

## 3 Approved project

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This chapter provides a general overview of the approved project with a more detailed description of the part of the project proposed to be modified. The approved project is described in Chapter 5 and Chapter 6 of the EIS and Part D of the SPIR for the project as modified by the application documentation for SSI 7485 MOD1.

### 3.1 Overview

As noted in section 1.3, the project is being constructed in stages. The proposed modification presented in this report is relevant to the Stage 2 works. Approved construction activities for Stage 2 are described in Chapter 6 of the EIS.

As the proposed modification to the project addressed in this report relates to the Iron Cove Link MOC4 within the Iron Cove Link site (EIS C8 compound), an overview of the concept design set out in the EIS for MOC4 is provided in section 3.2.1.

As all plant, equipment and materials required to construct the proposed new ventilation tunnel and caverns would be supported from a new surface tunnel support site proposed to be established and operated within in the Iron Cove civil site (C8), following the completion of the southern half of the cut and cover structure, an overview of relevant activities within this site is provided in section 3.2.2.

As the proposed modification involves additional tunnelling works, the excavation methodology detailed in the EIS is summarised in section 3.3.

As there is also the potential for some tunnelling of the proposed new vent tunnel and caverns to be supported from the Rozelle civil and tunnel site (EIS C5) an overview of this construction site is provided in section 4.4.

### 3.2 Iron Cove

#### 3.2.1 Iron Cove Link motorway operations complex

The MOC4 described in the EIS would be constructed on the southern side of the realigned Victoria Road, on land occupied during construction by the Iron Cove civil site (C8). The electrical substation, which provides power for the operation of the ventilation facilities, would be about four metres high and located on the corner of Victoria Road and Callan Street, while the ventilation exhaust facilities building would be located between Callan Street and Springside Street and be around 10 metres above ground level, about 50 metres in length and adjacent to residential properties.

In relation to substations, the EIS notes that intake substations (substations that would connect to the Ausgrid network and would manage the intake and distribution of the project's power needs) would be required. The MOC4 above-ground substation and ventilation facility is illustrated in EIS Figure 5-47, which is reproduced in Figure 3-1.

Land between the eastbound and westbound carriageways of Victoria Road would accommodate the ventilation outlet for the Iron Cove Link ventilation facility. The ventilation outlet would have a height of around 20 metres above the existing ground level and would meet project air quality criteria, urban design and visual amenity objectives.

The substation and ventilation facilities would operate 24 hours a day, seven days a week.

EIS Table 5-7 indicates that parking would be provided at MOC4 but the location and extent of parking is not shown.

The overshadowing diagram for MOC4 from EIS Appendix N is reproduced in Figure 3-2.



Figure 3-1 Indicative MOC4 (EIS Figure 5-47)





Figure 3-2 Indicative Overshadowing diagram for the MOC4 (EIS Appendix M)

### 3.2.2 Iron Cove civil site (C8)

As described in the EIS, the Iron Cove civil site (C8) would be located along the southern side of Victoria Road at Rozelle between Byrnes Street and Springside Street. The ancillary facility on the southern side of Victoria Road would include offices, amenities, parking, workshop and maintenance facility, laydown and parking. The site would be used to support construction of the Iron Cove Link surface works, including tunnel entry and exit ramps, upgrades and modifications to the eastbound and westbound carriageways of Victoria Road.

Key construction activities to be carried out at and supported by the Iron Cove civil site (C8) relevant to the proposed modification include construction of the MOC4 including the Iron Cove Link ventilation facility and one ventilation outlet.

Construction of the ventilation facility and substation on the western side of Victoria Road, as described in the EIS, included:

- Excavation, footing and base slab installation
- Erection of precast or in situ poured concrete wall panels for shaft structure stability
- Installation of precast floor or in situ poured elements at the fan room and damper levels
- Installation of roof panels and stair structures for maintenance, access and monitoring of the facilities
- Fixture of façade support structures to shaft walls as per architectural and urban design requirements
- Internal fitout of plant areas, equipment installation and commissioning.

This proposed modification does not alter the portal location or design. The Iron Cove cut and cover would be constructed in stages between the eastbound and westbound Victoria Road carriageways. Construction activities would include:

- Utility works including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities
- Piling for the dive structure walls
- Bulk excavation of the dive structure and portal
- Casting of a concrete slab in the cut and cover section
- Finishing works including asphaltting, line marking and signage installation
- Landscaping, installation of road furniture and commissioning.

Spoil haulage vehicles would use Victoria Road.

### 3.2.3 Construction hours

The approved project would be undertaken as a mix of both standard and out of hours construction works. Planning Approval Condition E68 defines standard construction hours as:

- Monday to Friday 7am to 6pm
- Saturday 8am to 1pm
- No work on Sundays or public holidays.

Planning Approval Condition E69 allows works to be undertaken between 1pm and 6pm on Saturdays. Daytime works for the proposed modification would be undertaken during these hours. The Planning Approval permits work at the Iron Cove civil and site between 7am to 6pm Monday to Friday and 8am to 6pm Saturday.

### 3.2.4 Construction program

An indicative construction program is provided in Table 6-16 of the EIS. Relevant extracts are reproduced in Table 3-1.

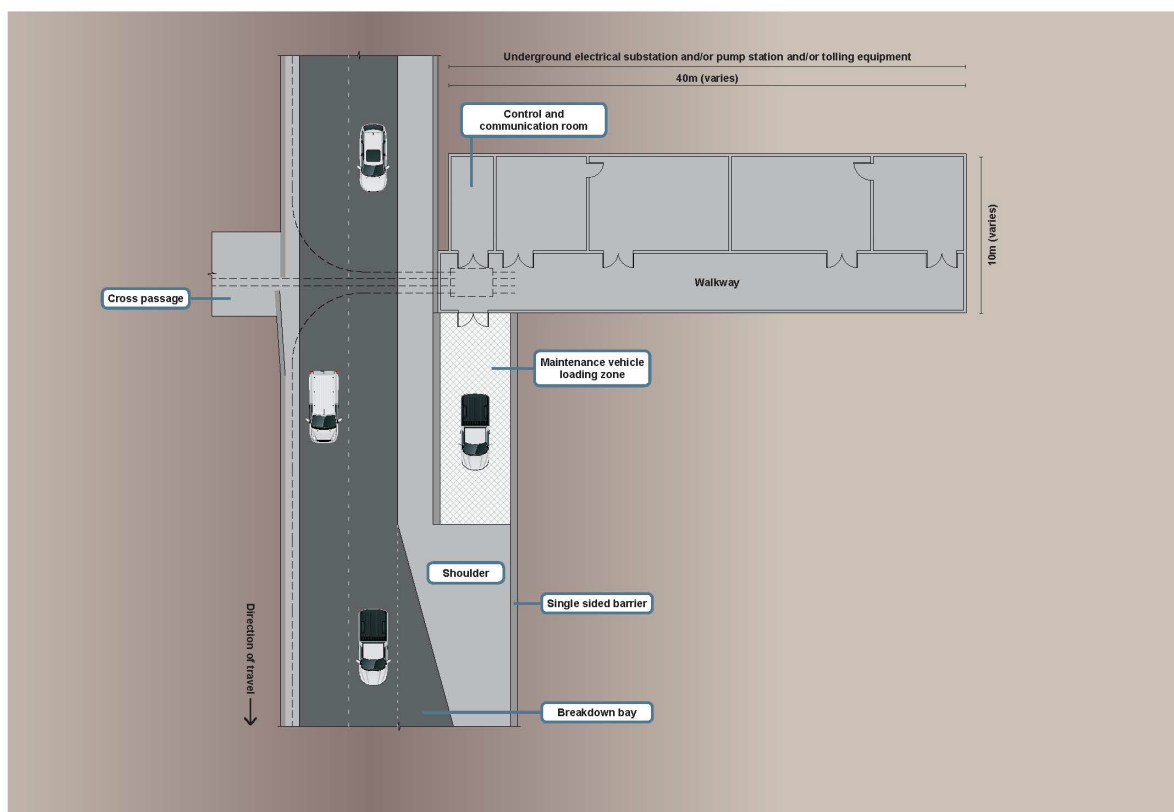
**Table 3-1 Iron Cove civil site (C8) indicative construction program (extract from EIS Table 6-16)**

Construction activity	Indicative construction timeframe																							
	2018				2019				2020				2021				2022				2023			
Construction of cut and cover and tunnel portals																								
Construction of motorway operational infrastructure																								
Site rehabilitation and landscaping																								
Testing and commissioning																								

### 3.3 Ventilation tunnels

As noted in section 3.1, the EIS included diagrams of the arrangement of ventilation tunnels that would connect the road tunnels with ventilation facilities at Rozelle and St Peters, however the design and construction of the ventilation arrangement for the Iron Cove Link Tunnel was not detailed in the EIS.

The EIS also notes that the project would also include a series of underground substations at a spacing not exceeding around 1.2 kilometres within the tunnel. An indicative layout of an underground substation is shown in EIS Figure 5-53, which is reproduced in Figure 3-3.



**Figure 3-3 Indicative underground substation layout (EIS Figure 5-53)**

The EIS indicates that tunnel excavation would be carried out in a staged process. An indicative tunnel excavation method using roadheaders is illustrated in EIS Figure 6-13.

### 3.4 Rozelle tunnel and civil site (C5)

The Rozelle civil and tunnel site is located between Lilyfield Road to the north, City West Link and The Crescent to the south, Victoria Road to the east and the Sydney CBD and South East Light Rail maintenance depot to the west. The site is predominantly located on disused land that forms part of the Rozelle Rail Yards.

The EIS describes how roadheaders and other excavation plant and equipment would be launched from this site to excavate the Rozelle Interchange and the Iron Cove Link, as well as ventilation tunnels and cross-passages. Three acoustic sheds would be constructed to mitigate the noise impacts of works undertaken outside standard day time construction hours. Tunnel excavation and associated support activities, including spoil handling and haulage, would occur 24 hours a day, seven days a week from this site.