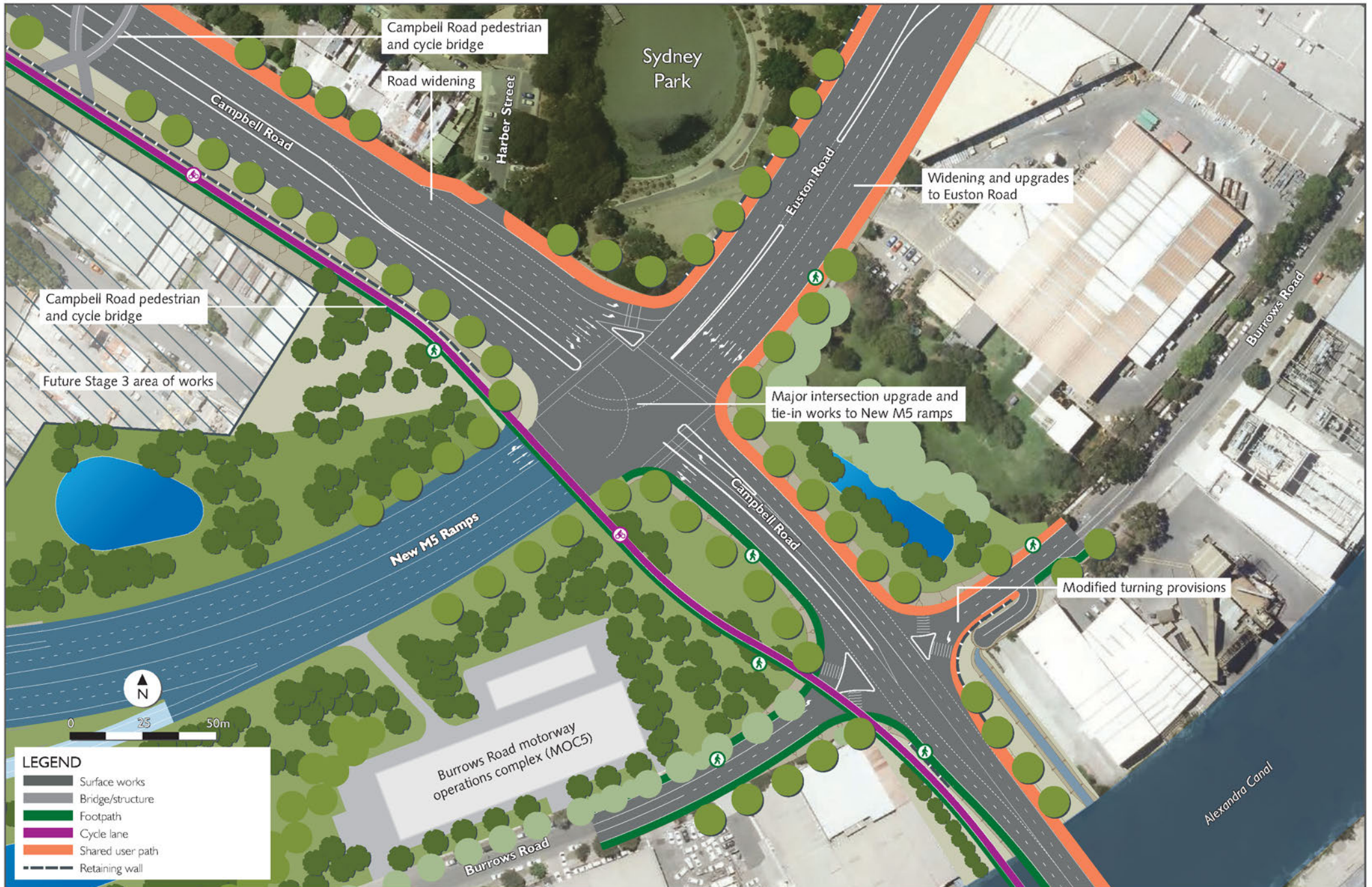


Figure 5-33 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 3

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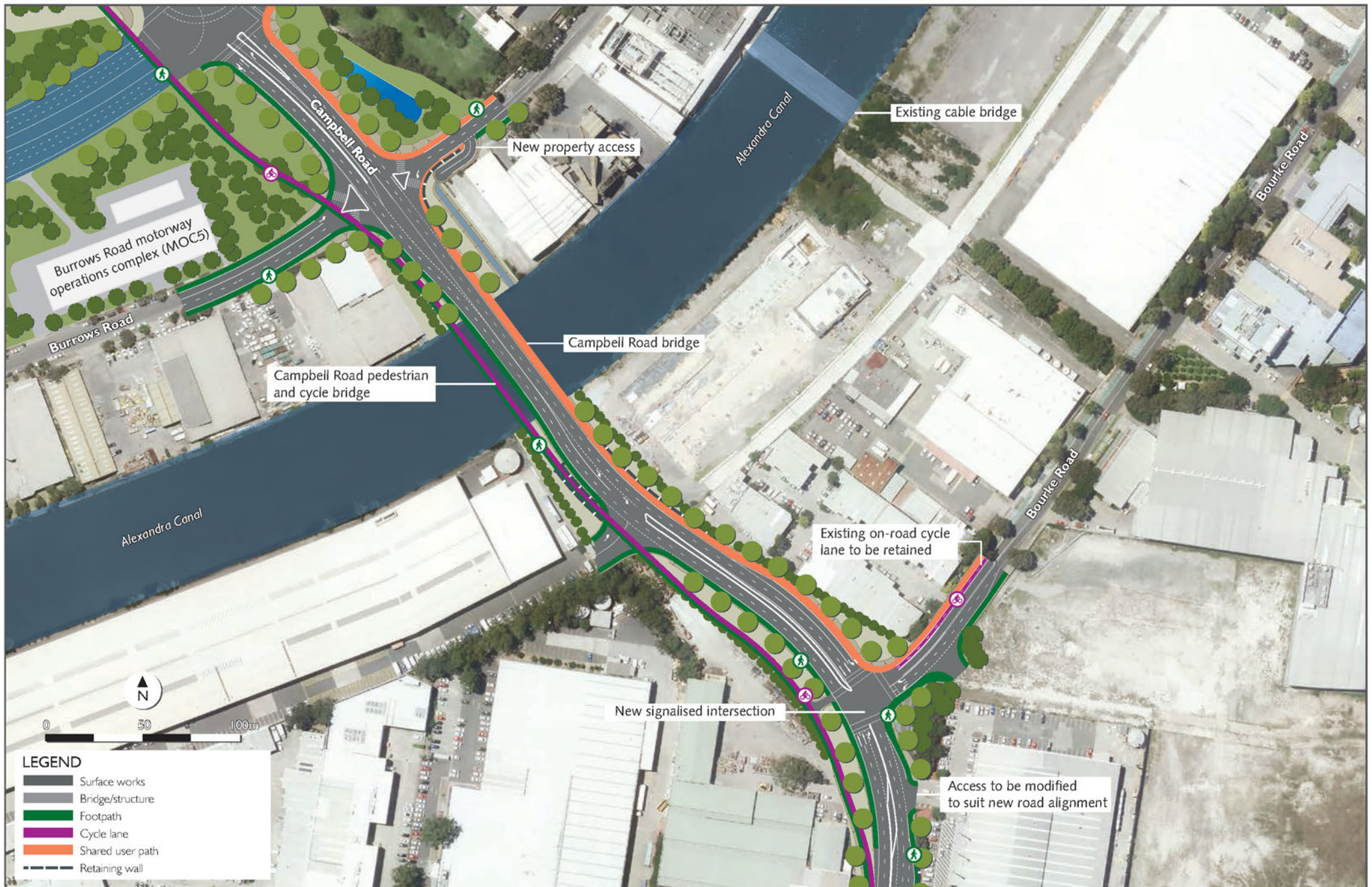


Figure 5-34 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 4

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5.7.3 Upgrade and widening of Bourke Road / Bourke Street

The upgrade of Bourke Road / Bourke Street would comprise the following key components:

- Widening of Bourke Road between the new intersection with the Campbell Road extension and the intersection with Gardeners Road
- Widening of Bourke Street between the intersection with Gardeners Road and the intersection with Church Avenue
- A new intersection where the Campbell Road extension meets Bourke Road and upgrades to the intersection of Bourke Road / Bourke Street with Gardeners Road.

Widening of Bourke Road

Bourke Road would be upgraded and widened from around 100 metres north of the new intersection with the Campbell Road extension to the intersection with Gardeners Road. Two traffic lanes would be provided in the southbound direction with a single lane retained northbound. Each lane would be about three metres wide.

In the southbound direction, two additional lanes would be provided near the intersection with Gardeners Road to allow for left-hand and right-hand turning movements into Gardeners Road. In the northbound direction, a right-hand tuning lane would be provided near the intersection with the Campbell Road extension to allow traffic to turn into Bourke Road north rather than continue along the Campbell Road extension over Alexandra Canal.

Pedestrian footpaths would be provided in both directions. A separate cycle path would be provided along the western side of Bourke Road, adjacent to the pedestrian footpath.

Details of the widening works are shown in **Figure 5-35**.

Widening of Bourke Street

Bourke Street would be upgraded and widened from the intersection with Gardeners Road to around the intersection with Church Avenue. Two through traffic lanes would be provided in each direction and a right hand turn lane northbound to the eastbound Gardeners Road. Each lane would be three metres wide.

Pedestrian footpaths would be provided in both directions. A separate cycle path would be provided along the western side of Bourke Street, adjacent to the pedestrian footpath.

Details of the widening works are shown in **Figure 5-35**.

Bourke Road / Bourke Street intersection upgrades

As part of the upgrade and widening of Bourke Road / Bourke Street, the following intersection works would be carried out:

- Provision of a new intersection between Bourke Road and the Campbell Road extension (also detailed in **Section 5.7.2** in relation to intersection upgrades along Campbell Road)
- Upgrade of the Bourke Road / Bourke Street / Gardeners Road intersection.

Intersection works at these locations are summarised in **Table 5-6** and shown in **Figure 5-35**.

Table 5-6 Bourke Road / Bourke Street intersection works

Intersection	Upgrade works
Bourke Road / Campbell Road (extension)	• A new signalised T-intersection at the junction of the Campbell Road extension and Bourke Road • Bourke Road northbound would include two through lanes and one right-turn lane • Bourke Road southbound would include one left-turn lane and one right-turn lane • Campbell Road would include one left turn lane and two through lanes.
Bourke Road / Bourke Street / Gardeners Road	• Bourke Street northbound would be widened from one lane to three lanes and would include one combined left / through lane, one through lane and one right turn lane • Bourke Road southbound would be widened from two to four lanes and would include one dedicated left-turn lane, one through lane and two right-turn lanes • Gardeners Road eastbound would include one shared left-turn / through lanes and two through lanes • Gardeners Road westbound would be widened from three lanes to four to provide an additional right-turn lane into Bourke Road northbound

5.7.4 Gardeners Road

Gardeners Road would be widened in the vicinity of the upgraded Bourke Road / Bourke Street / Gardeners Road intersection to accommodate an additional through lane for westbound traffic, a new concrete median between the eastbound and westbound carriageways and two right-turn lanes for westbound traffic to turn into Bourke Road. These widening works would generally be undertaken along the northern side of Gardeners Road.

Details of the widening works are shown on **Figure 5-36**.

East of Kent Road, Gardeners Road is currently two lanes in each direction. Gardeners Road would be widened to three lanes in each direction between the Gardeners Road bridge over the Alexandra Canal to east of the intersection with Bourke Road / Bourke Street. All turning movements would be provided at the Gardeners Road / Kent Road intersection, including:

- Three through lanes on Gardeners Road (eastbound)
- One right-turn lane on Gardeners Road (eastbound) onto Kent Road (southbound)
- Two right-turn lanes on Kent Road (northbound) onto Gardeners Road (eastbound)
- One left-turn lane on Kent Road (northbound) onto Gardeners Road (westbound).

These widening works would generally be undertaken along the northern side of Gardeners Road. All lanes would be around three metres wide.



Figure 5-35 Bourke Road / Bourke Street widening and upgrade works

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Figure 5-36 Gardeners Road upgrade and widening works

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5.7.5 Other minor local road upgrades

As a consequence of local road upgrades, minor changes to other local roads would be required. These changes would include:

- Construction of Venice Street
- Minor upgrade works on Unwins Bridge Road and May Street
- Minor upgrade works on Albert Street
- Some permanent road and intersection closures.

Venice Street

The existing driveway located between three Ricketty Street, Mascot and five Ricketty Street, Mascot would be extended to form Venice Street. Venice Street would provide access to properties between Ricketty Street and Gardeners Road and would be one lane in each direction with a turning head at the northern end.

Vehicles travelling westbound along Gardeners Road would be able to turn left into Venice Street via a slip lane, allowing vehicles to travel southbound along Venice Street and turn into Ricketty Street. Venice Street would comprise two lanes, about three metres wide and a pedestrian footpath along the eastern (southbound) side of the street. The northbound lane of Venice Street would provide access to properties. However, no vehicles would be able to turn into Gardeners Road from Venice Street.

Upgrade works on Unwins Bridge Road and May Street

The upgrade of the Bedwin Road / Campbell Street / Unwins Bridge Road / May Street intersection would require minor localised upgrades along Unwins Bridge Road and May Street. These upgrades would extend around 150 metres from the upgraded intersection would include:

- Unwins Bridge Road northbound: extension of the high angle left turn lane by about 80 metres
- May Street northbound: extension of the second through lane from the upgraded Bedwin Road / Campbell Street / Unwins Bridge Road / May Street intersection
- May Street southbound: extension of the second through lane from the upgraded Bedwin Road / Campbell Street / Unwins Bridge Road / May Street intersection for about 100 metres.

The localised upgrade works on Unwins Bridge Road and May Street would be carried out along the western side of these roads. The widening of May Street would require partial acquisition of Camdenville Park. Details of these minor upgrade works are shown in **Figure 5-31**.

Camdenville Park would also be occupied during construction of the project in order to upgrade the existing detention basin within the park. Following completion of construction, BMX facilities would be provided at Camdenville Park or as agreed with Marrickville Council.

Upgrade works on Albert Street

Albert Street is currently open to eastbound traffic only between the Princes Highway and Holland Lane, and two-way traffic between Holland Lane and Campbell Road. As part of the local road upgrades, Albert Street would maintain one-way traffic movements between the Princes Highway and Campbell Road. Car parking would not be provided along Albert Street following completion of the project.

Details of these minor upgrade works are shown in **Figure 5-32**.

Permanent road and intersection closures

The local road upgrade works would require the permanent closure of the following roads and intersections:

- Harber Street between Holland Street and Campbell Road
- Campbell Lane between Albert Street and Harber Street
- Woodley Street between Holland Street and Campbell Road
- Holland Street between Woodley Street and Harber Street
- The Campbell Road / Woodley Street intersection.

5.7.6 Bridges and structures

The local road upgrades would include construction or upgrade of the following bridges and structures:

- A new bridge over the Alexandra Canal as part of the Campbell Road extension (Campbell Road bridge)
- A new grade separated pedestrian and cycle bridge over Campbell Road into Sydney Park, west of Euston Road extending from Sydney Park, west of Euston Road over Campbell Road and Alexandra Canal into Alexandria
- A cut and cover structure beneath Campbell Street and Albert Street to allow potential future construction of the future M4-M5 Link
- Widening of the Euston Road bridge over the Munni Street stormwater channel
- A new bridge over the Alexandra Canal as part of the Gardeners Road extension.

Campbell Road bridge

The Campbell Road bridge would be a three span grade separated girder bridge, extending around 130 metres across the Alexandra Canal. The substructure would comprise bored piles, piers and abutments. The superstructure would consist of steel box girders, precast concrete deck infill slabs with an in-situ deck and precast parapets.

The location of the new Campbell Road bridge is shown in **Figure 5-33**. An indicative cross-section of the new bridge is shown in **Figure 5-37**.

Campbell Road pedestrian and cycle bridge

The Campbell Road pedestrian and cycle bridge would extend from the Bourke Road cycle path to Sydney Park. The bridge would be delivered as part of a broader series of works to improve pedestrian and cyclist accessibility around Sydney Park.

The bridge would be made up of two main sections:

- Extending from Bourke Road, across Alexandra Canal to then run parallel to Campbell Road to around Campbell Lane. This section would:
 - Be around 370 metres long and provide pedestrian and cycle access across the on- and off-ramps, as part of the St Peters interchange
 - Comprise nine spans, including two long spans over the on-and off-ramps and over the Alexandra Canal. The substructure would comprise bored piles, piers and abutments. The superstructure would include steel box girders and beams.

- Extending across Campbell Road to Sydney Park. This section of the bridge would:
 - Be around 60 metres long and four metres wide and would cross Campbell Road in a single span
 - Include architectural features, comprising a sweeping arc, anti-throw screens, integrated pedestrian lighting and landscaping. The substructure would consist of bored piles and abutments built from the pile level. The superstructure would consist of a steel arch, precast floor slabs and an in-situ deck.

The location of the new Campbell Road pedestrian and cycle bridge is shown in **Figure 5-31** to **Figure 5-34**.

Cut and cover structure beneath Campbell Street and Albert Street

A cut and cover structure underneath Campbell Street would be constructed near the intersection with Albert Street. The cut and cover structure would allow for the potential construction of the future M4-M5 Link at a later date.

The structure would consist of bored piles as well as abutment and pier headstocks which would be cast around super T-beams forming an internal bridge. The location of the cut and cover structure is shown in **Figure 5-32**.

Widening of the Euston Road stormwater channel bridge

The existing bridge structure which carries Euston Road over the Munni Street stormwater channel would be widened as part of the Euston Road widening works (refer to **Section 5.7.1**).

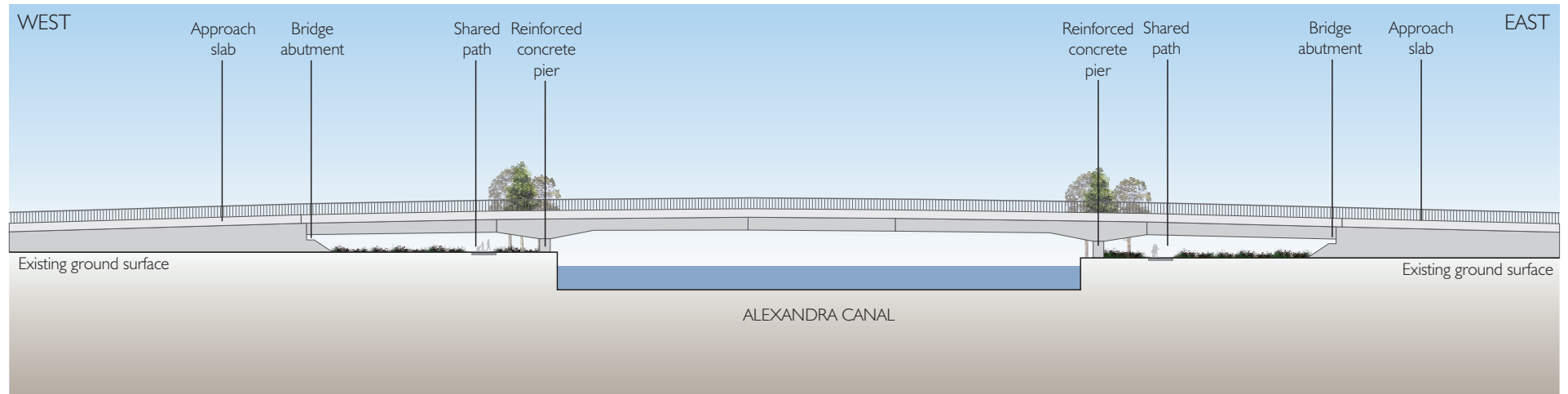
The widening would utilise bridge components similar to the existing crossing.

Gardeners Road bridge

The Gardeners Road bridge over the Alexandra Canal would be a three span girder bridge, extending across the Alexandra Canal. The substructure would comprise bored piles, piers and abutments. The location of the new Gardeners Road bridge is shown in **Figure 5-36**.

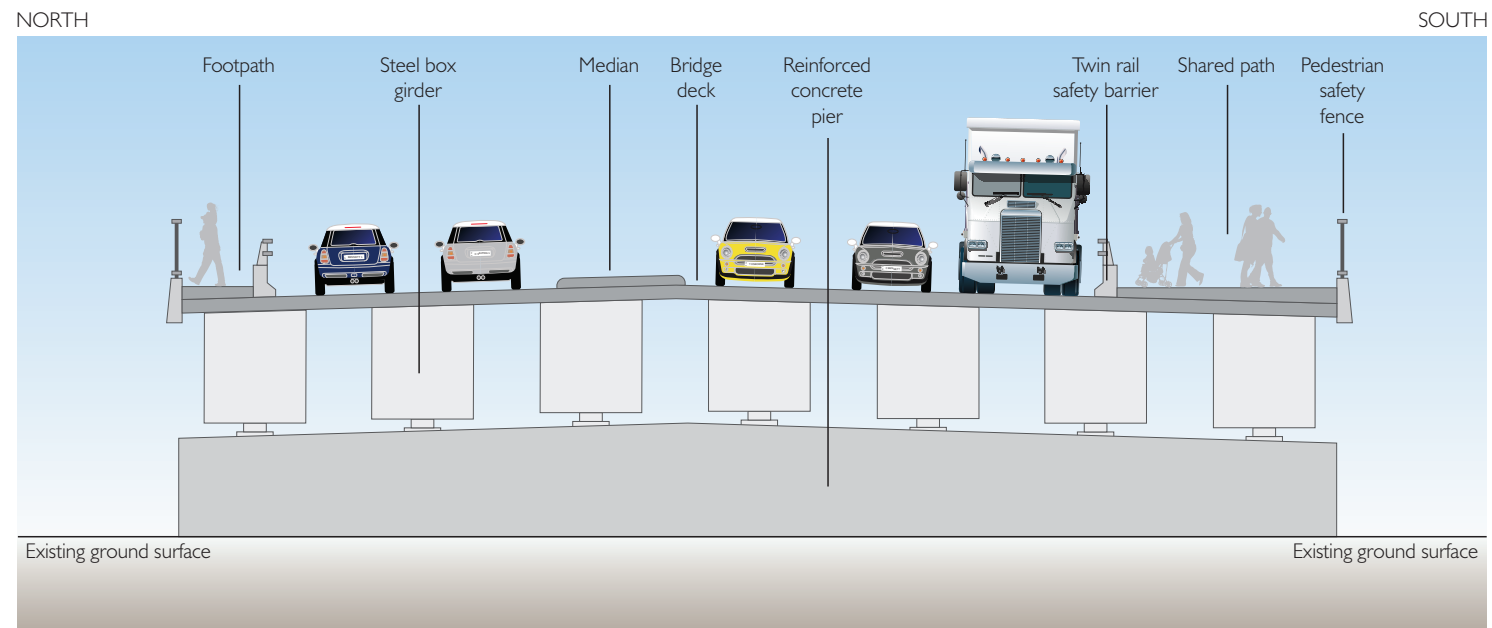
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CAMPBELL ROAD BRIDGE - ELEVATION



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CAMPBELL ROAD BRIDGE OVER PIER - SECTION



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Figure 5-37 Indicative cross section - Campbell Road bridge

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5.7.7 Road infrastructure design

The project has been designed generally in accordance with Australian Standards, the Austroads Guides, as well as Roads and Maritime design guides and supplements.

The project has been designed to safely accommodate the design speeds listed in **Table 5-7**. These design traffic speeds are mostly higher than the actual posted speed limited that would be applied to each component of the project.

Table 5-7 Design speeds and posted speed limits

Location	Design speed (kilometres per hour)	Posted speed limit (kilometres per hour)
New M5 Motorway		
Main alignment tunnels and ramps	90	80
Local road upgrades		
Campbell Street, between Unwins Bridge Road and the Princes Highway	60	60
Campbell Street, between the Princes Highway and Barwon Park Road	70	60
Campbell Road between Barwon Park Road and Bourke Road (including the Campbell Road extension)	70	60
Bourke Road, north of Campbell Road	60	60
Bourke Road, between Campbell Road and Gardeners Road	70	60
Bourke Street	60	60
Euston Road	70	60
Sydney Park Road	70	60
Huntley Street	60	60
Gardeners Road	70	60
Unwins Bridge Road	60	60
May Street	60	60
Bedwin Road	70	60
Burrows Road	70	60

5.7.8 Heavy vehicle access arrangements

The local road upgrades have been designed to allow movement of heavy vehicles in some areas, including:

- Single unit heavy vehicles – a 12.5 metre long rigid vehicle, for example a bus
- Semi-trailer – a heavy vehicle up to 19 metres in length, consisting of a prime mover and one articulated trailer
- B-doubles – A heavy vehicle up to about 25 metres in length, consisting of a prime mover and two articulated trailers. The lead trailer is shorter and able to carry one 20 foot container and the second trailer is longer and able to carry two 20 foot containers or one 40 foot container
- Super B-doubles – A B-double up to 32 metres long. A super B-double is configured the same as a B-double; however, the lead trailer is the same length as the second trailer, meaning that the vehicle is capable of carrying up to four 20 foot containers or two 40 foot containers.

A summary of where local road upgrades have been designed to accommodate heavy vehicle turning movements is provided in **Table 5-8**. The turning provisions would allow for new heavy vehicle routes around St Peters to be designated via the relevant Roads and Maritime process if required. All other turning movements within the local road upgrades have been design to accommodate vehicles up to and including semi-trailers.

Table 5-8 Suggested heavy vehicle turning provisions – local road upgrades

Heavy vehicle type	Location of turning movements
Super B-doubles	• Right turn – Princes Highway northbound into Campbell Street eastbound • Right turn – Campbell Road eastbound into New M5 ramps southbound • Right turn – Campbell Road eastbound into Bourke Road southbound • Left turn – Bourke Road southbound into Gardeners Road eastbound.
B-doubles	• All movements at the intersection of Campbell Road and Burrows Road.
Single unit vehicles	All turning movements at the following intersections: • Campbell Street and Brown Street • Campbell Street and Hutchinson Street • Campbell Street and Florence Street • Campbell Street and St Peters Street • Campbell Street and Church Street • Campbell Street and Crown Street • Campbell Street and Albert Street • Princes Highway and Albert Street • Campbell Road and Woodley Street • Campbell Road and Harber Street.
Semi-trailer	All other movements not specifically mentioned above.

5.7.9 Pedestrian and cycle access arrangements

The local road upgrades would provide new and upgraded pedestrian and cycle infrastructure. This infrastructure has been designed to maintain and enhance pedestrian and cyclist accessibility and connectivity, particularly around the St Peters interchange and Sydney Park.

The most significant new infrastructure would include the construction of the Campbell Road pedestrian and cycle bridge providing connections between Sydney Park and Bourke Road cycle path.

Other key pedestrian and cycle infrastructure to be delivered as part of the local road upgrades would include:

- A shared path along the western side of Euston Road between Campbell Road and Sydney Park Road
- An on-road cycle lane along Bourke Road between Campbell Road and Church Avenue
- Retention of the on-road cycle lane on Bourke Road / Street, north of the Campbell Road extension
- Provision of footpaths along all local roads upgraded as part of the project.

The upgrades to pedestrian and cycle infrastructure would provide for a safe cyclist and pedestrian environment by minimising the interface between cyclists, pedestrians and vehicular traffic, and would also provide a regional cycle connection between Mascot and Marrickville.

Pedestrian and cycle infrastructure associated with the local road upgrades component of the project are shown on **Figure 5-29** to **Figure 5-36**.

5.7.10 Changes to bus infrastructure

The local road upgrades would provide the opportunity for potential future public transport connections between the Princes Highway, St Peters and Gardeners Road, Mascot via the Campbell Road extension.

The bus stop on the southbound side of Canal Road along route 418 (Burwood to Bondi Junction) near the intersection of the Princes Highway would be permanently relocated further south along Canal Road to accommodate construction vehicles entering and exiting the Canal Road construction compound throughout construction of the project (refer to **Section 6.9** for further details). The final location of this bus stop would be determined during detailed design and in consultation with Transport for NSW.

The existing bus stop on Euston Road northbound, south of the intersection with Maddox Street would be temporarily relocated during the upgrade of Euston Road and Maddox Street. The bus stop would be reinstated after this work is completed.

The project offers a flexible design which does not preclude bus priority measures being included in the future Roads and Maritime and TfNSW will continue to work together to deliver *Sydney's Bus Future*, which may be extended to this area in due course, at which point the surface road network can be adapted to include measures identified at a future date.

5.8 Motorway operational ancillary infrastructure

The project would require permanent operational ancillary infrastructure including:

- Operational management control systems and incident and emergency response infrastructure
- Tunnel ventilation systems and facilities
- Drainage and water treatment facilities
- Noise attenuation measures
- Utilities
- Roadside furniture and lighting.

Most operational ancillary infrastructure would be established in five main motorway operations complexes:

- The Kingsgrove motorway operations complex (MOC1) – located to the south of the western project portals and the existing M5 East Motorway, on land previously occupied by the Kingsgrove South construction compound (C3)
- The Bexley Road South motorway operations complex (MOC2) – located to the south of the M5 East Motorway western portals, adjacent to Bexley Road, on land previously occupied by the Bexley Road South construction compound (C5)
- The Arncliffe motorway operations complex (MOC3) – located near the south western corner of the Kogarah Golf Course site, on land previously occupied by the Arncliffe construction compound (C7)
- The St Peters motorway operations complex (MOC4) – located near the western corner of the St Peters interchange, adjacent to the Prince Highway / Canal Road intersection, on land previously occupied by the Canal Road construction compound (C8)
- The Burrows Road motorway operations complex (MOC5) – located at the corner of Burrows Road and Campbell Road, St Peters on land previously occupied by the Burrows Road construction compound (C11).

Noise attenuation measures, utilities, roadside furniture and lighting would be provided as required along the project corridor.

The locations of the motorway operations complexes are shown in **Figure 5-38** to **Figure 5-42**.

Operational ancillary infrastructure that would be located within each motorway operations complex is summarised in **Table 5-9** and detailed in the following sections.

Table 5-9 Summary of motorway operations complexes and operational ancillary infrastructure

Operational ancillary facilities	Motorway operations complex				
	Kingsgrove (MOC1)	Bexley Road South (MOC2)	Arncliffe (MOC3)	St Peters (MOC4)	Burrows Road (MOC5)
Ventilation facility	✓		✓	✓	
Emergency smoke extraction facility		✓	✓		
Deluge water tanks	✓				
Car parking	✓	✓	✓	✓	✓
Substation / power supply	✓	✓	✓	✓	
Emergency response system	✓				
Maintenance facility	✓				
Workshop / offices	✓				
Storage	✓				
Water treatment plant / infrastructure			✓		
Motorway control centre					✓

Infrastructure required for the ongoing management of the former Alexandria Landfill, including landfill gas, leachate and other environmental control measures, are detailed in **Section 5.9**.



Figure 5-38 Kingsgrove motorway operations complex (MOC 1)

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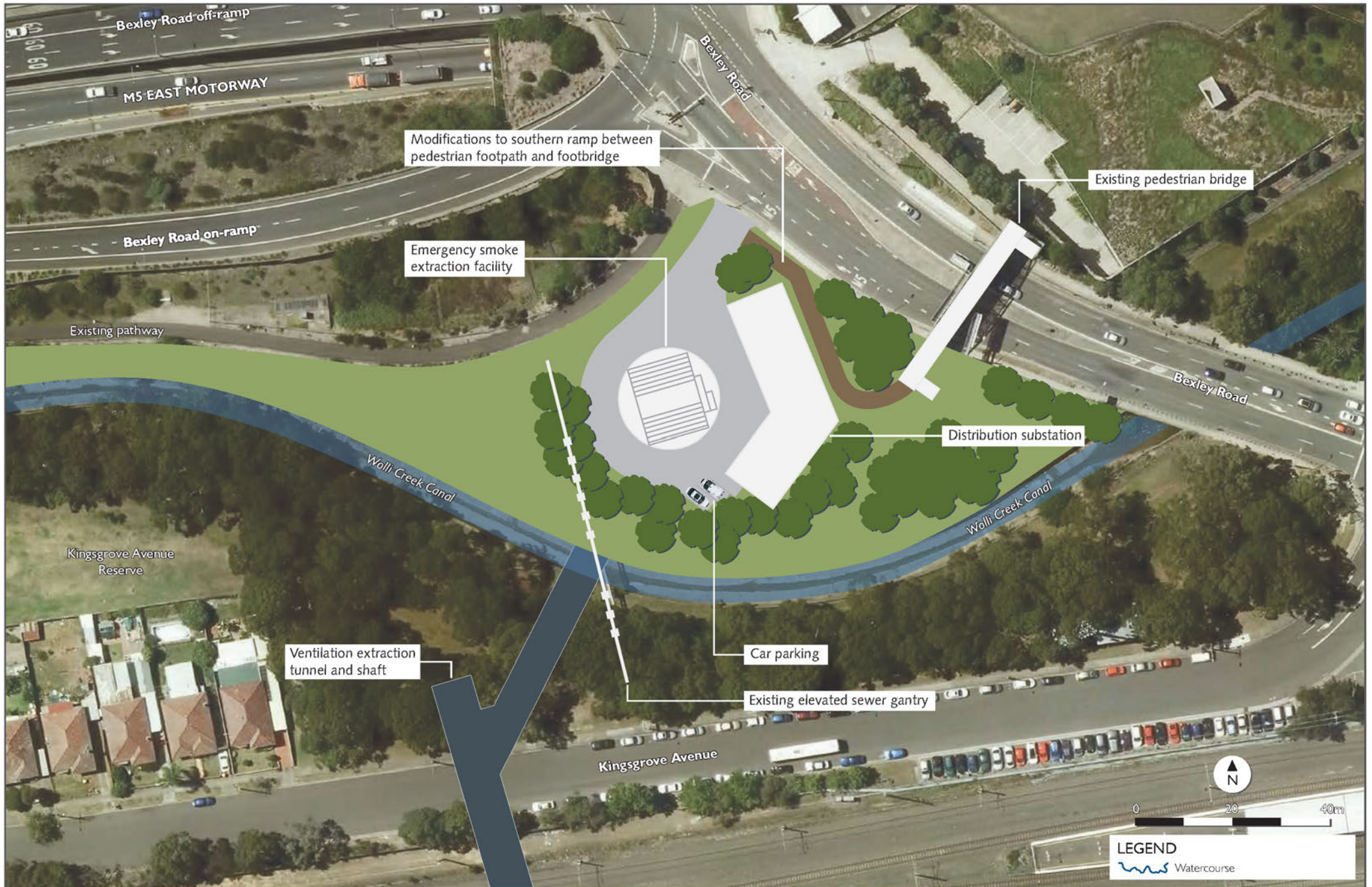


Figure 5-39 Bexley Road South motorway operations complex (MOC 2)

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Figure 5-40 Arncliffe motorway operations complex (MOC 3)

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