

# Site-specific Ancillary Facilities Management Plan: Cooks River Grouting

Project Name: WestConnex New M5

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## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	18/01/17	CDS-JV	Environmental Representative / WCX M5 AT			
01	23/01/17	CDS-JV	Environmental Representative DP&E			
02	20/02/17	CDS-JV				
Signature:						

# Site-specific AFMP: Cooks River Grouting



## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this Plan is reviewed and approved. The Support Services Director (SSD) is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

### Revision Details

Revision	Details
00	Prepared for ER and client review
01	Updated to address review comments.
02	Updated to address DP&E comments



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## 1. Introduction

### 1.1 Context

The New M5 Project is the Stage 2 component of the WestConnex scheme, a NSW Government initiative to connect Sydney's west and south-west with the Sydney Airport and the Port Botany precinct. It is being delivered by the Sydney Motorway Corporation (SMC), formerly the WestConnex Delivery Authority (WDA).

The CPB Contractors Dragados Samsung Joint Venture (CDS-JV) will deliver the design and construction of WestConnex Stage 2 referred to as the New M5 (the Project). The Project will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, providing improved access to the airport, south Sydney and Port Botany precincts. The Project will substantially improve the east - west corridor access between the Sydney CBD, Port Botany and Sydney Airport precincts and the South West growth areas.

The Project will deliver approximately nine kilometres of two-lane twin tunnels with capacity to operate three lanes in the future, motorway to motorway connections to the King Georges Road Interchange Upgrade at Beverly Hills, and a new interchange at St Peters. Infrastructure Approval was granted for the project on 20 April 2016. Major works are expected to commence in mid 2016 and the New M5 tunnel is scheduled to open to traffic in late 2019.

The Construction Environmental Management Plan (CEMP) provides further background and a detailed description of the Project.

The Ancillary Facilities Management Plan describes the establishment and use of the approved ancillary facilities identified in the New M5 Environmental Impact Statement (EIS).

### 1.2 Purpose and scope

This Site-specific Ancillary Facilities Management Plan (SSAFMP) describes a proposed ancillary facility, additional to those approved under the EIS. The proposed facility is for the purpose of supporting surface-based grouting works, which are required to meet the groundwater infiltration criteria required by condition B26 of the Conditions of Approval and to reduce the risk of ground settlement above the tunnel in this location. The site is located above the tunnel alignment south of the Cooks River, in Arncliffe. The site is outside the approved project area.

The site does not meet the locational criteria identified in condition of approval (CoA) D62 and does not meet the requirements of a minor ancillary facility (CoA D64) as it is located outside the approved project area. This SSAFMP has been prepared for the approval of the Secretary, Department of Planning and Environment (DP&E), to satisfy CoA D63.

## 2. Environmental Planning Requirements

### 2.1 Compliance with CoA D63

Section 4 and Appendix E of the approved Ancillary Facilities Management Plan (AFMP) describe the approval pathways for ancillary facilities associated with the project. For proposed ancillary facilities that are not included in the EIS and are not compliant with CoA D62 or D64, a Site-Specific Ancillary Facilities Management Plan (SSAFMP) is required to be approved by the Secretary, DP&E.

The proposed Cooks River ancillary facility is not included in the EIS and is located outside of the project area and therefore outside an active construction zone. Approval of an SSAFMP, under CoA D63 is therefore required. Table 1 identifies the requirements of CoA D63 and where they are addressed in this SSAFMP.

Table 1: Compliance with requirements of CoA D63

CoA D63 Reference	Requirement	Where addressed
a)	a detailed description of the ancillary facility, including proposed use and access arrangements;	Section 3.1
b)	a review of the environmental and social impacts of the ancillary facility, including an analysis of compliance with the locational criteria specified in condition D62;	Section 3.2
c)	measures to avoid, mitigate and manage environmental and social impacts associated with the ancillary facility; and	Section 5
d)	demonstration that, with the measures proposed in accordance with (c), the impacts of the ancillary site are consistent with - <ul style="list-style-type: none"> <li>i. the overall project impacts described in documents referred to in conditions A2(b) and A2(c), and</li> <li>ii. all relevant conditions of this approval.</li> </ul>	Section 6

## 3. Identify and Assess

### 3.1 Detailed description of the ancillary facility

#### 3.1.1 Site description

The proposed site is located south of the Cooks River either side of Rockwell Avenue at the Rowers On Cooks River and at Cahill Park in Arncliffe. An additional proposed grouting site is located on the north of Cooks River in Tempe Recreation Reserve, however use of this site will be subject to agreement with the relevant landowners/occupiers, and an update to this SSAFMP.

The proposed site to the north of Rockwell Avenue is managed by Rowers on Cooks River and is currently used for carparking, and the site south of Rockwell Avenue is managed by Bayside Council and is used for recreational purposes. The site contains hardstand areas as well as grassy and vegetated areas.

#### 3.1.2 Site activities

The site compounds are proposed to support surface-based grouting works prior to tunnelling and underground grouting works. The sites would contain the grouting station including batch plant, grout rigs, crane and washout ponds/skips as well as general waste skips. The site would also accommodate limited parking and staff amenities.

The sites would receive deliveries of plant, equipment and materials and a sucker truck would remove waste water from the site to the Arncliffe construction compound (C7) for treatment at the existing construction water treatment plant.

The compounds would be operated by CDS-JV under agreement with the respective land owners/occupiers for a period of approximately 4 months, commencing in January/February 2017. The site would be decommissioned and rehabilitated to its pre-construction condition or better, or as otherwise agreed by the landowner, in accordance with CoA D65, after the completion of New M5 construction works.

Refer to Table 4 for further details of the proposed activities at the site.

#### 3.1.3 Hours of operation

Grouting activities would be conducted during standard working hours:

- 7 am – 6 pm Monday to Friday, inclusive; and
- 8 am – 1 pm Saturday;
- At no time on Sundays or public holidays.

Deliveries would also primarily be restricted to standard working hours. Some deliveries may need to occur outside of standard construction hours for safety and/or road network restriction reasons. These works will be carried out in accordance with the Infrastructure Approval (in particular CoA D15) and any applicable Road Occupancy Licences (ROs).

Operation of the Cooks River site compound would be in accordance with all requirements specified in the Ancillary Facilities Management Plan (AFMP), the Construction Environmental Management Plan (CEMP) and CEMP Sub-Plans.

#### 3.1.4 Services and utilities

Connections to the potable water supply at the site would be required for the works. Connections would be made in consultation with the relevant water authority. No other connections or modifications to services or utilities are required for the works.

#### 3.1.5 Site access

Site access to both compound areas will be via Rockwell Avenue. Access to the site will be gained from Marsh Street (eastbound) and from the Princes Highway (both directions) via Gertrude and Levey Street. Egress from the site will be via Levey Street and either Innesdale Road to Marsh Street, or Gertrude Street to Princes Highway (refer to Figure 2). Gertrude Street, Levey Street and Innesdale

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Road are all local roads as they are not classified as State or Regional roads under RMS' Schedule of Classified Roads and Unclassified Regional Roads (January 2014).

### 3.1.6 Workforce and vehicle movements

The total number of light and heavy vehicle movements at the site each day is likely to vary slightly depending on activities that are occurring at the site. During the establishment phase (less than 2 weeks), there is expected to be approximately 10 heavy vehicles accessing the site per day (20 HV movements). Light vehicles during the establishment phase would be the same as for the operational phase (Table 2). Following establishment, the site would primarily be accessed using light vehicles, with limited heavy vehicle movements each day during standard construction hours for cement deliveries and wastewater removal. Indicative numbers for site-based personnel and vehicles accessing the site are provided in Table 2.

Table 2: Indicative vehicle movements and personnel numbers per day

Cooks River Grouting site compound	Light vehicle movements per day	Heavy vehicle movements per day	Personnel
Indicative number	20	4	10

Note: all vehicle movements will occur during the daytime period, unless required for emergency purposes, safety or road network restriction purposes.

### 3.1.7 Plant, equipment and materials

Major equipment and vehicles to be used at the site will include:

- Drill rigs (19-21 tonne)
- Grouting station with mixer, agitators, grouting pumps, hoses, reels, packers
- Washout ponds/skips
- Sedimentation tanks
- Crane (establishment only)
- Four float trucks (establishment only)
- Cement delivery trucks
- Sucker truck
- Utility/light vehicles



**Cooks River  
Grouting Compounds**

**Cooks River**




**Wollli Creek  
Site Compound**

**Arnccliffe (C7)  
Construction Compound**

**RTA Frog Ponds**

**Eve Street  
Site Compound**

**Eve St Wetland**

-  Waterways/Wetlands
-  Cooks River Grouting Compounds
-  Construction and Compound Sites

0 100 200 300 400 Metres

**Figure 1: Site Location**



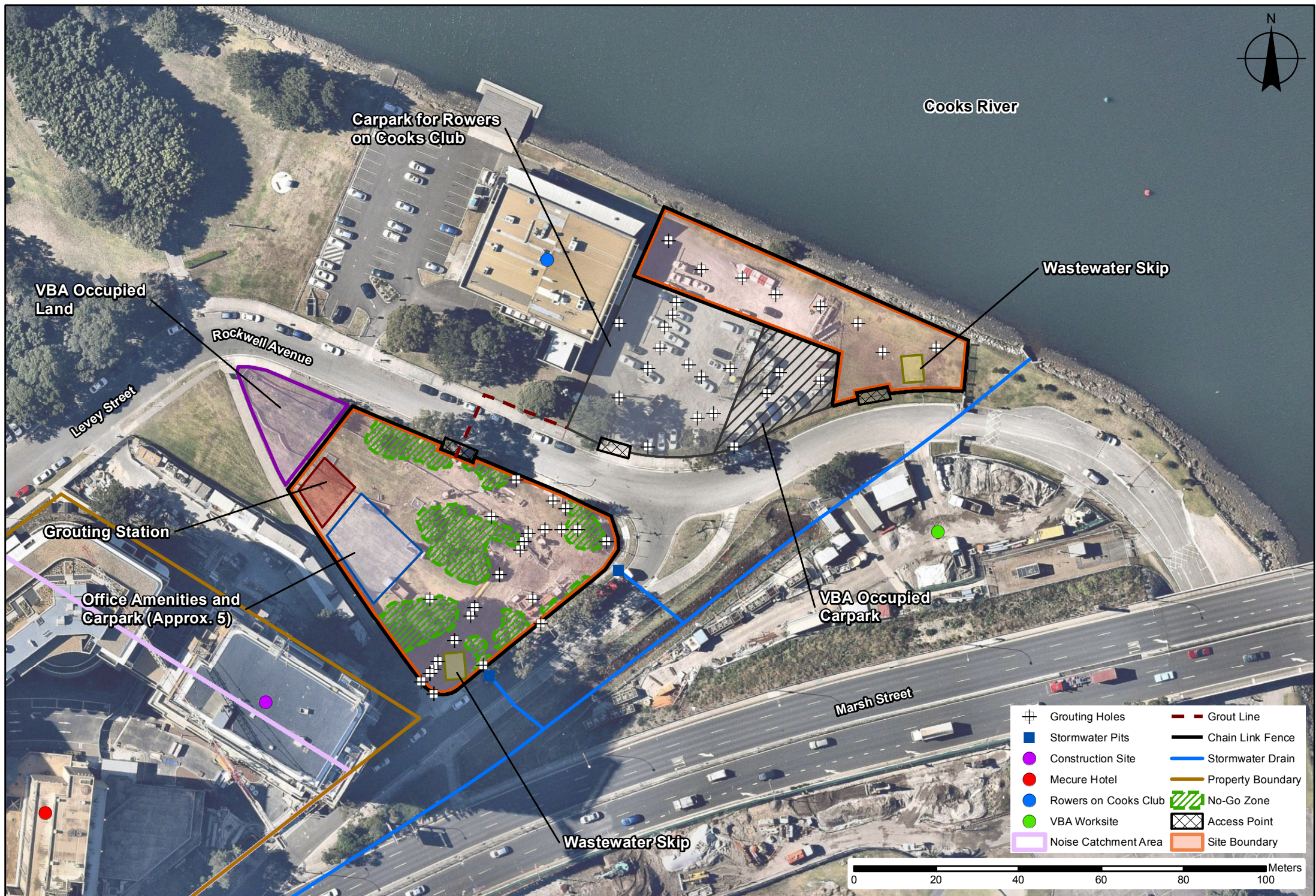


Figure 2: Cooks River Grouting Site Compound Layout



Figure 3: Site Access Routes

## 3.2 Construction aspects and environmental impacts

### 3.2.1 Locational criteria assessment

Table 3: Locational criteria for ancillary facilities (CoA D62)

CoA D62 Reference	Requirement	Compliant	Comments
a)	Be located more than 50 metres from a waterway;	✘	The site is less than 10 metres from the Cooks River (Figure 1). Refer to Section 3.2.5 for further details and Section 5 for controls.
b)	Be located within or adjacent to land where the SSI is being carried out;	✓	The site is directly above the subsurface tunnel alignment. The site is located at Rockwell Avenue, Arncliffe approximately 60 m north of the Arncliffe (C7) compound site (Refer to Figure 1).
c)	Have ready access to the road network;	✓	Refer to section 3.1.5 and Figure 2 and Figure 3 for further information on site access.
d)	Be located to minimise the need for heavy vehicles to travel on local streets and/or through residential areas;	✓	Refer to section 3.1.5 and Figure 3 for details on heavy vehicle access.
e)	Be sited on relatively level land;	✓	The site is level.
f)	Be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant);	✘	The site is approximately 35 metres from an apartment building on Levey Street and immediately adjacent to the Rowers on Cooks River (rowing club) commercial property. The batching plant would be located in Cahill Park which is approximately 35 metres from the apartment building and 35 metres from Rowers on Cooks River. Refer to Sections 3.2.3 and 3.2.4 and Figure 2. Refer to Section 5 for controls.
g)	Not require vegetation clearing beyond that already required by the SSI;	✓	The site would require minor stripping of grass and topsoil but no vegetation clearing.
h)	Not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;	✓	Refer to Section 3.2.7.
i)	Not unreasonably affect the land use of adjacent properties;	✓	The site will be used on a temporary basis for approximately 4 months. Use of the site would have minor and temporary impacts on adjacent properties. With the implementation of the site-specific management measures in Section 5 of

CoA D62 Reference	Requirement	Compliant	Comments
			this SSAFMP, the use of this site is not expected to unreasonably affect the land use of adjacent properties.
j)	Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and	✘	The site is within the 20 year ARI flood level. Flood contingency measures are provided in Section 5 of this SSAFMP.
k)	Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	✓	The site will be used for the storage of cement. The site will also provide storage / laydown area for traffic management plant and equipment and is considered to have sufficient storage area for this requirement. Deliveries will occur during standard hours, except where required by a Road Occupancy Licence (ROL) or for safety reasons.

### 3.2.2 Traffic and transport

Site access to both compound areas will be via Rockwell Avenue. Access to the site will be gained from Marsh Street (eastbound) and from the Princes Highway (both directions) via Gertrude and Levey Street. Egress from the site will be via Levey Street and either Innesdale Road to Marsh Street, or Gertrude Street to Princes Highway (refer to Figure 3). Gertrude Street, Levey Street and Innesdale Road are all local roads (refer to sections 3.1.5 and Figure 3 for a detailed description of access routes). Potential traffic and access impacts on these access routes are considered to be minor given the low number of vehicles, and in particular, low numbers of heavy vehicles, that would be accessing the site.

### 3.2.3 Noise and vibration

A construction noise and vibration impact statement (CNVIS) has been prepared for the works. The CNVIS identified that the apartment building located at 24 Levey Street may be affected by up to 8dB(A) above the day time NML and all other residential receivers would comply with the predicted NMLs. The Rowers on Cooks River rowing club may be highly noise affected at some points during the works, when grouting works are occurring in proximity to this venue. All other sensitive receivers will comply with their respective criteria. The CNVIS concluded that vibration impacts as a result of the proposed changes would be very low risk as no vibration generating equipment is to be used and the nearest sensitive receiver is located more than 30 metres from the proposed works.

Section 5 of this SSAFMP identifies relevant noise mitigation and management measures.

### 3.2.4 Visual amenity

The site would be visible from nearby properties, including the residential apartment building on Levey Street. The site would also be visible from nearby recreational areas and the Cooks River. Fencing, site facilities and the grouting plant would be the primary visual impacts from surrounding areas. The site would have some security lighting which may have potential light spill impacts during the evening and night time period. The visual and light spill impacts associated with the use of the site would be relatively minor and temporary. The site would be rehabilitated to its existing condition, subsequent to the completion of the works. Management measures outlined in Table 5 would be implemented to minimise visual amenity and light spill impacts at the site.

### 3.2.5 Soil and water quality

The site is located adjacent to the Cooks River and a stormwater drain to the south of the site also drains to the Cooks River (Refer to Figure 2). Excavation works proposed at the site are limited to the

drilling of the bore holes. Potential and/or Actual Acid Sulfate Soils (PASS and/or ASS) may be encountered during drilling and treatment of PASS may be required. This would be conducted in accordance with the management measures outlined in the Acid Sulfate Soils Management Plan being implemented at the Arncliffe Construction Compound (C7).

With the implementation of mitigation measures outlined in Table 5, it is expected that potential soil and water quality impacts at the site would be minor.

### 3.2.6 Flora and fauna

No trees or shrubs are proposed to be removed at the site. Some grass and topsoil would need to be removed from the site. The site would be rehabilitated to its existing condition, subsequent to the completion of the works.

With the implementation of mitigation measures outlined in Table 5, it is expected that potential impacts on flora and fauna at the site would be minor.

### 3.2.7 Heritage

The site was assessed for heritage potential in the EIS and no heritage items have been identified in proximity to the site. The site was also determined to be unlikely to contain any Aboriginal heritage. The Unexpected Heritage Finds Procedure would be implemented in the event of a potential heritage find.

With the implementation of mitigation measures outlined in Table 5, it is expected that potential impacts on heritage would be unlikely.

### 3.2.8 Air quality

Air quality impacts associated with the works would be consistent with construction works across the project in general and would relate to the generation of dust and exhaust emissions from plant and vehicle use associated with the works. Given the temporary and minor nature of the works, and with the implementation of measures outlined in Table 5, any impacts to air quality are expected to be minor.

### 3.2.9 Waste and contamination

No spoil is expected to be generated as part of this project. The wastewater generated, approximately 5-10m<sup>3</sup> per day will be transferred to the WTP for treatment and reuse. General construction waste will be segregated and collected in adequately labelled skips and disposed at licensed waste collection facilities. Waste collection and transfer will be documented and tracked. Any contamination would be dealt with as per the project Unexpected Contaminated Finds Procedure. Acid Sulfate Soils would be dealt with as per Section 3.2.5 above. With the implementation of the measures outlined in Table 5, impacts associated with waste are expected to be minor.

### 3.2.10 Socio-economic

Use of the site compound has the potential for some minor impacts on the surrounding community including visual and noise impacts as described in the sections above. These impacts would be temporary and localised. No property acquisition would be required for the site and sufficient parking exists within the site for project personnel. Part of the car park at Rowers on Cooks River would be required for the construction works and part of Cahill Park to the south of Rockwell Avenue would also be unavailable for the duration of the works. The affected stakeholders are being consulted in accordance with the Community Communication Strategy and communications will be maintained prior to and during the works. On the completion of the proposed grouting works all impacted land would be restored to its original condition, or better.

With the implementation of the mitigation measures outlined in Table 5, any potential socio-economic impacts associated with the site compound would be minor.

### 3.2.11 Rehabilitation

In accordance with CoA D65, ancillary facilities must be rehabilitated to at least their pre-construction condition or better, to the satisfaction of the Secretary, unless otherwise agreed by the landowner.



Restoration works will include cleanup, dismantling and removal of temporary offices and all site facilities, ground preparation, planting and/or laying of turf, or as otherwise agreed with the landowner.

### 3.2.12 Cumulative impacts

The construction compound would be in addition to a number of other construction compounds/sites in the local area. The New M5 Arncliffe Construction Compound occurs to the south of the site and the Marsh Street widening works are also located near to the site. Cumulative impacts would primarily relate to the visual impact of the compound and some minor traffic and noise impacts. With the implementation of mitigation measures outlined in Table 5, it is considered that any potential cumulative impacts on the surrounding community would be temporary and minor.

### 3.2.13 Construction activities and associated impacts summary

Key construction activities to be conducted at the Cooks River Grouting site compound are identified in Table 4 below, along with the associated impacts and corresponding environmental controls.



Table 4: Key site activities proposed during construction

Key work activities	Key environmental impacts	Key environmental controls
<ul style="list-style-type: none"> <li>Site establishment activities including deliveries, installation of fencing, installation of environmental controls, installation of site sheds and amenities, installation of grout plant</li> <li>Deliveries of cement</li> <li>Operation of grout plant</li> <li>Drilling of grout lines and pumping of grout</li> <li>Use of sucker truck to collect / transfer wastewater to Arncliffe Water Treatment Plant</li> <li>Use of site office and amenities</li> <li>Decommissioning of site, including removal of all project materials, site rehabilitation and clean-up.</li> </ul>	<p>Noise impacts on nearby sensitive receivers including residential and commercial premises.</p> <p>Noise sources include vehicle access/egress, use of generators, and drilling and grouting activities.</p>	<p>Refer to the management measures in Section 5</p> <p>Also refer to the Construction Noise and Vibration Management Plan (M5N-ES-PLN-PWD-0003-14) and the AFMP</p>
	<p>Spills or leaks of fuels or other hazardous substances</p> <p>Erosion/sedimentation impacts from removal of grass cover and topsoil.</p> <p>Exposure of Potential and/or Actual Acid Sulfate Soils.</p>	<p>Refer to the management measures in Section 5</p> <p>Also refer to the Construction Soil and Water Quality Sub-plan (M5N-ES-PLN-PWD-0005) and the AFMP</p>
	<p>Generation of waste, including wastewater and general construction and office waste.</p>	<p>Refer to the management measures in Section 5</p> <p>Also refer to the Construction Waste and Resource Sub-plan (M5N-ES-PLN-PWD-0008) and the AFMP</p>
	<p>Traffic impacts on Rockwell, Levey, Gertrude Streets and Innesdale Road.</p>	<p>Refer to the management measures in Section 5.</p> <p>Also refer to the Construction Traffic and Access Sub-Plan (M5N-ES-PLN-PWD-0004) and the AFMP.</p>
	<p>Visual amenity and light spill impacts on surrounding properties and recreational areas.</p>	<p>Refer to the management measures in Section 5</p> <p>Also refer to the AFMP</p>
	<p>Dust and emissions/air quality impacts due to removal of ground cover and use of vehicles and plant.</p>	<p>Refer to the management measures in Section 5</p> <p>Also refer to the Construction Air Quality Sub-plan (M5N-ES-PLN-PWD-0002)</p>

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Key work activities	Key environmental impacts	Key environmental controls
	Damage to retained vegetation on site.	Refer to the management measures in Section 5 Also refer to the Construction Flora and Fauna Sub-plan (M5N-ES-PLN-PWD-0007)





## 4. Consultation

Consultation has been undertaken with the following stakeholders affected by and surrounding the proposed site:

- Bayside Council
- Ventia Boral Amey Joint Venture (VBA JV)
- Rowers On Cooks River

Bayside Council have provided permission to undertake the works and also requested that consultation is also conducted with Rowers on Cooks River and VBA JV. An agreement for sharing of the sites has been reached with VBA JV and an agreement for access to the Rowers on Cooks River site is being finalised. Refer to Appendix B for evidence of consultation to date.

Community notification will be provided to advise the surrounding community of the proposed site use in accordance with the Community Communication Strategy. The notification is provided in Appendix B and will be provided once this SSAFMP is approved and at least 5 days prior to establishing the site.

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### 5. Implement Controls

The table below details mitigation and management measures to specifically address the identified potential environmental and social impacts resulting from the operation of the Cooks River Grouting site compound. These measures will be implemented in addition to any relevant CDS-JV environmental procedures and controls described in the AFMP and CEMP. Implementation of all control measures will:

- Minimise any potential adverse impacts arising from the use of the site compound, and
- Ensure compliance with environmental obligations and requirements.

Regular compliance activities, such as inspections, observations and monitoring will be undertaken throughout the operation of the compound, inclusive of any subcontractor activities. These compliance activities and any non-conformances will be undertaken in accordance with Element 3 of the CEMP.

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Table 5: Site-specific environmental safeguards

No.	Impact	Environmental safeguards	Responsibility	Timing
WC1.	General	<ul style="list-style-type: none"> <li>All relevant safeguards provided in the Ancillary Facilities Management Plan (M5N-ES-PLN-PWD-0026), the Construction Environmental Management Plan (M5N-ES-PLN-PWD-0001) and all sub-plans must be implemented.</li> </ul>	Project manager	Prior to and during site operation
WC2.		All environmental safeguards must be incorporated within the following: <ul style="list-style-type: none"> <li>Construction Area Plan</li> <li>Work Pack (Including Site Environment Plan)</li> </ul>	Project manager	Prior to site operation
WC3.		<ul style="list-style-type: none"> <li>Training will be provided to all Project personnel, including relevant sub-contractors on site management requirements through inductions, toolboxes and targeted training where required.</li> </ul>	Project manager	Prior to and during site operation
WC4.		<ul style="list-style-type: none"> <li>The weekly environmental inspection checklist will be completed and will record ancillary facility management related issues.</li> </ul>	Environmental coordinator	Site operation
WC5.	Community	<ul style="list-style-type: none"> <li>CDS-JV will advise affected residents and property owners of the site use in accordance with the Community Communication Strategy.</li> </ul>	Community relations manager	Prior to and during site operation
WC6.		<ul style="list-style-type: none"> <li>Community complaints will be recorded and actioned in accordance with the Community Communication Strategy.</li> </ul>	Community relations manager	Site operation
WC7.	Traffic and access	<ul style="list-style-type: none"> <li>Access to site from the Princes Highway will occur Gertrude Street, Levey Street and Rockwell Avenue. Access to site from Marsh Street will occur via Marsh Street and Rockwell Avenue.</li> <li>Egress from site to Princes Highway will be via Rockwell Avenue, Levey Street and Gertrude Street. Egress from site to Marsh Street will be via Rockwell Avenue, Levey Street and Innesdale Road.</li> </ul>	Project manager Site supervisor	Site operation

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No.	Impact	Environmental safeguards	Responsibility	Timing
WC8.		<ul style="list-style-type: none"> <li>Deliveries will be carried out during standard construction hours where feasible and reasonable.</li> <li>Project personnel to be made aware of appropriate access and parking requirements for the site during induction/toolbox talks.</li> <li>Project personnel to be encouraged to use public transport to access site.</li> </ul>	Site supervisor	Site operation
WC9.	Noise	<ul style="list-style-type: none"> <li>Management and mitigation measures outlined in the CNVIS to be implemented, including programming of activities where reasonable and feasible and conducting noise monitoring to confirm predicted noise levels where required.</li> </ul>	Site supervisor	Site operation
WC10.		<p>Appropriate behavioural practices to be reinforced at site inductions / toolboxes, including:</p> <ul style="list-style-type: none"> <li>Relevant site approval conditions and site specific mitigation measures</li> <li>Location of nearest sensitive receivers</li> <li>No unnecessary loud swearing or unnecessary shouting,</li> <li>No loud stereos/radios on site,</li> <li>No dropping of materials from height where practicable or throwing of items, and</li> </ul> <p>No slamming of doors.</p>	Site supervisor	Site operation
WC11.		<p>Plant that is brought to site should meet the sound power limits identified in the CNVIS. Where plant exceeds limits then the plant may require installation of 'noise control kits' to comply with the noise limits set in the CNVIS. Such 'noise control kits' comprise:</p> <ul style="list-style-type: none"> <li>high performance 'residential-grade' exhaust mufflers</li> <li>additional engine cowling / enclosure lined inside with sound absorbent industrial-grade foam, and</li> <li>air intake and discharge silencers / louvres.</li> </ul> <p>The requirement of fitting 'noise control kits' onto the identified plant, shall be confirmed once each plant is tested prior to its regular use on site.</p>	Project Manager Site Supervisor	Site operation

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No.	Impact	Environmental safeguards	Responsibility	Timing
WC12.		<ul style="list-style-type: none"> <li>Ensure all deliveries occur during standard construction hours where reasonable and feasible.</li> </ul>	Site supervisor	Site operation
WC13.		<ul style="list-style-type: none"> <li>Non-tonal reversing beepers (or an equivalent mechanism) must be fitted &amp; used on all vehicles regularly used on site.</li> </ul>	Project Manager Site supervisor	Site operation
WC14.		<ul style="list-style-type: none"> <li>Undertake consultation (at least 5 days prior to relevant works) with potentially-affected community, religious, educational institutions and vibration-sensitive business and critical working areas, to ensure, where feasible and reasonable, works that may impact on the above groups/businesses are not timetabled during sensitive periods.</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Prior to and during site operation
WC15.		<ul style="list-style-type: none"> <li>During construction, proponents of other construction works in the vicinity of the SSI must be consulted and reasonable steps taken to coordinate works to minimise impacts on, and maximise respite for, affected sensitive receivers</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Site operation
WC16.		<ul style="list-style-type: none"> <li>Plant and equipment would be switched off when not in operation for periods of greater than 15 minutes. Where reasonable and feasible, noisy equipment will be substituted for alternative low-emitting equipment particularly for activities or in locations that may impact on potential noise sensitive receivers.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC17.		<ul style="list-style-type: none"> <li>Noisy equipment and equipment with directional noise emissions will be orientated away from neighbouring properties where practicable. The distance between plant and noise sensitive receivers will be maximised where practical. Avoid/ limit simultaneous operation of noisy plant and equipment within discernible range of a sensitive receiver</li> </ul>	Site supervisor Environmental advisor	Site operation

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No.	Impact	Environmental safeguards	Responsibility	Timing
WC18.		<ul style="list-style-type: none"> <li>Community consultation protocols for sensitive receivers likely to be impacted by construction activities such as vibration and noise will be prepared and implemented, as required.</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Site operation
WC19.	Flora and fauna	<ul style="list-style-type: none"> <li>Site induction to include awareness of flora and fauna requirements on site, including</li> <li>No damage to any trees/shrubs on site</li> <li>Any unexpected species finds on site to be reported to the Environment advisor/Environment &amp; Sustainability Manager.</li> </ul>	Project Manager Site supervisor Environmental advisor	Site operation
WC20.		<ul style="list-style-type: none"> <li>No-go zones to be implemented for all retained vegetation on site. No access to exclusion zones without a permit to enter no-go zones. No damage to occur to trees/shrubs on site.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC21.		<ul style="list-style-type: none"> <li>Equipment storage and laydown areas to be located outside the drip line of trees</li> </ul>	Project manager Site supervisor	Site operation
WC22.		<ul style="list-style-type: none"> <li>Unexpected species finds to be managed in accordance with the Manage Flora and Fauna Procedure.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC23.		<ul style="list-style-type: none"> <li>If a threat to an animal is evident onsite, the Site supervisor and/or Environmental advisor must be notified immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated.</li> <li>The handling of injured fauna must be carried out by licensed fauna handler such as fauna ecologist or wildlife carer.</li> </ul>	Site supervisor Environmental advisor	Site operation

# Site-specific AFMP: Cooks River Grouting



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No.	Impact	Environmental safeguards	Responsibility	Timing
WC24.		<ul style="list-style-type: none"> <li>Weed and pathogen management and control will be undertaken in accordance with the project Construction Flora and Fauna Sub-Plan (M5N-ES-PLN-PWD-0007), including ensuring vehicles and machinery are clean prior to entering site, and active management of weeds</li> </ul>	Site supervisor Environmental advisor	Site operation
WC25.		<ul style="list-style-type: none"> <li>Rehabilitation of site to occur at the completion of site operations to at least its pre-construction condition (refer Section 3.2.11), and in accordance with any relevant rehabilitation requirements specified in the Construction Flora and Fauna Sub-Plan (M5N-ES-PLN-PWD-0007) and the Ancillary Facilities Management Plan (M5N-ES-PLN-PWD-0026), or as otherwise agreed with the landowner.</li> </ul>	Project Manager	At the completion of site operation
WC26.	Soil and Water	<ul style="list-style-type: none"> <li>Erosion and sedimentation control plan to be developed for the site consistent with Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition (Landcom 2004).</li> </ul>	Environmental advisor	Prior to site operation
WC27.		<ul style="list-style-type: none"> <li>The assessment, classification and management of Potential and Actual Acid Sulfate Soils will be managed in accordance with the Acid Sulfate Soils Sub-plan, part of the Construction Soil and Water Quality Sub-Plan (M5N-ES-PLN-PWD-0005).</li> </ul>	Project Manager	Site operation
WC28.		<ul style="list-style-type: none"> <li>Batch Plant to be located within Cahill Park compound (i.e greatest distance from Cooks River).</li> </ul>	Project Manager	Prior to site operation
WC29.		<ul style="list-style-type: none"> <li>Sediment controls to be inspected and maintained as necessary, including after rain</li> </ul>	Site supervisor Environmental advisor	Prior to site operation

# Site-specific AFMP: Cooks River Grouting



SAMSUNG C&T

No.	Impact	Environmental safeguards	Responsibility	Timing
WC30.		<p>The following measures are to be implemented where a forecast rainfall event poses a potential flood risk to the site:</p> <ul style="list-style-type: none"> <li>• Grouting activities to cease,</li> <li>• Mobile equipment to be moved to higher ground or flood mitigated land (i.e. Arncliffe compound),</li> <li>• Non-mobile equipment to be appropriately secured,</li> <li>• Cement silo to be emptied and cement stores transferred to higher ground or flood mitigated land,</li> <li>• Septic tanks and holding tanks for waste water emptied.</li> </ul>	<p>Project Manager Site supervisor</p>	<p>Prior to rainfall event with potential flood risk</p>
WC31.		<p>The following measures to be in place to avoid and manage spills:</p> <ul style="list-style-type: none"> <li>• No long-term storage of chemicals or hazardous substances on site</li> <li>• Any temporary storage of fuels, chemicals and other hazardous materials to be in appropriately secure and bunded areas in accordance with EPA guidelines</li> <li>• Spills or contaminated runoff would be captured and treated and / or disposed of at a licensed facility</li> <li>• Any re-fuelling and wash down would be undertaken in bunded areas to mitigate risks in relation to spills or leaks of fuels / oils or other hazardous onsite construction material</li> <li>• Any soil which has been contaminated with fuel, oils or other chemicals would be disposed as contaminated soil by a waste subcontractor.</li> </ul>	<p>Project manager Site supervisor Environmental advisor</p>	<p>Site operation</p>
WC32.		<ul style="list-style-type: none"> <li>• In the event of a spill the Spill Management Procedure will be implemented. Emergency spill kits will be kept onsite and Project personnel would be aware of the location of spill kits and trained in their use.</li> </ul>	<p>Site supervisor Environmental advisor</p>	<p>Site operation</p>
WC33.	Visual amenity	<ul style="list-style-type: none"> <li>• All trees and shrubs at the site to be retained</li> <li>• Site fencing / hoarding / temporary noise barriers would be maintained during site operation</li> </ul>	<p>Project Manager Site supervisor Environmental advisor</p>	<p>Site operation</p>



# Site-specific AFMP: Cooks River Grouting



SAMSUNG C&T

No.	Impact	Environmental safeguards	Responsibility	Timing
WC34.		<ul style="list-style-type: none"> <li>Cut-off and/or directed lighting would be used at the site with lighting location and direction considered to ensure glare and light spill are minimised. Lighting to be generally consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting. Any residual night lighting impacts to adjoining or adjacent properties to be managed in consultation with affected landowners.</li> </ul>	Project Manager	Site operation
WC35.	Air quality	<ul style="list-style-type: none"> <li>Dust suppression measures to be incorporated into the Erosion and Sedimentation Control Plan for the site.</li> </ul>	Environmental advisor	Prior to site operation
WC36.		<p>Control emissions on site, including:</p> <ul style="list-style-type: none"> <li>Ensure all construction vehicles comply with their relevant emission standards</li> <li>Ensure that, where practicable engine idling is minimised when vehicles are stationary</li> <li>Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable</li> <li>Promote and encourage sustainable travel (public transport, cycling, walking, and car-sharing)</li> <li>No bonfires and burning of any materials including waste.</li> </ul>	Project Manager Site supervisor	Site operation
WC37.	Waste	<ul style="list-style-type: none"> <li>All liquid and/or non-liquid waste generated on the site must be assessed and classified in accordance with Waste Classification Guidelines (DECCW, 2009) or any superseding documents.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC38.		<ul style="list-style-type: none"> <li>All waste water generated from the batch plant activities will be removed from site and take to the Arncliffe Construction Compound to be processed via ARN-2 (WTP).</li> </ul>	Site supervisor Environmental advisor	Site operation
WC39.		<ul style="list-style-type: none"> <li>All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.</li> </ul>	Site supervisor Environmental advisor	Site operation

## 6. Consistency with existing project impacts and approvals

The use of the Cooks River Grouting site compound will assist in achieving the environmental objectives for the New M5 project as identified in the EIS, the CEMP and associated Sub-plans. The proposed facility is for the purpose of supporting additional surface-based grouting works, which are required to meet the groundwater infiltration criteria required by condition B26 of the Conditions of Approval and to reduce the risk of ground settlement above the tunnel in this location. Geotechnical studies undertaken during detailed design have identified the need for this additional grouting. The surface grouting is required so that:

1. The underground grouting program can proceed with high-pressure injections without having to first fill the larger fractures. This will reduce the number of holes and the pumping time needed for underground grouting.
2. The surface grout holes will approach the fractures at different angles to the underground grout holes. Horizontal fractures, in particular, can be grouted much more efficiently from the surface.

The impacts associated with the site, identified in Section 3.2, are considered to be minor, and consistent with the impacts identified in the New M5 EIS and other project approval documentation. The identified impacts can be appropriately managed through implementation of the management measures identified in Section 5 of this SSAFMP as well as those identified in the AFMP, the CEMP and the relevant Sub-plans.

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# Site-specific AFMP: Cooks River Grouting

## Appendix A: Ancillary Facility Application



# Site-specific AFMP: Cooks River Grouting



Step 1 – Ancillary facilities information			
<b>Site location (attach map for reference):</b>		Rockwell Avenue, Arncliffe. Refer Figures 1-3.	
<b>Date works to commence:</b> Late January 2017		<b>Date works to finish:</b> May 2017	
<b>Proposed activities (select all that apply):</b>			
Office and amenities	x	Construction compound	x
Laydown area		Parking	x
Batch Plant	x	Materials storage compound	
Maintenance workshop		Material stockpile area	
Other _____		Other _____	
<b>Please provide details regarding the proposed ancillary facility.</b>			
<b>Is the proposed facility within the approved construction footprint?</b>		No. The proposed facility is located outside the approved footprint, however is above the tunnel alignment. The site is required for grouting works, which are in addition to the original Arncliffe grouting activities that have been ongoing since August 2016.	
<b>Distance to the nearest waterway?</b>		Cooks River is located approximately 6 m from the north-eastern site boundary.	
<b>Proposed access route?</b>		Existing roads – Access/egress to site will be via Marsh Street, Gertrude Street, Levey Street, Innesdale Road and Rockwell Avenue.	
<b>Do heavy vehicles need to travel through residential areas?</b>		Limited numbers of heavy vehicles will travel through high density residential areas. These will provide for the delivery of the Batch (Grout) Plant, site facilities and amenities, deliveries of cement and equipment.	
<b>Is the proposed site on relatively level ground?</b>		Yes.	
<b>Distance to nearest residential receiver?</b>		35 metres.	
<b>Is vegetation clearance or trimming required? If so, what is the area in hectares?</b>		Grass and topsoil will be stripped, however no trees or shrubs will be removed. There will be no additional impacts to biodiversity beyond those described in the EIS.	
<b>Will the facility impact heritage?</b>		No.	
<b>Will the facility affect the land use of adjacent properties?</b>		The site is located in proximity to a residential apartment, hotel, construction sites and sporting facilities and will have some minor temporary impacts on these properties. It is not considered the facility will unreasonably affect the use of these properties.	

# Site-specific AFMP: Cooks River Grouting



<b>Is the facility above the 20 ARI flood level?</b>	No.
<b>Will out of hours works be required to establish facility? During operation of the facility?</b>	No.
<b>Potential noise and vibration impacts?</b>	Temporary and minor noise impacts are predicted for one residential receiver and the St George Rowing Club. No vibration impacts are expected. Noise impacts will be managed in accordance with the Construction Noise and Vibration Management Plan and the Construction Noise and Vibration Impact Statement prepared for the works.
<b>Potential dust or odour impacts?</b>	Water (via hoses) and polymer will be used to mitigate all dust impacts.
<b>Potential visual or light spill impacts?</b>	Temporary and minor visual impacts are anticipated due to grouting plant and equipment located at the site, grouting activities, fencing and minor lighting impacts from security lighting. Lighting will be adjusted to minimise impact.
<b>Potential waste management impacts?</b>	In addition to wastewater generation, described below, some general construction waste will also be generated at the site. All general waste will be removed via a licenced contractor overseen by CDS-JV.
<b>Potential soil and water impacts?</b>	Waste water will be generated as a result of the grouting activities. Waste water will be transferred to the Arncliffe Water Treatment Plant for treatment prior to discharge. Potential and/or actual acid sulfate soils may be encountered. There is also the potential for spills and/or leaks of chemicals or other substances. These potential impacts will be managed in accordance with the Construction Soil and Water Quality Sub-plan and an ESCP to be developed and implemented.

<b>Step 2 – Environmental and Sustainability Manager Review</b>	
<b>Is additional assessment required (e.g. noise, biodiversity, heritage)?</b>	Yes. A construction noise and vibration impact statement has been prepared for the activities proposed at the site. A biodiversity assessment has also been undertaken for the use of the site. Refer above for impacts identified.
<b>Is the proposed facility compliant with CoA D62 criteria?</b>	No
<b>Is the ancillary facility included in the EIS?</b>	No
<b>Does the ancillary facility have minimal amenity impacts to surrounding residences?</b>	Yes
<b>Does the ancillary facility have minimal environmental impact?</b>	Yes
<b>Can potential impacts be managed through existing controls identified in the CEMP?</b>	Yes

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# Site-specific AFMP: Cooks River Grouting

WestConnex New M5



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# Site-specific AFMP: Cooks River Grouting



## Appendix B: Evidence of consultation

**27 February 2017**

**Site compound – 2 Levey Street, Wolli Creek**

Work is underway on WestConnex which involves widening and extending the M4 and M5 and joining them to create a free-flowing motorway network.

As part of the project, the New M5 will duplicate the existing M5 East corridor, doubling vehicle capacity and easing congestion between St Peters and Beverly Hills. It will include twin tunnels, an upgrade of King Georges Road Interchange and a new interchange at St Peters. For more information, visit [westconnex.com.au/NewM5](http://westconnex.com.au/NewM5).

In order to deliver the project safely and efficiently, a site compound will be established at **2 Levey Street, Wolli Creek** to support surface-based grouting work before tunnelling begins in the area. A map of the location of the compound is provided overleaf.

The compound will contain a grouting station including batch plant, grout rigs, franna and washout ponds/skips as well as general waste skips. The compound will also accommodate limited parking and staff amenities.

The site compound is necessary to provide onsite support for construction of the New M5 tunnel under the Cooks River.

If you would like further information or want to discuss the location of site compound, please call 1800 660 248 and ask to speak to a member of the New M5 community engagement team or email [info@newm5.com.au](mailto:info@newm5.com.au).

Notification no: xxx

**ABOUT WESTCONNEX**

WestConnex is part of a broader transport plan for Sydney which includes improved public transport, such as Sydney Metro and light rail, as well as better, more reliable motorway solutions. More than two-thirds of WestConnex will be built underground. Once complete, motorists will be able to avoid up to 52 sets of traffic lights and enjoy significant travel time savings.

For more information

 [info@newm5.com.au](mailto:info@newm5.com.au)

 1800 660 248

 [westconnex.com.au](http://westconnex.com.au)



Constructed by







Easing  
congestion



Creating  
jobs



Connecting  
communities

Location of site compound at 2 Levey Street, Wolli Creek



Map data © Sixmap 2017



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1800 660 248

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