

## 3 Proposed design changes

This chapter describes the proposed design changes associated with the amended project. The changes:

- Amendments to the motorway-to-motorway interchange at the M7 Motorway including an option to connect the M12 Motorway to Elizabeth Drive
- Signalised intersections into the Western Sydney International Airport (subject to funding)
- Other minor changes as part of the progression of project development that are consistent with the parameters of the project description in the EIS.

These proposed design changes are described in detail in the sections that follow.

### 3.1 Amendments to motorway-to-motorway interchange at the M7 Motorway

#### 3.1.1 Project as described in the EIS

A motorway-to motorway interchange between the M12 Motorway and the M7 Motorway was described in Section 5.10.1 of the EIS as a grade-separated interchange to provide a free-flowing connection to and from the M7 Motorway which, in turn, links to the wider Sydney motorway network that includes the M5 Motorway, the M4 Motorway and the M2 Motorway. Exit and entry ramps for this motorway are shown in **Figure 3-1** and included the following:

- Entry and exit ramps between the M7 Motorway and Elizabeth Drive
- Entry and exit ramps between the M7 Motorway and the M12 Motorway
- Realignment of Wallgrove Road connection to the M7 Motorway from Elizabeth Drive, with a G-loop on-ramp
- Realignment of the existing M7 Motorway shared user path
- Water quality treatment basins.

#### 3.1.2 Proposed design change

Two options are proposed for the motorway-to-motorway interchange at the M7 Motorway as part of the amended project described in **Chapter 2**. Both options would comprise a motorway-to-motorway interchange, however option 2 (with Elizabeth Drive connections) would have an additional connection between the M12 Motorway and Elizabeth Drive (see **Section 3.1.2.2**).

**Figure 3-1** shows a comparison between the motorway-to-motorway interchange at the M7 Motorway as described in the EIS, and the two options proposed as part of the amended project. The key changes for this interchange are discussed in the following sections.

### 3.1.2.1 Option 1 interchange

The proposed design change for option 1 of the motorway-to-motorway interchange at the M7 Motorway consists of the following and is shown in **Figure 3-1**:

- Two amended intersections of Elizabeth Drive to the M7 Motorway, including changes to the lane configuration of the existing M7 Motorway connection to Elizabeth Drive as follows:
  - Updated lane configuration of the existing intersection of the M7 Motorway southbound and Elizabeth Drive
  - Changes to the existing intersection of the M7 Motorway and Wallgrove Road with Elizabeth Drive, including:
    - Changes to lane configuration
    - Removal of the loop ramp
    - Realignment of Wallgrove Road to connect to Cecil Road, including a connection between Elizabeth Drive and Wallgrove Road via Cecil Road with a signalised intersection with Elizabeth Drive
    - Direct connection from Elizabeth Drive to the M7 Motorway northbound
- Widening of Elizabeth Drive under the M7 Motorway and approaches
- Amended exit ramps from the M7 Motorway to the M12 Motorway and Elizabeth Drive
  - The exit ramps would provide a combined exit to both the M12 Motorway and Elizabeth Drive, and would then diverge to provide separated entry to the M12 Motorway and Elizabeth Drive
- Realignment of the existing M7 Motorway shared user path from the alignment proposed in the EIS
- Changes to the proposed M12 Motorway road alignment at the lead up to the interchange including modifications to bridges, culverts and other structures
- Changes to some of the existing and proposed water quality treatments.

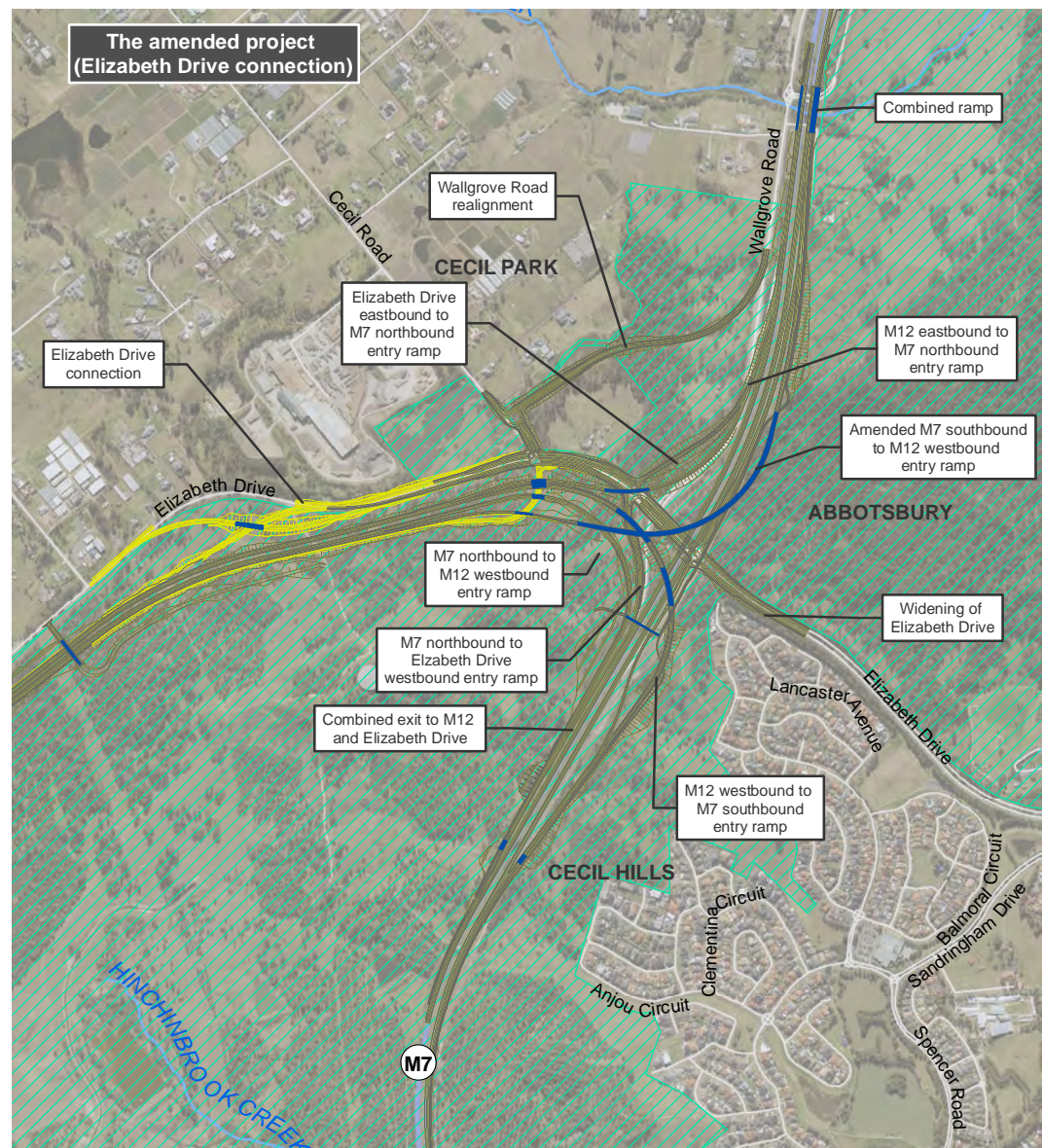
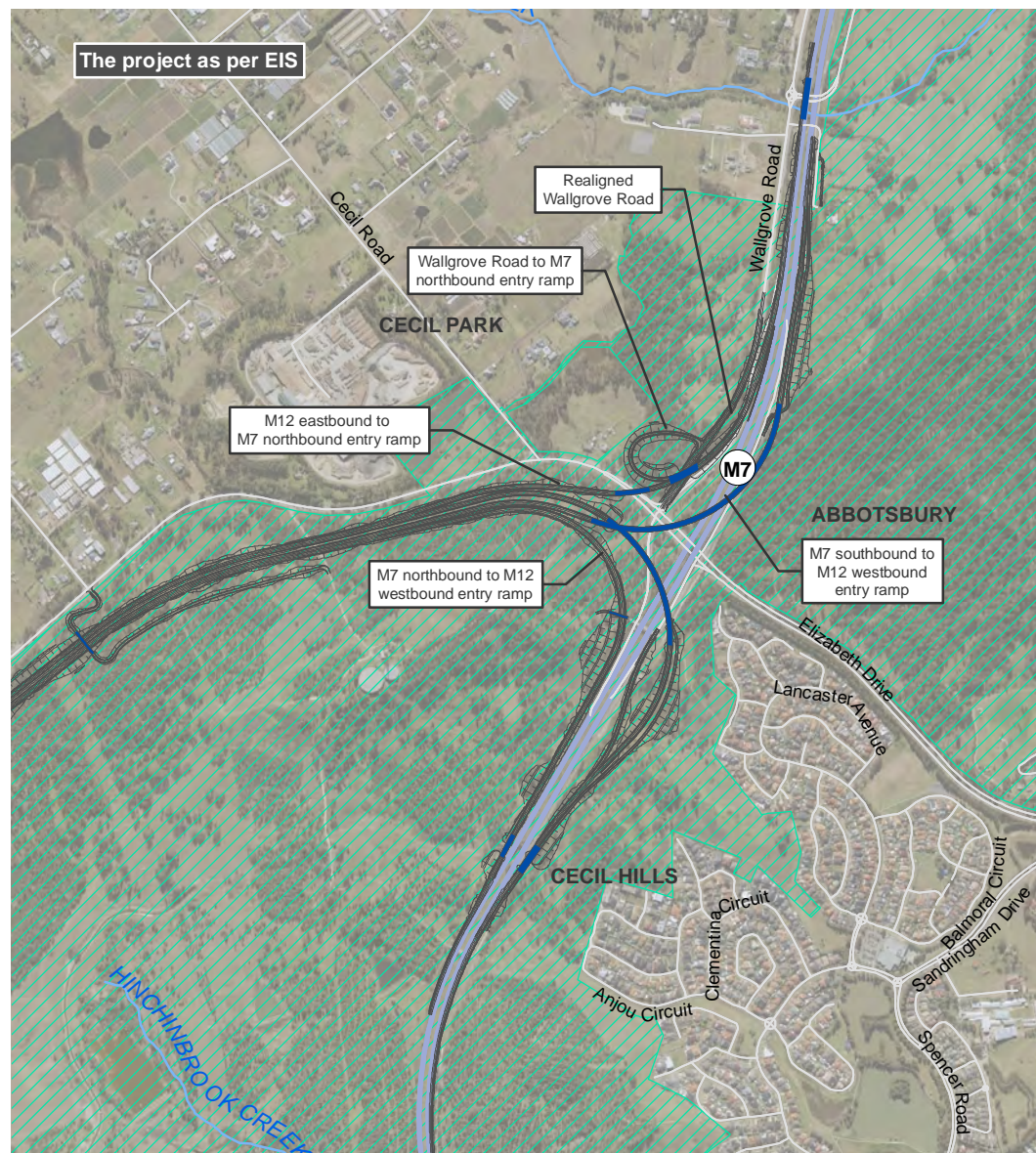
These changes to the design of the motorway-to-motorway interchange have been developed to provide improved operational performance and connectivity to the M12 Motorway.

Combining two M7 Motorway off-ramps into a single exit point from the motorway before diverging for access to M12 Motorway or Elizabeth Drive would improve operational performance and driver safety. This is due to the reduction in locations where vehicles would be merging left and decelerating to exit the motorway. A single exit point would also reduce driver confusion. Similarly for the ramps exiting the M12 Motorway, the combination into a single exit point from the motorway before diverging would improve safety and performance.

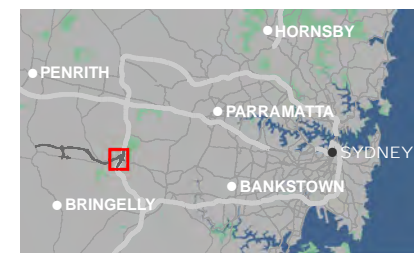
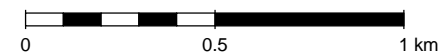
The high point of the amended interchange ramps (see **Figure 3-1**) would be lower than the high point of the interchange ramps as described in the EIS. The high point of the amended M7 Motorway southbound to M12 Motorway westbound ramp would be lowered by about five metres when compared to the project as described in the EIS, and the high point of the amended M12 Motorway Eastbound to M7 Motorway southbound ramp would be lowered by about four metres when compared to the project as described in the EIS. It is noted this may be further amended in detailed design.

The widening of Elizabeth Drive under the M7 Motorway is proposed to provide additional capacity for the motorway-to-motorway interchange.





- The amended project
- The amended project (Elizabeth Drive connection)
- The project as per EIS
- Motorway
- Existing roads
- Waterways
- Bridges
- ▨ Western Sydney Parklands



**Figure 3-1** M12 Motorway to M7 Motorway Interchange



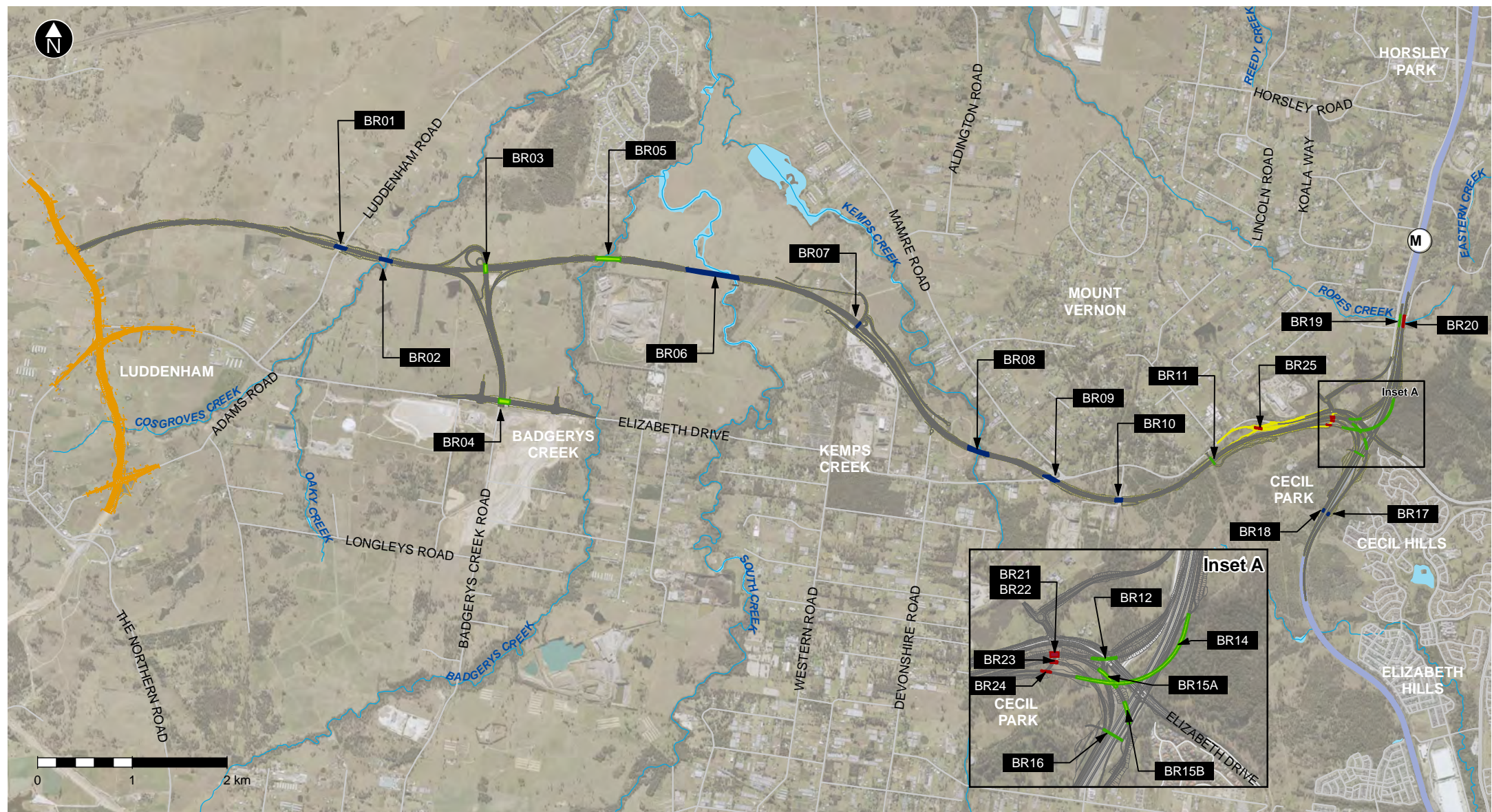
The existing intersection of Wallgrove Road and Elizabeth Drive has been shown to have major delays in the AM and PM peak periods (see Appendix F of the EIS). The addition of a connection to the M12 Motorway at, or in close proximity to, the existing signalised intersection of Wallgrove Road and Elizabeth Drive would result in further deterioration in the performance of this intersection to unacceptable levels. In order to avoid reduced intersection performance, an additional intersection with Elizabeth Drive near Cecil Road would provide the connection to the M12 Motorway. The realignment of Wallgrove Road to this intersection would separate traffic accessing the M7 Motorway from Wallgrove Road. The access to the M7 Motorway would also be a straight ramp which would provide improved performance over the loop ramp that was proposed in the EIS. The design of the Wallgrove Road realignment would be further refined in consultation with adjacent landowners.

The described amendments to the motorway-to-motorway interchange at the M7 Motorway would result in changes to bridges as they were described in Section 5.12 of the EIS. Bridge 13 would no longer be required, and five additional bridges are proposed, primarily to facilitate a connection between the M12 Motorway and Elizabeth Drive, bringing the total number of bridges constructed to 23. The additional bridges would be constructed in the form of a multi-span precast concrete super-T girder, an example of which is shown in Figure 5-10 of the EIS. Details of the new bridges are listed in **Table 3-1** and shown in **Figure 3-2**.

Table 3-1 Proposed additional bridges

Bridge reference and description	Indicative structure type	Indicative length (L) and width (W) in metres (m)
<b>Bridge 20</b> Widening of the existing the Villiers Road bridge (Bridge 19) at the M7 Motorway southbound Configuration would be one additional traffic lane and shared user path	Multi-span precast concrete super- T girder	L = about 120 m W = about 8 m
<b>Bridge 21</b> M7 Motorway northbound entry ramp from M12 Motorway eastbound Bridge over M12 Motorway westbound entry ramp from Elizabeth Drive Configuration would be one lane and shoulder	Multi-span precast concrete super- T girder	L = about 36 m W = about 6 m
<b>Bridge 22</b> M7 Motorway southbound entry ramp from M12 Motorway eastbound bridge over M12 Motorway westbound entry ramp from Elizabeth Drive Configuration would be two lanes and shoulder	Multi-span precast concrete super- T girder	L = about 36 m W = about 10 m
<b>Bridge 23</b> M7 Motorway northbound exit ramp to M12 Motorway westbound bridge over M12 Motorway westbound entry ramp from Elizabeth Drive Configuration would be two lanes and shoulder	Multi-span precast concrete super- T girder	L = about 36 m W = about 10 m
<b>Bridge 24</b> M7 Motorway southbound exit ramp to M12 Motorway westbound bridge over M12 Motorway westbound entry ramp from Elizabeth Drive Configuration would be two lanes and shoulder	Multi-span precast concrete super- T girder	L = about 36 m W = about 10 m





**Figure 3-2** Proposed amended project bridges



### 3.1.2.2 Option 2 interchange

The proposed amendments to the motorway-to-motorway interchange at the M7 Motorway provide opportunity for a direct connection between the M12 Motorway and Elizabeth Drive. This connection would increase the accessibility of the M12 Motorway, particularly for vehicles travelling to and from areas to the east of the amended project. It would allow vehicles to access the M12 Motorway at the eastern end of the amended project without having to utilise the tolled M7 Motorway. The traffic modelling has shown that, compared to the project as described in the EIS, traffic volumes on the M12 Motorway would be lower for option 1 (without Elizabeth Drive connections) and higher for option 2 (with Elizabeth Drive connections). This would also provide additional capacity along Elizabeth Drive for local and regional trips in the area.

The proposed design changes for option 2 (with Elizabeth Drive connections) of the motorway-to-motorway interchange at the M7 Motorway consists of the following and is shown in **Figure 3-1**. The proposed changes to the design of option 2 when compared to option 1 are shown in **bold text**.

- Two amended intersections of Elizabeth Drive to the M7 Motorway, including changes to the lane configuration of the existing M7 Motorway connection to Elizabeth Drive as follows:
  - Updated lane configuration of the existing intersection of the M7 Motorway southbound and Elizabeth Drive
  - Changes to the existing intersection of the M7 Motorway and Wallgrove Road with Elizabeth Drive, including:
    - Changes to lane configuration
    - Removal of the loop ramp
    - Realignment of Wallgrove Road to connect to Cecil Road, including a connection between Elizabeth Drive and Wallgrove Road via Cecil Road with a signalised intersection with Elizabeth Drive
    - Direct connection from Elizabeth Drive to the M7 Motorway northbound
- Widening of Elizabeth Drive under the M7 Motorway and approaches
- **Direct connection between the M12 Motorway and Elizabeth Drive at the motorway-to-motorway interchange at the M7 Motorway via the following ramps:**
  - **M12 Motorway westbound from Elizabeth Drive entry ramp connection to a combined Cecil Road and Wallgrove Road signalised intersection Elizabeth Drive**
  - **M12 Motorway eastbound to Elizabeth Drive off ramp via a realigned Elizabeth Drive, including:**
    - Lane configuration of existing Elizabeth Drive to a two lane eastbound alignment
    - Further widening and realignment of Elizabeth Drive westbound between Duff Road and Cecil Road
    - M12 Motorway eastbound to Elizabeth Drive off ramp under passing the realigned Elizabeth Drive westbound, connecting to Elizabeth Drive eastbound via a third lane
- Amended exit ramps from the M7 Motorway to the M12 Motorway and Elizabeth Drive
  - The exit ramps would provide a combined exit to both the M12 Motorway and Elizabeth Drive, and would then diverge to provide separated entry to the M12 Motorway and Elizabeth Drive
- Realignment of the existing M7 Motorway shared user path from the alignment proposed in the EIS



- Changes to the proposed M12 Motorway road alignment at the lead up to the interchange including modifications to bridges, culverts and other structures
- Changes to some of the existing and proposed water quality treatments.

The proposed changes to the design of option 2, when compared to option 1, are shown in **Figure 3-3**. The amended project to the west of Duff Road would be consistent between option 1 and option 2.

Option 2 (with Elizabeth Drive connections) would allow road users to access the M12 Motorway from Elizabeth Drive and provide a toll-free option for motorway access to the Western Sydney International Airport from the east. The decision on which option would be built is dependent on available funding. This will be determined during the detailed design and construction phase of the project.

Option 2 (with Elizabeth Drive connections) would result in an additional bridge, Bridge 25, bringing the total number of bridges constructed to 24. The additional bridge would be constructed in the form of a multi-span precast concrete super-T girder, an example of which is shown in Figure 5-10 of the EIS. Details of the new bridge are listed in **Table 3-2** and shown in **Figure 3-2**.

Table 3-2 Proposed additional bridge (Elizabeth Drive connection)

Bridge reference and description	Indicative structure type	Indicative length (L) and width (W)
<b>Bridge 25</b> Elizabeth Drive westbound Bridge over M12 Motorway eastbound exit ramp to Elizabeth Drive Configuration would be two lanes and shoulder.	Multi-span precast concrete super-T girder	L = about 36 metres W = about 10 metres

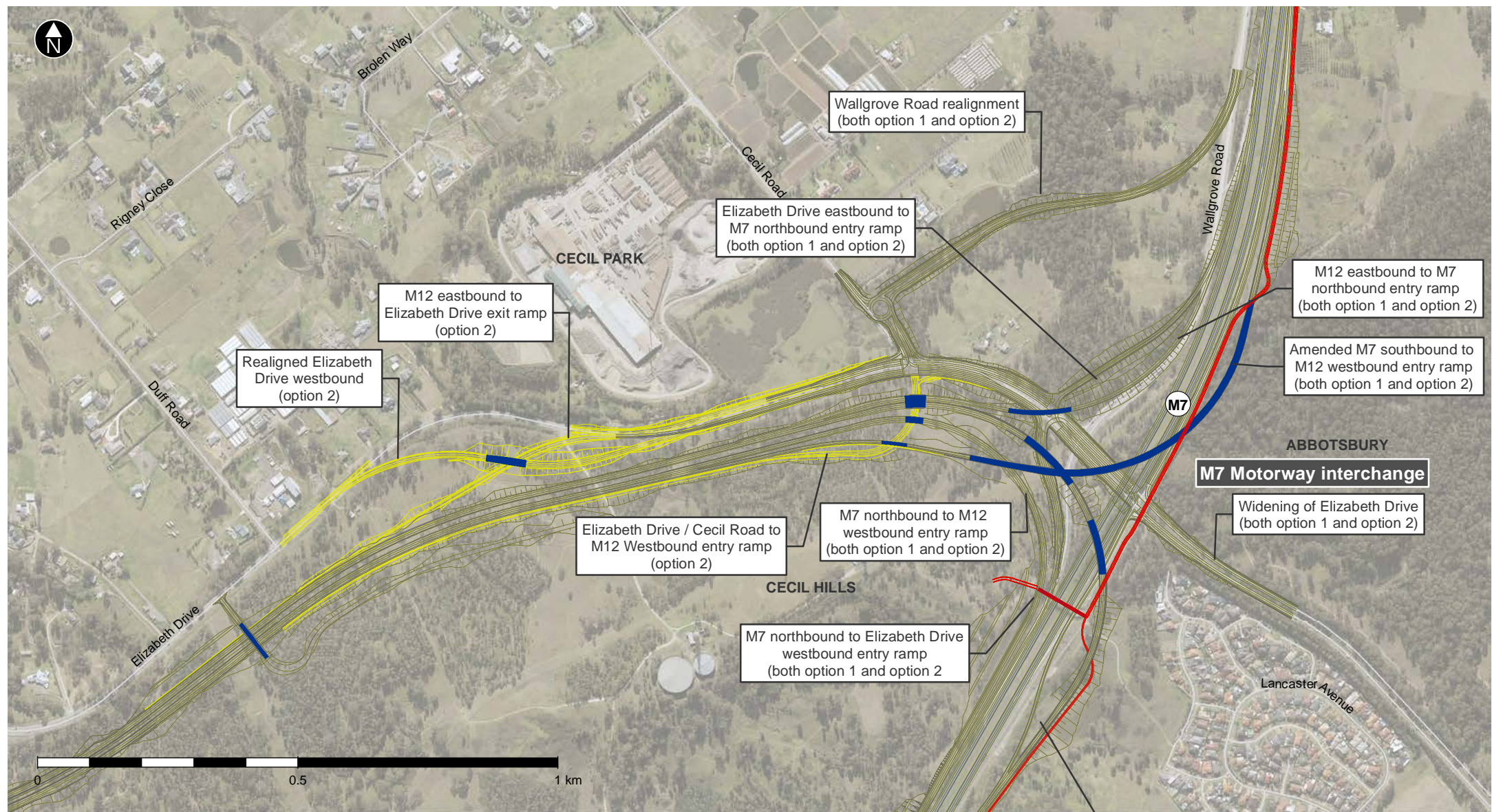
## 3.2 Signalised intersections into the Western Sydney International Airport

### 3.2.1 Project as described in the EIS

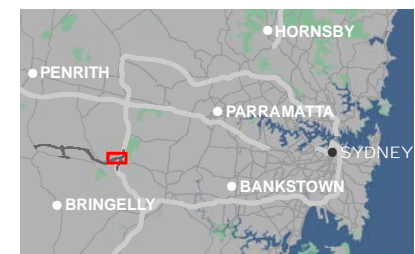
The design as described in the EIS included an allowance for future provision of two intersections for new access roads into the Western Sydney International Airport from Elizabeth Drive. The construction of the intersections would be undertaken as part of the construction of the Western Sydney International Airport.

The signalised intersections into the Western Sydney International Airport were described in Section 5.11.1 of the EIS. In summary, Elizabeth Drive would be realigned and upgraded from about 1000 metres east of the airport access road for about 1800 metres. It would then bridge across the airport road and future Sydney Metro - Western Sydney Airport (previously known as the Sydney Metro Greater West) corridor via twin bridges (Bridge 04).

The realignment of Elizabeth Drive as described in the EIS is shown in **Figure 3-4**.

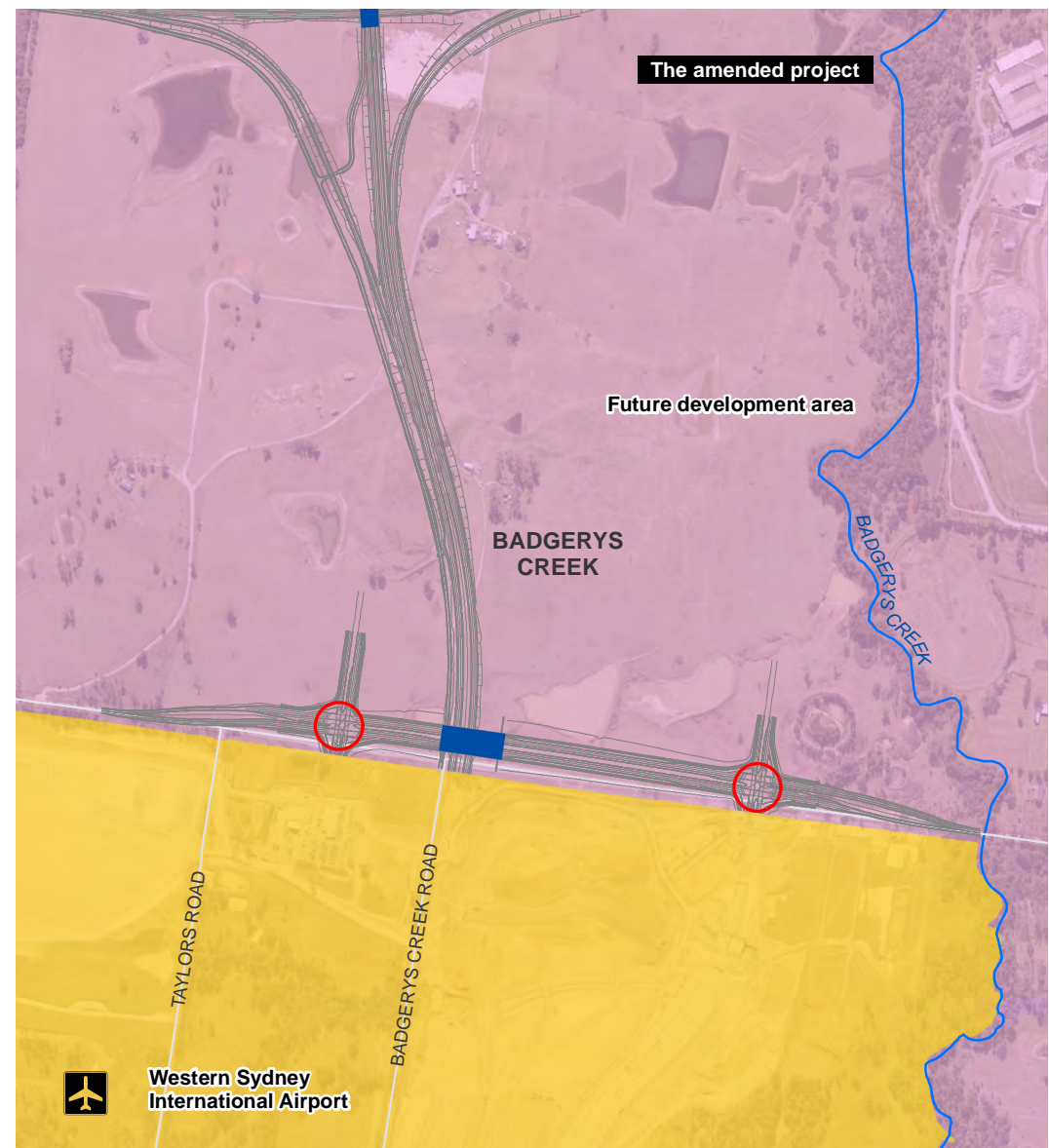
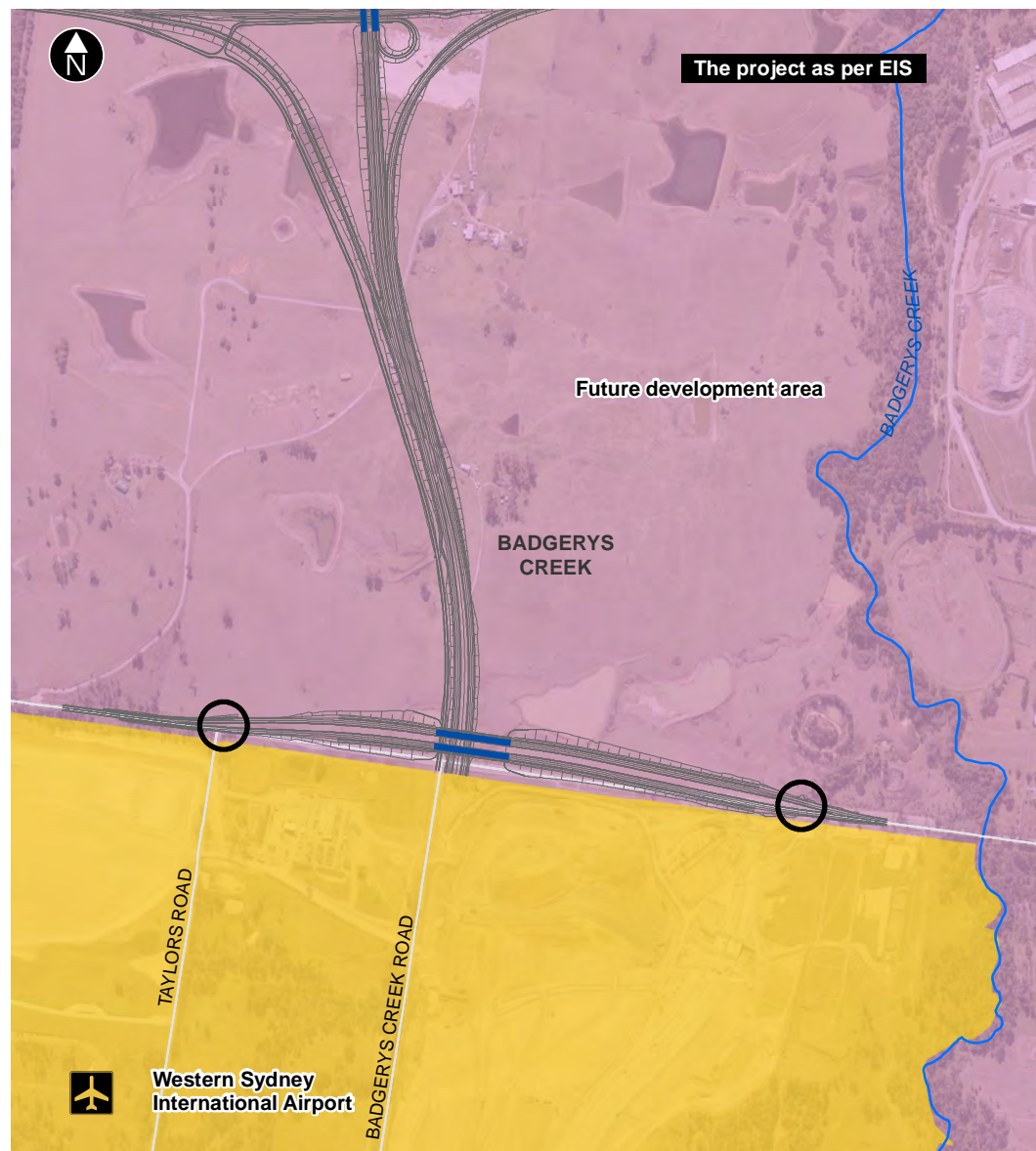


- The amended project
- The amended project with Elizabeth Drive connection
- Shared user path
- Bridges
- Motorway
- Existing roads



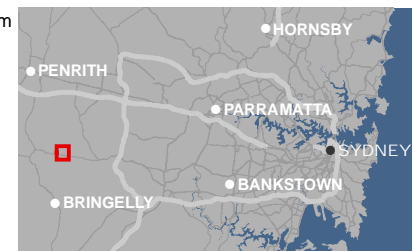
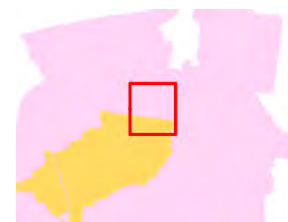
**Figure 3-3** Key differences between option 1 and option 2 of the amended project





- The project as per EIS
- The amended project
- Bridges
- Existing roads
- ~ Waterways
- Western Sydney International Airport
- Western Sydney Aerotropolis
- Potential future intersections (by others)  
Note: Locations to be confirmed
- Intersection connecting into the Western Sydney International Airport  
Note: Indicative, subject to detailed design

0 0.5 1 km



**Figure 3-4** Signalised intersections into the Western Sydney International Airport

### 3.2.2 Proposed design change

Instead of the signalised intersections from Elizabeth Drive into the Western Sydney International Airport being constructed by WSA Co, the amended project would incorporate the construction and operation of these intersections where funding is available from WSA Co and adjoining developers.

Being constructed as part of the amended project would allow for improved access to the Western Sydney International Airport. It would also reduce complexity and safety risks during construction as it would reduce the number of contractors working at the interface between Elizabeth Drive and the Western Sydney International Airport. The intersections would also include provisions for future connection to potential developments to the north. Tie-in works required for the intersections would be constructed on Commonwealth land under the Western Sydney International Airport Plan with relevant approvals from WSA Co.

The two new signalised intersections that are proposed subject to funding from WSA Co and adjoining developers as part of the amended project are shown in **Figure 3-4**, alongside the design described in the EIS.

## 3.3 Other design changes

### 3.3.1 Lowering in and around the Western Sydney International Airport Interchange

The M12 Motorway at its interchange with the Western Sydney International Airport access road would be lowered by about eight metres when compared to the interchange design as described in the EIS. This design change is in response to further project integration and design development with the Sydney Metro - Western Sydney Airport project (previously known as the Sydney Metro Greater West).

The lowered section of the amended M12 Motorway and the interchange with the airport access road would commence about one kilometre to the west of Bridge 03 and continue to approximately two kilometres to the east of Bridge 03, under passing the proposed Sydney Metro - Western Sydney Airport approximately 500 metres to the east of Bridge 03. The proposed amended Western Sydney International Airport interchange is shown in **Figure 3-5**.

This would provide the following benefits to the amended project:

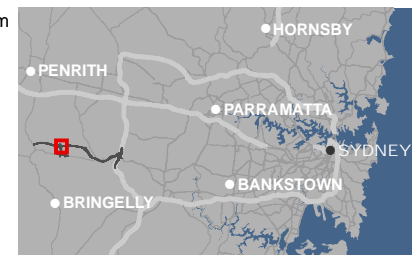
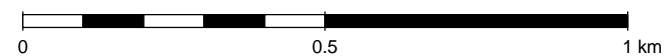
- Optimisation of the vertical alignment of the M12 Motorway between Luddenham Road and Badgerys Creek
- Reduction in height, total fill material (see **Table 4-3**) and construction materials required for Bridge 03 and associated entry and exit ramps
- Reduction in construction heavy vehicle movements and maximisation of construction efficiency due to the reduction in total fill material and construction materials required (see **Section 4.2.6**).

In addition, the design and construction of an at-grade alignment for the Sydney Metro - Western Sydney Airport would reduce the earthworks and maximise the efficiency of the Sydney Metro - Western Sydney Airport project.





- The project as per EIS
- The amended project
- Existing roads
- Western Sydney International Airport
- Proposed transport corridors**
- Sydney Metro - Western Sydney Airport



**Figure 3-5** Proposed amended Western Sydney International Airport interchange

### 3.3.2 Shared user path

In order to facilitate the lowering of the Western Sydney International Airport interchange, the alignment of the shared user path would also need to be altered. The proposed shared user path for the amended project would underpass the M12 Motorway westbound entry ramp from the airport access road about 300 metres further south than in the design described in the EIS. From this underpass, the shared user path would travel north along the western side of the Western Sydney International Airport access road, bridging over the M12 Motorway and forming a loop to decrease in elevation and continue along the northern side of the M12 Motorway as far as Clifton Avenue.

The amended shared user path alignment is shown in **Figure 3-6**.

### 3.3.3 Infrastructure works at the intersection of the M12 Motorway and The Northern Road

The M12 Motorway would terminate at a signalised T-intersection with The Northern Road. This intersection would be constructed as part of the construction of Stage 6 of The Northern Road upgrades. The construction of The Northern Road upgrades would include a stub from this intersection that would extend east of The Northern Road boundary by approximately 40 metres. The stub would have two lanes in each direction separated by a central median and two left slip lanes from and onto The Northern Road. The stub would then connect with the M12 Motorway as shown in **Figure 2-1**.

Infrastructure works at this intersection would still be constructed as part of the M12 Motorway project and would include pavement works and line markings and installation of traffic signals, road signs and lighting.

### 3.3.4 Relocation of utilities

The proposed design of the amended project would result in additional utility impacts as described in **Table 3-3**. As noted in the EIS, the extent of utility impacts cannot be confirmed until detailed design is finalised, and TfNSW will continue to carry out ongoing consultation with utility providers with a view to refining potential utility modifications and utility protection measures during detailed design.

As discussed in 5.24.4 of the EIS, a number of activities would be carried out as early works prior to the start of construction. In particular, TfNSW would prioritise adjusting, relocating and protecting utilities around existing road corridors such as Elizabeth Drive and at the M7 Motorway interchange to minimise construction interface issues.

### 3.3.5 Property access, acquisition and temporary leases

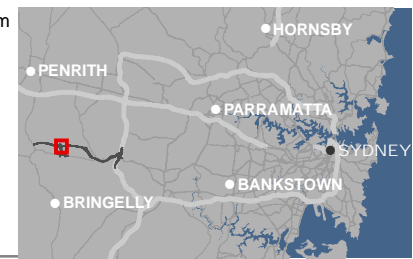
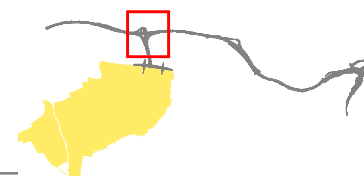
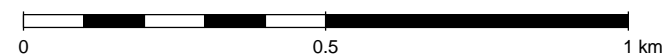
Access would continue to be maintained to all properties where existing access arrangements are impacted by the amended project during operation. Proposed access arrangements to support the construction of the amended project are described in **Section 4.2.5**.

The proposed changes described throughout this chapter may result in additional or amended access impacts to properties. TfNSW will continue to consult with affected property owners about temporary and permanent changes to property access as a result of the amended project.





- The project as per EIS
- The amended project
- Shared user path as per EIS
- Amended project shared user path
- Western Sydney International Airport
- Proposed transport corridors**
- Sydney Metro - Western Sydney Airport



**Figure 3-6** Proposed amended shared user path alignment

Table 3-3 Proposed additional utility modifications for the amended project

Asset owner	Asset type	Location	Potential impact and indicative protection strategy
Endeavour	Overhead electrical transmission lines	Ropes Creek – Transmission line runs east–west just south of Villiers Road	The transmission pole is impacted by widening of the bridge along the M7 Motorway over Villiers Road. The utility pole is proposed to be relocated clear of the proposed bridge widening.
Endeavour Energy	Street Lighting and associated underground electrical lines	Elizabeth Drive intersection with Wallgrove Road	The utility is impacted by the road widening works and is proposed to be relocated into the new verge.
Endeavour Energy	Street Lighting and associated underground electrical lines	Elizabeth Drive – runs east–west in both the northern and southern verge	The utility is impacted by the road widening works and is proposed to be relocated into the new verge.
Endeavour Energy	Street Lighting and associated underground electrical lines	Villiers Road – located to the east of the M7 Motorway	The utility is impacted by the bridge widening works and is proposed to be relocated into the new verge.
Endeavour Energy	Overhead Powerline	Elizabeth Drive – runs east–west in the northern verge	The utility is impacted by road widening between Cecil Road and Wallgrove Road, and is proposed to be relocated into the new verge.
Endeavour Energy	Overhead Powerline	Elizabeth Drive – runs north–south in the western verge	The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility would be protected or relocated clear of the embankment.
Endeavour Energy	Overhead Electrical Powerline	Cecil Road – runs north–south in the western verge	The utility is impacted by the roundabout at the intersection between Cecil Road and the realigned Wallgrove Road. The impacted pole and electrical line is proposed to be relocated clear of the roundabout.



Asset owner	Asset type	Location	Potential impact and indicative protection strategy
TPG	Underground Telecommunication cables	Elizabeth Drive – runs east-west in the northern under the M7 Motorway overpass and then crosses to the southern verge on either side of the M7 Motorway	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.
TfNSW (formerly Roads and Maritime Services)	ITS communications power supply	Shared user path on the east side of the M7 Motorway between existing bridge over Villiers Road/Ropes Creek and Elizabeth Drive	Relocate the communications and power supply to below the realigned shared user path parallel to the M7 Motorway southbound to M12 Motorway exit ramp.
TfNSW (formerly Roads and Maritime Services)	ITS communications power supply	Shared user path on the east side of the M7 Motorway between Elizabeth Drive and a point about 1.9 kilometres south of Elizabeth Drive	Relocate the communications and power supply to below the realigned shared user path parallel to the M12 Motorway to M7 Motorway southbound entry ramp.
TfNSW (formerly Roads and Maritime Services)	Traffic Control Signals	Traffic Signals at Elizabeth Drive, Wallgrove Road and the M7 motorway northbound entry ramp	The utilities are impacted by the relocation of the intersection. The utility is proposed to be relocated into the verge of the proposed intersection.
TfNSW (formerly Roads and Maritime Services)	Traffic Control Signals	Traffic Signals at Elizabeth Drive and M7 Motorway southbound exit ramp	The utilities are impacted by the widening of the intersection. The utility will be relocated into the verge of the proposed intersection.
Jemena	Eastern Gas Pipeline (Transmission Gas Main)	Cecil Park – runs north-south across Elizabeth Drive, and on the western verge of Wallgrove Road	<p>The utility runs under the existing Elizabeth Drive which is proposed to be widened.</p> <p>The realigned Wallgrove Road crosses over the utility further to the north.</p> <p>Further consultation will be carried out with the utility authority at detailed design to confirm any protection requirements associated with building over the utility.</p>

Asset owner	Asset type	Location	Potential impact and indicative protection strategy
Jemena	Wilton to Horsley Pipeline (Trunk Main)	Cecil Park – runs north–south under the existing M7 Motorway northbound exit ramp to Elizabeth Drive, under Elizabeth Drive and under the M7 Motorway	<p>The realignment of the M7 Motorway northbound exit ramp to Elizabeth Drive crosses over the utility further to the west of the existing crossing.</p> <p>The utility runs under the existing Elizabeth Drive which is proposed to be widened.</p> <p>Further consultation will be carried out with the utility authority at detailed design to confirm any protection requirements associated with building over the utility.</p>
Jemena	Secondary Main	Elizabeth Drive – runs east–west on the northern verge	<p>Elizabeth Drive is proposed to be widened, which could potentially impact the existing utility in the verge.</p> <p>The utility is proposed to be relocated into the new verge.</p>
Jemena	Secondary Main	Wallgrove Road – runs north–south on the western verge	<p>The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.</p>
WaterNSW	WaterNSW – Cecil Hills Tunnel	Cecil Park – runs north–south within an easement and crosses under Elizabeth Drive and Wallgrove Road	<p>The realignment of the M7 Motorway northbound exit ramp to Elizabeth Drive cross over the easement and the tunnel.</p> <p>Further consultation will be carried out with the utility authority at detailed design to confirm any requirements associated with building over the utility.</p>
Sydney Water	500 mm diameter water main	Cecil Park – runs north–south. It is located within the WaterNSW easement south of Elizabeth drive, crosses Elizabeth drive and runs along the western verge of Wallgrove Road	<p>The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.</p> <p>Elizabeth Drive is proposed to be widened, which could potentially impact the existing utility where it crosses Elizabeth drive. The utility could be protected or relocated depending on the depth of utility. This can be determined at detailed design.</p>



Asset owner	Asset type	Location	Potential impact and indicative protection strategy
Sydney Water	150 mm diameter water main	Elizabeth Drive – runs east–west in the northern verge	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.
Sydney Water	150 mm diameter water main	Cecil Road – runs north–south in the eastern verge	The utility is impacted by the realignment of Cecil Road and the new roundabout between Cecil Road and the realigned Wallgrove Road. The utility is proposed to be relocated into the new verge.
Telstra	Underground Telecommunication cables	Elizabeth Drive – runs in the southern verge west of Wallgrove Road, and in the northern verge east of Wallgrove Road	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.
Telstra	Underground Telecommunication cables/Overhead cables	Cecil Road – runs north–south in the eastern verge	The main is impacted by the realignment of Cecil Road and the new roundabout between Cecil Road and the realigned Wallgrove Road. The main is proposed to be relocated into the new verge.
Telstra	Underground Telecommunication cables	Wallgrove Road – runs north–south in the western verge	The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.
NBN	Underground Telecommunication cables	Wallgrove Road – runs north–south in the western verge	The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.
NBN	Underground Telecommunication cables	Elizabeth Drive – runs in the southern verge west of Wallgrove Road, and in the northern verge east of Wallgrove Road	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.
Optus	Underground Telecommunication cables	Elizabeth Drive – runs in the southern verge west of Wallgrove Road, and in the northern verge east of Wallgrove Road	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.

Asset owner	Asset type	Location	Potential impact and indicative protection strategy
Optus	Underground Telecommunication cables	Cecil Road – runs north–south in the eastern verge	The main is impacted by the realignment of Cecil Road and the new roundabout between Cecil Road and the realigned Wallgrove Road. The main is proposed to be relocated into the new verge.
Optus	Underground Telecommunication cables	Wallgrove Road – runs north–south in the western verge	The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.
Uecomm	Underground Telecommunication cables	Wallgrove Road – runs north–south in the eastern verge	The utility is impacted by the proposed embankment for the M7 Motorway northbound entry ramp. The utility could be protected or relocated clear of the embankment.
Uecomm	Underground Telecommunication cables	Elizabeth Drive – runs in the northern verge west of the M7 Motorway, and in the southern verge east of the M7 Motorway	Elizabeth Drive is proposed to be widened which potentially impacts this utility. The utility is proposed to be relocated into the new verge.
M7 Motorway	ITS communications power supply	Shared user path on the east side of the M7 Motorway between existing bridge over Villiers Road/Ropes Creek and Elizabeth Drive	Relocate the communications and power supply to below the realigned shared user path parallel to the M7 Motorway southbound to M12 Motorway exit ramp.
M7 Motorway	ITS communications power supply	Shared user path on the east side of the M7 Motorway between Elizabeth Drive and a point about 1.9 kilometres south of Elizabeth Drive	Relocate the communications and power supply to below the realigned shared user path parallel to the M12 Motorway to M7 Motorway southbound entry ramp.
M7 Motorway	Underground power supply (street lighting)	M7 Motorway interchange, northbound entry ramp	Remove and relocate the existing underground power supply.
M7 Motorway	Underground power supply (street lighting)	M7 Motorway interchange, southbound entry ramp	Remove and relocate the existing underground power supply.



Properties that would be acquired or temporarily leased by TfNSW are described in Table 5-11 of the EIS. The proposed changes described throughout this chapter would result in additional and amended properties being acquired or temporarily leased for the amended project, as described in **Table 3-4**. Where property acquisition and temporary leases have not changed from those described in Table 5-11 of the EIS, they are not repeated in **Table 3-4**.

The extent of property impacts would be confirmed during detailed design, in consultation with the property owners. For partial acquisitions, property adjustment plans would be developed in consultation with the property owner. Following consultation with property owners, some of the lots listed as requiring partial acquisition may be totally acquired.

In addition to the properties in **Table 3-4**, there would be an additional 11 parcels of land that are currently owned by TfNSW and used as road reserves that would be impacted by the amended project. This would increase the number of TfNSW affected parcels from 16 as described in the EIS to 27.

## 3.4 Amended operational footprint

### 3.4.1 Project as described in the EIS

The operational footprint generally includes the M12 Motorway and additional areas required for operation and maintenance of the project. The operational footprint of the project as described in the EIS is shown in **Figure 3-7**, and would comprise about 285 hectares.

### 3.4.2 Proposed design change

The operational footprint as described in the EIS is proposed to be amended as a result of the proposed design changes described throughout this chapter. Where relevant, and as discussed throughout Chapter 6 and the appendices to this amendment report, the amended operational footprint has been used as a basis for the environmental assessment of the amended project.

This updated footprint is referred to as the amended operational footprint and would comprise about 317 hectares. This is an increase of about 32 hectares. Both the amended operational footprint and the operational footprint as described in the EIS are shown in **Figure 3-7** for ease of comparison.

Table 3-4 Additional and amended properties to be acquired or temporarily leased for the amended project

ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
2	1/DP1240402	Private (company)	Rural	315.2	13.5 (4.3%)	9.3 (3.0%)	-	Increase in property area affected by construction with the temporary lease of the area currently used for The Northern Road upgrade (Stage 5 and 6) construction ancillary facility (9.3 hectares)
4	25/DP604586	Private	Agriculture – grazing	12.8	4.7 (36.4%)	0.2 (1.6%)	Farm dams (two)	Increase in the property area affected by construction with the temporary lease of 0.2 hectares to fully incorporate a farm dam that would be impacted by the amended project
6	1/DP235124	Private (now owned by TfNSW)	Commercial (former Karingal Training Stables – no longer operating)	17.6	5.2 (29.8%)	5.4 (30.7%)	Sheds, horse paddocks/ stables, farm dams, training facilities, training track, internal roads/tracks	Increase in the property area affected by construction (by 5.0 hectares) for a construction ancillary facility (AF 11) following acquisition of the property by TfNSW



ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
7	35/DP211842	Private	Agriculture – intensive animal husbandry (horses)	11.3	1.0 (8.7%)	0.7 (6.2%)	Farm dams	Change to the property area affected by temporary lease (from 0.6 hectares to 0.7 hectares) to fully incorporate the farm dams that would be impacted by the amended project
8	101/DP848215	Private (company)	Agriculture – grazing, commercial (quarrying, waste management and/or resource recovery)	343.4	47.7 (13.8%)	13.1 (3.8%)	Farm dams, quarry, farm dams (two), internal roads/tracks	Minor adjustment in operational footprint to accommodate amended design of airport interchange (47.2 hectares to 47.5 hectares).  Reduction in the property area subject to temporary lease (from 13.4 hectares to 13.1 hectares), which is partly due to adjustments in the operational footprint
9	63/DP1087838, 62/DP1087838, 3/DP164242, 1/DP74574, 21/DP258414, 1/DP88836	Private	Rural land – The University of Sydney farms	343.9	34.0 (9.9%)	23.2 (6.7%)	Farm dams	Change to the operational footprint (from 30.9 hectares to 33.6 hectares) at Elizabeth Drive to incorporate intersections into the Western Sydney International Airport and connection to future development to the north of Elizabeth Drive.

ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
								Reduction in the area subject to temporary lease (from 27.9 hectares to 23.2 hectares), which is mainly due to the change in the operational footprint
12	1/DP587135, 2/DP587135, 7/DP812284	Private (company)	Agriculture – horticulture, grazing (identified for future urban development)	88.1	10.8 (12.2%)	0.1 (0.1%)	Horticultural gardens, internal roads	Minor increase in the property area affected by construction with the temporary lease of 0.1 hectares to fully incorporate a shed impacted by the amended project
13	47/DP734584	Private (company)	Rural land	10.7	6.1 (56.8%)	4.6 (43.0%)	-	Change to the property area subject to temporary lease (from 3.0 hectares to 4.6 hectares), to incorporate residual land within the construction ancillary facility (AF 12)
14	3/DP812284	Private (company)	Recycling facility, commercial (TreeServe)	12.8	0.8 (6.3%)	12.0 (93.8%)	-	Increase in the property area affected by construction with the temporary lease of 12.0 hectares for an ancillary facility (AF 12), in response to approach from owner offering lease



ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
20	1/DP981720	Private	Agriculture – horticulture	2.1	0.2 (9.0%)	0.2 (10.0%)	Shade houses, farm dam	Increase in the property area affected by construction with the temporary lease of 0.2 hectares to fully incorporate a farm dam and a small number of additional shade houses (up to five in total)
21	1/DP736951	Private	Commercial (horse training)	1.9	1.05 (56.8%)	0.03 (1.6%)	Dwellings (two), sheds/ stables, horse paddocks	Change to the construction footprint to fully incorporate a shed impacted by the amended project, increasing the property area affected from 1.05 hectares to 1.08 hectares
23	B/DP416720, 39/A/DP2566	Private	Commercial (horse training facility – Bara Lodge)	2.2	1.0 (45.4%)	1.2 (54.5%)	Horse paddocks, shed, internal roads/tracks	Increase in the property area affected by construction with the temporary lease of 1.2 hectares to include additional area for a construction ancillary facility (AF 13)
36	26/DP30265, 25/DP30265	Private	Commercial (Hi-Quality Group Head Office)	4.2	2.2 (51.6%)	2.0 (47.6%)	Shed, office, hardstand	Increase in the property area affected by construction by 2.0 hectares to incorporate the whole of this property

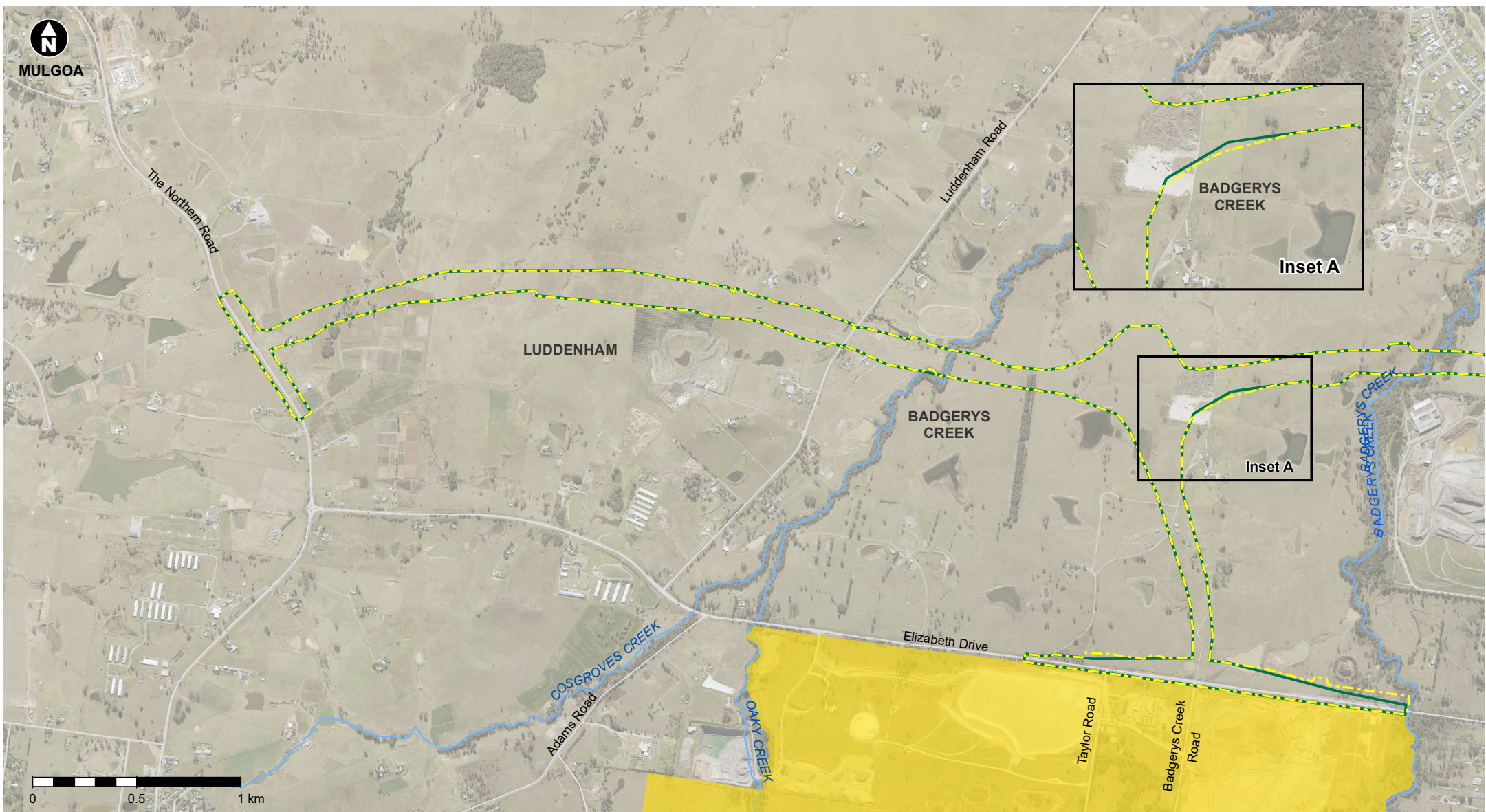
ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
37	9/DP1054778, 8/DP1054778, 7/DP1054778, 6/DP1054778, 5/DP1054778, 4/DP1054778, 3/DP1054778, 2/DP1054778, 1/DP1054778	Private	Agriculture – grazing	18.9	8.3 (43.7%)	1.7 (9.0%)	-	Increase in the property area affected by construction with the temporary lease of 1.7 hectares to incorporate land south of the M12 Motorway into a construction ancillary facility (AF 15)
38/40	3/DP1087825, 1/DP875790, 2/DP922940, 28/DP654786, 1/DP308358, 6/DP629798, 5/DP629798, 1/DP1041390, 2/DP1041390, 10/DP1021940, 11/DP1021940, 12/DP1021940, 14/DP1021940, 1/DP724970, 11/DP860893, 13/DP1021940 1/DP522269,	Public (Western Sydney Parklands Trust)	Western Sydney Parklands	801.3	53.5 (6.7%)	20.4 2.5%)	Wylde Mountain Bike Trail and other recreation uses, International Shooting Centre, car parking area, vegetated areas, orchard trees, dwelling, sheds, farm dams (two)	Increase in the property area affected by construction with the temporary lease of an additional 13.9 hectares of land to incorporate the existing Wylde Mountain Bike Trail car park area (which would be relocated) into construction ancillary facility (AF 16), land east of the M7 Motorway (AF 9), and other minor adjustments.  Increase in the property area affected by the operational footprint from 46.1 hectares to 53.5 hectares, to accommodate the amended project at Elizabeth Drive



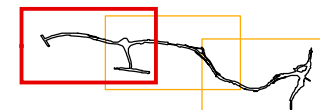
ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
39	21/DP1109551, 26/DP1109551, 22/DP1109551	Public	WaterNSW	9.5	2.1 (22.6%)	-	-	Minor change to the operational footprint east of the M7 Motorway, increasing the property area affected from 2.0 hectares to 2.1 hectares
42 New	33/A/DP2566		Rural residential	1.5	-	1.5 (100%)	-	Property to be used for construction ancillary facility (AF 14)
43 New	2/4/DP2954	Private	Rural residential	7.4	3.3 (45.4%)	-	Vegetated area, farm dam	Change to the operational footprint for the realignment of Wallgrove Road
44	7/DP629798, 1/DP1222339, 26B/DP387529, 26A/DP387529, 25/4/DP2954, 24/DP1152887	Public (Western Sydney Parklands Trust)	Rural and rural residential	14.9	2.9 (19.6%)	4.3 (28.9%)	Dwelling, sheds, vegetated area	Change to the operational footprint for the connection to Wallgrove Road and temporary lease of 4.3 hectares for an additional construction ancillary facilities (AF 17 and AF 18)
45 New	302/DP1122172 303/DP1122172 304/DP1122172	Private	Residential	4.3	0.02 (0.5%)	0.02 (0.5%)	-	Minor adjustment to driveway access at Cecil Road Temporary lease of 0.02 hectares of land to incorporate whole of dam
46 New	301/DP1122172	Private	Residential	1.3	0.02 (1.6%)	-	-	Minor adjustment to driveway access at Cecil Road
47 New	300/DP1122172	Private	Residential	1.0	0.01 (1.3%)	-	-	Minor adjustment to driveway access at Cecil Road

ID	Lot (lot or section/ DP)	Ownership	Existing land use	Total property area (hectares)	Area of land within amended operational footprint (hectares) (proportion of property in brackets)	Area of land subject to temporary lease (hectares) (proportion of property in brackets)	Property improvements affected (eg dwellings, sheds, farm dams, shade houses)	Change from EIS
48 New	303/DP1122172	Private	Residential	1.2	0.004 (0.4%)	-	-	Minor adjustment to driveway access at Cecil Road
49 New	91/DP1101411	Private	Commercial (quarry)	7.7	-	0.1 (1.3%)	-	Minor adjustment to driveway access at Range Road

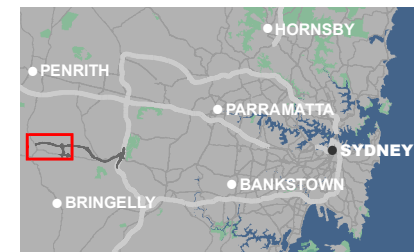




- The project operational footprint as per the EIS
- The amended project operational footprint
- ~~~~~ Waterways
- Western Sydney International Airport
- Existing roads

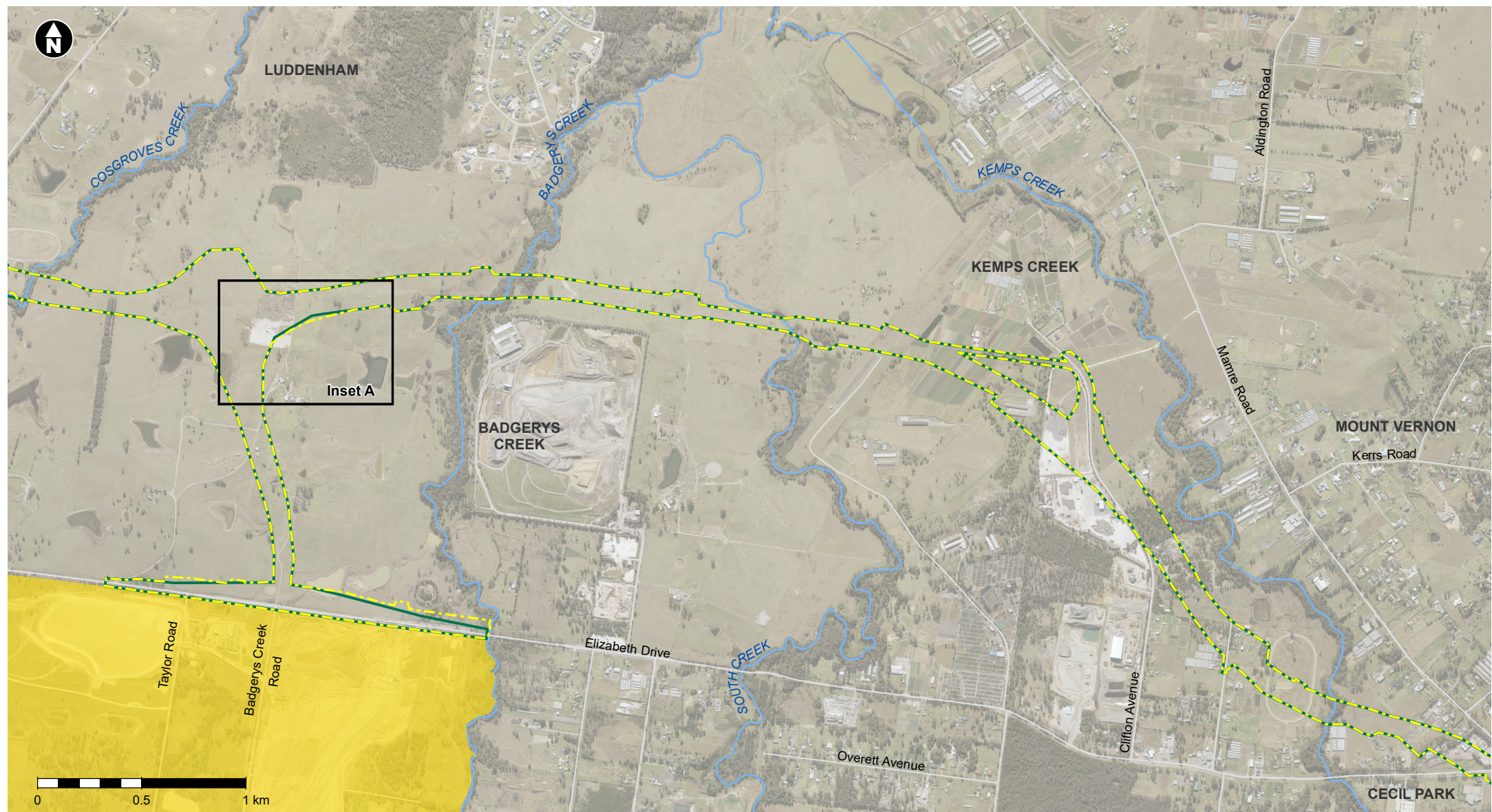


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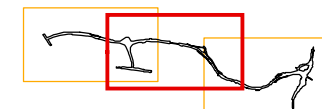


**Figure 3-7** Amended operational footprint

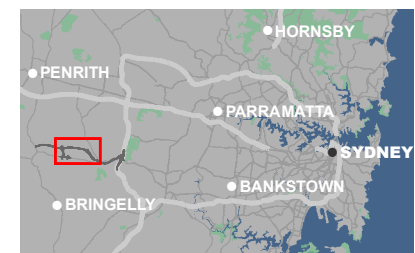




- The project operational footprint as per the EIS
- The amended project operational footprint
- Western Sydney International Airport
- Existing roads
- Waterways

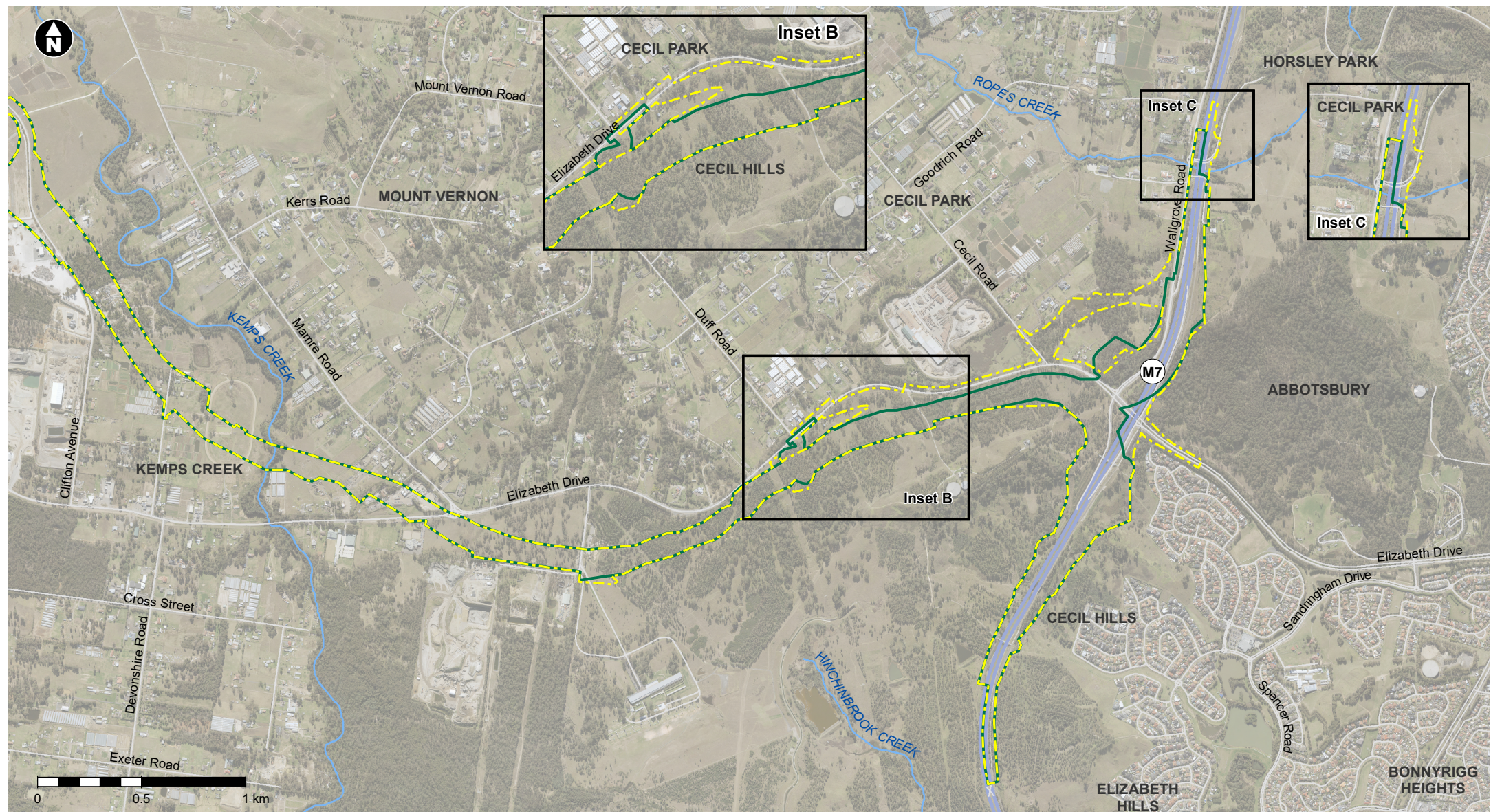


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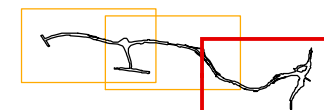


**Figure 3-7** Amended operational footprint

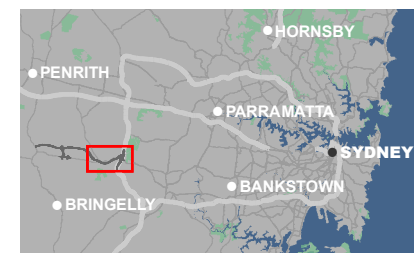




- The project operational footprint as per the EIS
- The amended project operational footprint
- ~~~~~ Waterways
- Motorway
- Existing roads



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**Figure 3-7** Amended operational footprint