

Pre-Construction Minor Works Approval Form

Minor Works are defined as any low impact activities that are undertaken prior to the commencement of 'construction' as defined in the project's applicable planning approval. However if Minor Works affect or potentially affect heritage items, threatened species, populations or endangered ecological communities, these works are defined as 'construction' unless otherwise determined by the applicable planning authority.

Minor Works approvals do not remove any obligation to comply with the project's applicable planning approval conditions (including requirements prior to 'any works' commencing) or obtain any other applicable permits, licenses or approvals as necessary.

This application and all supporting information must be submitted to TfNSW/the Environmental Representative as one (1) PDF file at least 10 business days prior to the commencement of the proposed Minor Works.

Part 1: Application			
Contractor:	John Holland & Laing O'Rourke joint venture (JHLOR)		
Project:	Sydenham Station and Junction – Tranche 1B/1C		
Application Title: (e.g. Smith St trenching works)	Site Compound and Laydown Set-up		
Application Number:	SSJT1B/1C-PCMW-009 Doc Number: SMCSWSSJ-JHL-WEC-EM-REC-000006		
Application Date:	Rev00 – 23 April 2019 Rev01 – 13 May 2019 Rev02 – 31 May 2019		
Planning Approval:	Sydney Metro City and Southwest – Sydenham to Bankstown – Environmental Impact Statement (EIS) Sydney Metro City and Southwest – Sydenham to Bankstown – Submissions and Preferred Infrastructure Report (SPIR) Sydney Metro City and Southwest Infrastructure Approval SSI-8256		
 Minor Works Categories: Highlight as applicable. If Items 4, 8 or 11 are applicable, this form must be endorsed by an Environmental Representative. 	 Survey, survey facilitation and investigations works (including road and building dilapidation survey works, drilling and excavation). Treatment of contaminated sites. Establishment of ancillary facilities (excluding demolition), including construction of ancillary facility access roads and providing facility utilities. Operation of ancillary facilities that have minimal impact on the environment and community. Minor clearing and relocation of vegetation (including native). Installation of mitigation measures, including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments. Property acquisition adjustment works, including installation of property fencing and utility relocation and adjustments to properties. Utility relocation and connections. Maintenance of existing buildings and structures. Archaeological testing under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010) or archaeological monitoring undertaken in association with other Minor Works to ensure there is no impact on heritage items. Any other activities that have minimal environmental impact, including construction of minor access roads, temporary relocation of pedestrian and cycle paths and the provision of property access. 		
Planning Authority Determination: Will the proposed works affect or	If 'Yes', this completed form must be endorsed by an Environmental Representative, approved by TfNSW and submitted to the applicable planning authority to determine that the works are not defined as 'construction'.		



have the potential to affect heritage items, threatened species, populations or endangered ecological communities? No – it is anticipated that there will be no impacts associated with the works that will affect State Heritage listed items, areas of known or expected archaeological potential, threatened species, populations or endangered ecological communities. In addition, JHLOR will implement the *Sydney Metro Unexpected Finds Procedure* V1.4 throughout the investigation works.

Part 2: Details

Site Description Overview

This overview is based on information from the Environmental Impact Statement (EIS) and Submissions and Preferred Infrastructure Report (SPIR).

The Project area is within the rail corridor of the T3 Bankstown Line and is comprised of stations, overbridges, overhead wiring structures, track, services and ballast, extending from Sydenham Station to Bankstown Station. Within the SSJ Tranche 1B/1C works area, the use of laydown and the installation and operation a minor ancillary facility (referred to as a "site compound" within this document) is proposed within the rail corridor between Sydenham and Bankstown Stations.

T3 Bankstown Line Sydenham Station to Bankstown Station

The T3 line runs adjacent to a number of land zoning types between Sydenham Station and Bankstown Station including industrial, business and community, infrastructure, residential and recreational.

Roads cross the T3 line in a number of places, both by overbridges and underpasses. A number of footbridges also cross the T3 line along the length of its alignment. The T3 Line crosses the Cooks River in one location between Sydenham and Bankstown. Other local waterways such as channels, culverts and stormwater systems are present along the alignment.

The majority of vegetation in the survey area comprises exotic or planted native species on highly modified landforms. A number of threatened plant communities, threatened plant species and habitat trees are within the rail corridor and Southwest Metro project area. Refer to Appendix 1 for sites relevant to this PCMW.

Description of Works

<u>Laydown</u>

A number of laydown areas and a site compound will be established within the rail corridor between Sydenham and Bankstown to enable the SSJ Tranche 1B and 1C works.

The laydown areas are required to enable the pre-Construction works and will be used for storage of inert construction materials (such as galvanised steel trough, ground level trough, pit, pipes, fencing panels), stockpiled waste and spoil, equipment and plant.

The SPIR states "for the purposes of the preferred project, it is assumed that construction activities would occur along the entire length of the rail corridor within the project area. Construction activities would include clearing and grubbing, fencing, stockpiling, and material laydown. These activities would move progressively along the project area."

As such, laydown of material throughout the corridor is pre-approved (where environmentally sensitive areas are protected and environmental risks mitigated). JHLOR will utilise laydown areas under a "no-go area" and "key impact mitigation" philosophy.

Lavdown "No-go" Areas

Laydown will not occur within areas of threatened species, threatened vegetation communities (including degraded Sydney Turpentine Ironbark Forest) or habitat trees (as shown in Appendix 1).

Laydown approved under this PCMW will not occur within any Archaeological Management Zone (AMZ). A separate PCMW is under preparation for "non-ground disturbing activities within AMZs", including laydown use. Refer to Appendix 1 for AMZs.

Laydown will not occur in areas of Potential Archaeological Deposits (PADs) as identified within the SPIR – ACHAR. Refer to Appendix 1 for PADs.

Laydown Key Impact Mitigation

Where possible laydown areas will be located away from residential receivers. It is noted that certain parts of the site are constrained by road overbridges, road underbridges, services, trees to be retained, environmentally sensitive areas and access tracks that are to remain unobstructed for emergency and maintenance purposes. Where such constraints exist, laydown adjacent to residential properties may occur. Appropriate consultation will be provided to residents adjacent to areas of ongoing laydown use.

Laydown areas will be selected to minimise vegetation removal.

Laydown areas will be selected to minimise impacts on overland flow paths for rainfall runoff.

Laydown areas will be selected to minimise risk to erosion and sedimentation issues, particularly, sites will be located more that 20m from a waterway or stormwater system,

Describe the proposed Minor Works:

Including work methodologies, site location(s) and site description(s) (e.g. landscape type, waterways, etc.).



where practicable.

Laydown areas will be selected to minimise impacts to visual amenity, noting that laydown of materials and stockpiling is consistent with the normal use of rail corridors.

Full mitigation is listed within the Risk Assessment in Appendix 1.

JHLOR has selected a number of indicative laydown areas within the corridor based on the "no-go" areas and "key impact mitigation". These indicative laydown areas are shown within Appendix 1 and are subject to further refinement based on construction methodology changes. Additional laydown areas may be added during the pre-Construction phase based on the "no-go" areas and "key impact mitigation".

JHLOR intends to use two additional laydown areas outside the Project area. These are, the Way Street Laydown and the Fraser Park Laydown. These areas are described further below.

Way Street Laydown

The Way Street laydown is an existing laydown area used by JHLOR for SSJ works. The area is asphalted and is suitable for unloading/loading of bulk objects.

JHLOR propose to use the area for laydown of inert construction materials such as galvanised steel trough, pits and pipes.

The area is surrounded by rail corridor. The Eastern Channel is located to the north of the laydown area. Road access is via Way Street. Residents are located approximately 100m away to the south. There is are no trees, shrubs or other plants within the footprint of the laydown, nearby trees will be protected.

It is noted that this area is located outside the Project Boundary as defined within the Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade Submissions and Preferred Infrastructure Report. A Planning Approval Consistency Assessment (PACA) will be undertaken and approved prior to the use of this area. Any mitigation measures identified within this document and within the PACA will be applicable.

Fraser Park Laydown

The Fraser Park laydown is an existing laydown area used by JHLOR for SSJ works. The hardstand area is suitable for laydown of construction materials and stockpiling of quarry and spoil.

The area is bordered by the T3 Bankstown Line and Southwest ARTC freight line. The embankment provides visual screening and noise attenuation to the nearest residents on Meeks Road, Marrickville. There is no known drainage in the area. There is are no trees, shrubs or other plants within the footprint of the laydown.

It is noted that this area is located outside the Project Boundary as defined within the Sydney Metro City & Southwest – Sydenham to Bankstown Upgrade Submissions and Preferred Infrastructure Report. A Planning Approval Consistency Assessment (PACA) will be undertaken and approved prior to the use of this area. Any mitigation measures identified within this document and within the PACA will be applicable.

Punchbowl Site Compound

JHLOR will establish a site compound at Punchbowl for the works. The compound will predominately be used for the Tranche 1C works. The site compound is required for office, crib, toilet and secure storage facilities.

The Punchbowl Site Compound will is proposed for use from the 28th of May for approximately 2-3 months.

The SPIR states "The project area includes all areas required to construct the project. The majority of construction would be located within the rail corridor from west of Sydenham to west of Bankstown.

Within the project area, a number of construction compounds would be required to support construction activities at stations, and at other key locations where civil works are required. In addition to the compounds, a number of work sites would also be used to facilitate construction of certain project elements e.g. bridge works."

Appendix B – Figure 2.1 of the SPIR identifies a number of pre-approved compound areas.

The Punchbowl site compound falls within one of these areas. As such the suitability of this location has been assessed and approved under the Planning Approval.

The area is asphalted. Several trees within the area will be protected with demarcation.

No works will occur within the nearby Potential Archaeological Deposit – PAD02 Punchbowl.

Entry to the rail corridor and a hi-rail access pad will also be developed as part of the compound. The hi-rail access pad will be constructed of ballast. An excavator and wacker



packer will be used to create the pad.

The site set-up has been arranged to minimise traffic movement and vehicle reversing to mitigate noise impacts. Attenuation of generator noise would be achieved by internal shielding. Parking would occur within the compound area where possible.

Access and egress to the site will occur through an existing rail corridor gate under normal conditions No further traffic controls are deemed necessary. JHLOR will continue to monitor traffic access and will implement further controls as required.

There is minimal flooding information available on the area. The EIS Technical Paper 8 – Hydrology, Flooding and Water Quality Assessment indicates that there are a number of culverts with rail corridor with varying capacities. The local catchment drains from the southern side of the track, to the northern side of the track, where the compound will be located. Flood impacts are mainly contained to the southern side of the track, where the rail line and culvert capacity restrict large flows. As there are no overland flow restrictions to the north, runoff will be free flowing in the vicinity of the compound. In respects to flood impacts JHLOR notes the following:

- The site compound facility will be located on stilts, maintaining flow paths for any overland flow that might occur in the area
- The compound represents a negligible amount of volume within the context of the total catchment volume. There would be no or negligible change to flood levels in the area.
- As the compound will be on stilts there will be negligible restrictions to flow and as such negligible changes to inundation periods
- The area is asphalted and is not subject to scour. No spoil will be stored within the area.

In accordance with the above, and the short duration of compound use, JHLOR has assessed the flood risks associated with the compound as negligible.

Plant List

Plant and equipment anticipated to be used during the works include:

- Excavators (5t-13t)
- · Delivery truck
- Mobile crane
- Vacuum truck
- Site utes
- 2t tipper
- · Portable lighting towers
- Road Sweeper
- 13t Bogie Trucks or dump trucks
- · Handheld compactor/wacker packer
- Hand tools
- Front End Loader
- Skip bins for spoil
- Multi-crane
- Telehandler
- Hiab
- Water cart/trailer

Working Hours

The majority of these works would occur during standard construction hours as identified within the planning approval. Any works to occur outside of standard construction hours, including deliveries, would occur under an Out of Hours Work Approval in accordance with the Sydney Metro City & Southwest Out of Hours Work Protocol.

It is noted that the laydown and the Punchbowl site compound will be used during possessions (rail shut downs). Any plant or equipment used within laydown areas of the site compound (e.g. light towers) will be included in noise monitoring.

An Out of Hours Work approval will be submitted where the Punchbowl site compound generator will be used outside of standard construction hours.

It is noted that material will be left in these areas on a full-time basis.

General Notes



	All plant would access site via existing Sydney Trains access gates.					
	Note that these activities are subject to change based on construction progress. The above list does not include activities approved under any other Pre-construction Minor Works Approval form.					
	JHLOR is responsible for the actions of its employees, workers and subcontractors. JHLOR is not responsible for the actions of other parties including but not limited to Sydney Trains and utility owners.					
	The Ewart Street laydown area was approved under SMCSWSSJ-JHL-WEC-EM-REC-000002 PCMW-006 - General Site Wide Minor Works Rev03.					
Planned Commonweat	Works/use of these areas will commence on the 5 th of June 2019 and will continue for the duration of the works until April 2020.					
Planned Commencement Date:	The Punchbowl Site Compound will is proposed for use from the 5 th of June for approximately 2-3 months. Although unlikely, any extension to this period would be undertaken in consultation with Sydney Trains, Sydney Metro and the ER.					
	T3 Line between Sydenham Station and Campsie Station					
	 There are a number of residential properties located within close proximity to the work locations as can be seen within Appendix 1. Due to the proximity of these receivers to the works, these properties may be sensitive to excessive noise, particularly during OOHW. Any potential impacts to these properties will be managed in accordance with the Construction Noise and Vibration Strategy, including relevant notifications. There are no vibratory activities associated with the works. Noise and vibration will also be managed in accordance with the following criteria; 					
	 Construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009); 					
	 Vibration criteria established using the Assessing vibration: a technica guideline (DEC, 2006) (for human exposure); 					
	 (BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions"; and 					
	 The vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage). 					
	 Preliminary environmental site assessment identified the potential risk of contamination within the investigation area, with potential contamination sources bein historical rail activities, and commercial and residential land use in surrounding areas. Potential contaminants identified in low to medium risk areas included: 					
	o Asbestos					
	o Hydrocarbons					
Local Sensitivities:	o Heavy metals					
Describe the presence (if any)	o Herbicides.					
of local sensitive environmental areas and community receptors	Works are non-invasive and therefore risks associated with the disturbance of contamination are negligible. Workers will report any finds in accordance with the JHLOR unexpected finds procedure for contamination.					
	 One medium to high risk area of contamination was identified between Sydenham and Marrickville Stations, originating from a property adjacent to the rail corridor at 361 Victoria Road, Marrickville. Potential contaminants include; 					
	o Asbestos					
	 Petroleum aromatic hydrocarbons in groundwater 					
	Works are non-invasive and therefore risks associated with the disturbance of contamination are negligible. Workers will report any finds in accordance with the JHLOR unexpected finds procedure for contamination.					
	One medium to high risk area of contamination was identified between Campsie and Belmore stations (triangular area within the rail corridor). This contamination is associated with historical railway activities and historical commercial and residential land use. Potential contaminants include:					
	Arsenic in ballast					
	o Asbestos					
	 Hydrocarbons (including chlorinated hydrocarbons in fill) 					
	 Heavy metals (including in groundwater) 					
	o Herbicides					
	Works are non-invasive and therefore risks associated with the disturbance of contamination are negligible. Workers will report any finds in accordance with the JHLOR unexpected finds procedure for contamination.					

JHLOR unexpected finds procedure for contamination.

• One medium to high risk area of contamination was identified between Punchbowl and



Bankstown stations (car park at North Terrace). This contamination is associated with historical railway activities and historical commercial and residential land use. Potential contaminants include;

- Asbestos
- Hydrocarbons (in soil and groundwater)
- Heavy metals
- Herbicides

Works are non-invasive and therefore risks associated with the disturbance of contamination are negligible. Workers will report any finds in accordance with the JHLOR unexpected finds procedure for contamination.

- Contamination will be managed in accordance with the Unexpected Contamination Finds Procedure – refer to Appendix 2.
- Acid sulphate soils ranging from Classes 1 to 4 exist within the work site, particularly
 within the vicinity of the Cooks River rail bridge crossing on the country side of
 Canterbury Station. Works are non-invasive and therefore risks associated with the
 disturbance of PASS/ASS are negligible
- Works will occur in close proximity to archaeological investigation zones as defined in the AARD. Works will not be undertaken within any archaeological zones under this document. The works will operate under the Sydney Metro Unexpected Finds Procedure
- Two areas that potentially contain aboriginal archaeology, known as PADs (Potential Archaeological Deposit) are located within the EIS study area. PAD01 is located outside the Project boundary at Belmore. PAD02 is located within the Project boundary, but outside the rail corridor at Punchbowl. No laydown will take place within these areas.
- A number of areas of Endangered Ecological Community (EEC) under the TSC Act
 have been identified within the vicinity of the work zone. These areas are shown in
 Appendix 1 where they relate to the proposed compound and laydown areas. No
 works will occur within the EEC areas. Appropriate delineation and signage will be in
 place.
- A number of patches of the threatened plant species Acacia Pubescens are located within the rail corridor on the country side of Punchbowl Station. These areas have been excluded from the project footprint and are shown in Appendix 1 (only where they relate to the proposed compound and laydown areas). Downy Wattle (Acacia pubescens) is listed as vulnerable under the EPBC Act and TSC Act. The EIS states "The patches of stems recorded are located mainly in the vicinity of Punchbowl Station, with around two stems recorded in the rail corridor, and one stem in a Council reserve around 100 metres east of the Yagoona substation. The project has been designed to avoid impacting on the recorded locations of this species." Works, including trimming or removal of vegetation, will not occur under this PCMW.
- A number of habitat features are present within the work area including;
 - o Hollow bearing trees
 - Habitat for Grey-headed flying-fox
 - Habitat for Australian Ibis roosting

The works will not include the removal or trimming of any vegetation, as such there will be no impact on these features. These features are shown in Appendix 1 (only where they relate to the proposed compound and laydown areas).

- Visual amenity the visual aspects of laydown areas and site compounds are
 consistent with the industrial nature of the rail corridor. Lighting towers will be pointed
 away from receivers to minimise the impacts of lighting spill.
- Works may occur in the vicinity of local stormwater systems. Localised erosion and sediment controls will be in place at all locations where materials associated with the works may leave the corridor, including via stormwater drainage.
- Appropriate approvals, including Road Occupancy Licences and Traffic Control Plans, must be in place where works on roadways are required. A Construction Traffic Management Plan has been deemed as "not required" by TTLG as per Low Impact Activities under Condition of Approval E47. A Traffic Management Proposal, providing basic information required for early works including access to these areas, has been approved by SCO.
- Pedestrian access will be maintained in any area where works are occurring, noting that pedestrian access is not permitted within the rail corridor.



Part 3: Environmental Risk Assessment and Management

Prepare an Environmental Risk Assessment (in accordance with the *Sydney Metro Risk Management Standard*) and an Environmental Control Map for the proposed Minor Works and attach as Appendix 1.

If an Environmental Risk Assessment and/or an Environmental Control Map for the proposed Minor Works is/are already contained in existing documentation, attach the relevant section(s) as Appendix 1.

Documentation:

List any existing documents (including those referenced above) that the proposed Minor Works will be undertaken in accordance with and attach as Appendix 2 (e.g. plans, procedures, procedures, etc.).

An Environmental Risk Assessment and an ECM for the proposed works are included in Appendix 1.

JHLOR's unexpected finds procedure for contamination and acid sulphate soil is included in Appendix 2.

Part 4: Workforce Notification

How will the environmental and community risks and associated mitigation measures of the proposed Minor Works be communicated to the contractor's workforce?

A site induction will be provided to all personnel working on the project site. The induction will include relevant environmental aspects and risks associated with works on the project site.

Works will be undertaken in accordance with a SWMS or JSEA (depending on whether work meets the definition of High Risk Construction Works in accordance with Clause 291 WHS Regulation). SWMS will be reviewed by the JHLOR Environmental Manager.

Part 5: Community Consultation What community consultation has been undertaken Construction laydown is included within the June 2019 Monthly Community Notice. already? The site compound at Punchbowl will be included within a subsequent Tranche 1C Community Notification. A subsequent detailed notification and door knock will also be distributed to the local area 200m from the site prior to the commencement of this activity. Ongoing consultation will occur through the Monthly Community Notice. What community consultation The community will be notified of any use of these areas outside of standard construction is planned to be undertaken? hours in accordance with the Additional Mitigation Measures specified in the Construction Noise and Vibration Strategy. Where lavdown will be used within 50m of a resident, a door knock will occur to inform the resident prior to the areas use. If drafted already, attach applicable Community Notification as Appendix 3.

Part 6: C	Part 6: Contact Details						
Nominate contractor's project manager, environmental and communications contact(s).							
	Neal Barron		Project Director	Phone:	0409 291752		
Name:	Cameron Newling	Position:	Environmental Manager		0419 727 445		
	Loretta Mihaljek		Communication and Stakeholder Manager		0412 129 064		



Part 7: Signature	
	or Works will be undertaken in accordance with this application, have so 'construction' in accordance with the applicable planning approval.
Name:	Cameron Newling
Signature:	Date: 31/05/2019



Determination Page

(TfNSW/Environmental Representative Use Only)

12. E	ndors	ement/Approval		NAME OF BOOK PARTY.
applica	ation and	res represent formal endorsement/a d the applicable planning approval ru ay be required by the planning appro	equirements (subject to any determine	ks to commence in accordance with this nation from the applicable planning
		TfNSW Principal Manager, Communication & Engagement – Endorsement (required for all applications)	TfNSW Principal Manager, Sustainability, Environment & Planning Approval (required for all applications)	Environmental Representative - Endorsement (required as necessary in accordance with the applicable planning approval optional for all other circumstances)
Signat	ture:	3		
Name:		Tim Garrard	FIL CEMONE	
Date:		31/05/19	3/5/19.	
Comm	nents:			Supporting letter attached as Appendix 4 if necessary.
Condi	tions:	Doorknoch required prior to installation of ancillary facilities		Supporting letter attached as Appendix 4 if necessary.
3	Appro	ved (by TfNSW)		
	Endor	sed (by Environmental Representati	ve)	ALL
	Reject	ed		

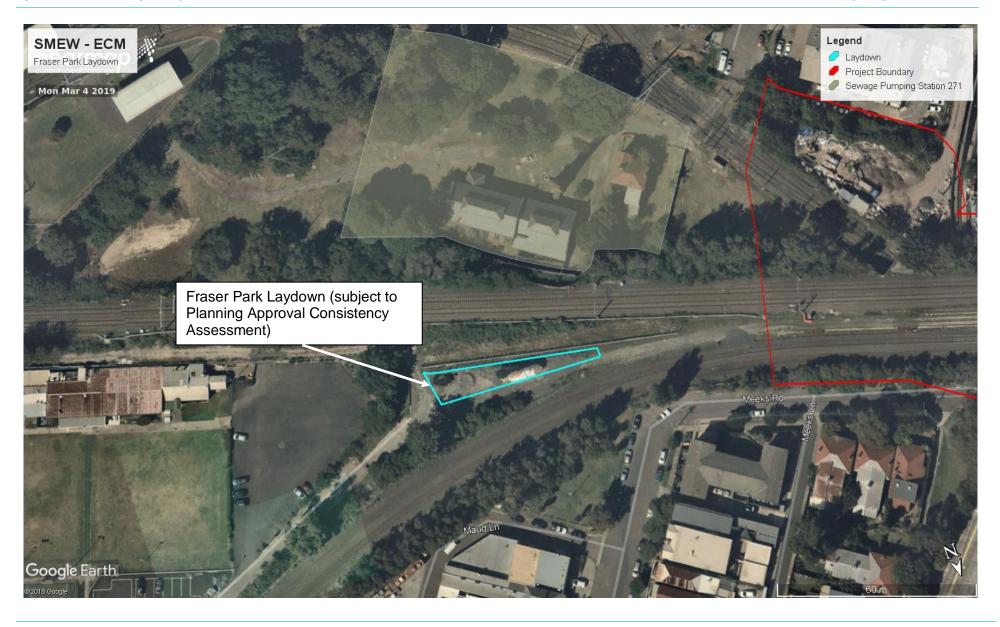


Appendix 1: Environmental Control Map and Environmental Risk Assessment









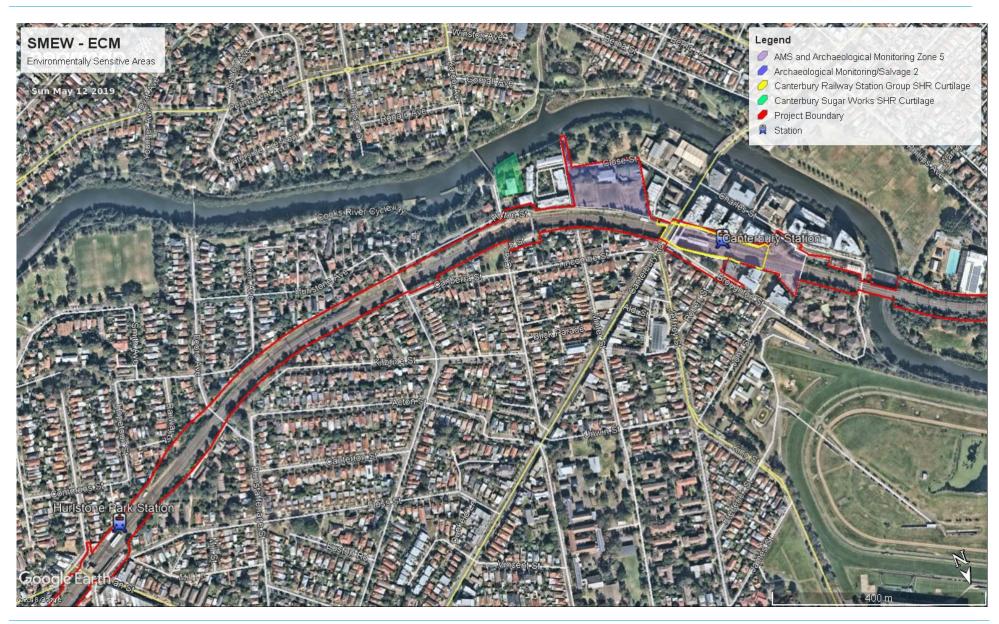




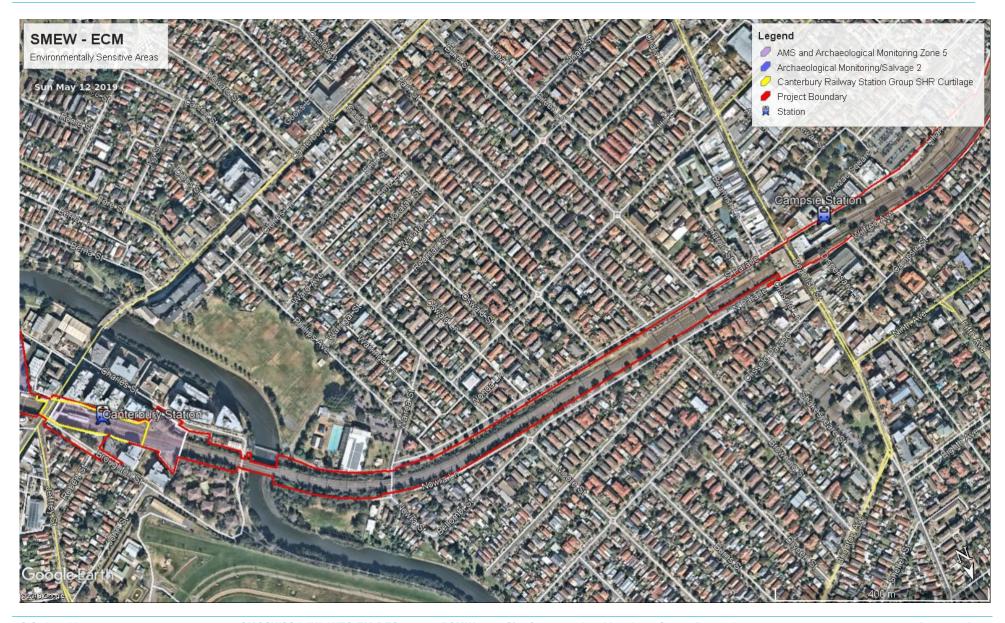




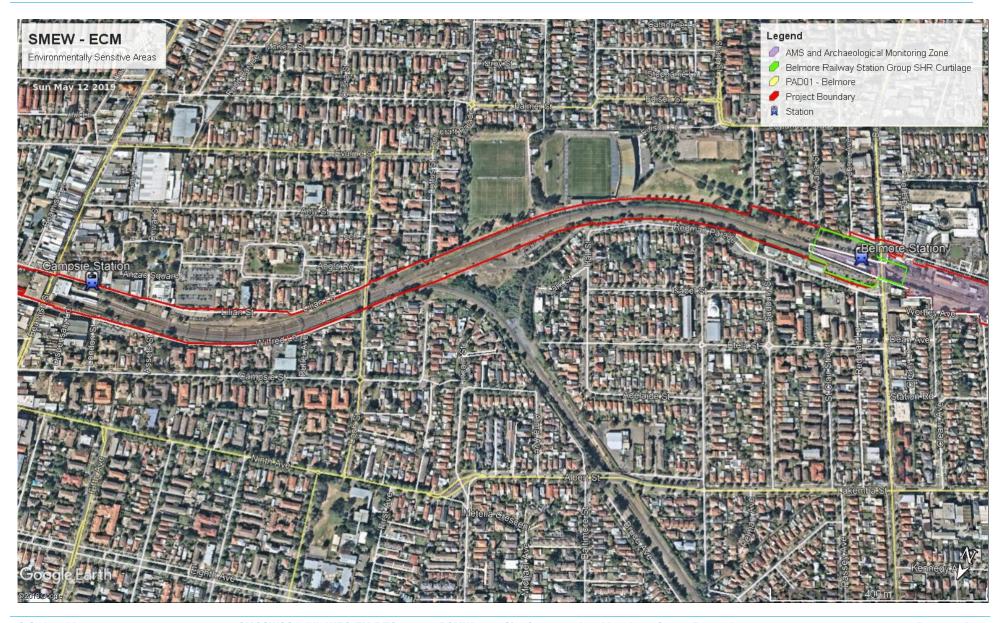






























Punchbowl Site Compound (indicative)



(Uncontrolled when printed)



Environmental Risk Assessment

The Risk Assessment has been undertaken in accordance with the requirements of the Sydney Metro Risk Management Standard.

Note; C = Consequence & L = Likelihood as per Sydney Metro Risk Management System - Appendix A Sydney Metro Risk Matrix

Aspect	Potential Environmental	Initial Risk Rating			Control Measures	Residual Risk Rating		
Aspect	Impact	Сx	L =	Risk	Control Measures	Сx	L =	Risk
Site Compound and Laydown								
Items of heritage significance uncovered during works	Damage to heritage items or archaeological deposits.	СЗ	L5	Med	 Induction to include heritage management requirements. No laydown within State Heritage Curtilages or Archaeological Management Zones under this PCMW Implement Sydney Metro Unexpected Finds Procedure V1.4 during invasive investigation works. If suspected materials are found, workers are to; Stop works in vicinity immediately Inform the Superintendent and Environmental Manager Delineate the area to prevent further access, where possible No works to occur in AMZs or SHR curtilages under this PCMW 	СЗ	L6	Low
Noise from plant and people	Noise from plant impacting on sensitive receivers. Noise impacts outside standard construction hours.	C 5	L3	Med	 Induction to include noise mitigation and "good neighbour" approach. Distance between noisy plant items and nearby noise sensitive receivers would be maximised and equipment orientated where possible to reduce noise. Where possible, night works should be programmed to undertake noisy activities prior to 10pm. All power driven work equipment used would have efficient muffler design and be well maintained. Mitigation measures to be implemented in accordance with the TfNSW Construction Noise Strategy, including appropriate notification. 	C 5	L5	Low
Chemical handling and storage	Poor storage and handling of chemicals causes spills	C5	L4	Low	 Any chemicals and fuels are to be stored within a bunded area with 110% of the capacity of the largest stored container. Any chemical storage is to be located more than 20m 	C5	L5	Low





Erosion and sediment controls	Sediment laden runoff from laydown areas or site compound	C4	L4	Med	 from a drainage line or waterway. Refuelling to occur more than 20m away from drainage lines or Cooks River Spill kits to be located at chemical storage locations and work fronts. Site induction includes spill response awareness. Induction to include ERSED protection measures. Produce an ESCP for relevant sites as activities progress. 	C4	L5	Low
Water Management	Discharge of water that does not meet water quality parameters	C4	L4	Med	Introduction to include water discharge requirements A discharge permit is to be signed-off by the Environmental Manager (or delegate) prior to any discharge in accordance with the Sydney Metro Water Discharge and Reuse Procedure SM ES-PW-309	C4	L5	Low
Waste	Incorrect disposal of spoil waste Acid sulphate soils Contamination	C3	L5	Med	 Induction to include waste management practices. Waste to be tested in accordance with the Waste Classification Guidelines (NSW EPA, 2014) prior to disposal. Any ballast or drainage rock imported to site will have the appropriate resource recovery exemption certification. The waste must be lawfully transported and disposed of to a licenced facility. Unexpected Contamination Finds procedure to be enacted where contamination is found during investigation works. Exposed Potential Acid Sulphate Soil will be kept wet if encountered. The excavations will be backfilled immediately to prevent any Potential Acid Sulphate Soils from oxidising. An occupational hygienist is to be on call to provide advice on management of any contaminated material (advice based on contamination type). 	C3	L6	Low
Air quality	Dust generation during excavation and stockpiling Dust from access track use, maintenance or establishment	C4	L4	Med	 Induction to include air quality management practices. Water cart or water trailer to be present to wet down material. Monitor conditions and modify works where dusty conditions are observed. 	C4	L5	Low





Services	Service strike leading to environmental discharges	C4	L4	Med	 Engineers and workers to establish locations of any services by Dial Before You Dig, Survey and Non-Destructive Digging (where possible). An Excavation Permit detailing service locations is to be reviewed and signed by all workers undertaking excavation works. 	C4	L5	Low
Vegetation	Removal or pruning of vegetation without approval Damage to vegetation that is a threatened plant species, habitat feature or within EEC area	C4	L4	Med	 Induction to include biodiversity requirements – no removal or pruning of any plants without appropriate JHLOR permit. A JHLOR permit will not be provided unless a Tree Report has been submitted to DPE in accordance with CoA – E5. Delineation and signage of threatened plant species, habitat trees and Threatened Vegetation Communities/EEC (Sydney Turpentine Grey Ironbark Forest, broadleaved ironbark Grey box melaleuca decora grassy open forest and Degraded Turpentine Grey Ironbark Forest). Tree protection zones would be established in areas where works will occur adjacent to trees. 	C4	L5	Low
Traffic and Pedestrians	Disruption to road users and pedestrians	C4	L4	Med	 Induction to include traffic control requirements Traffic Control Plans and Road Occupancy Licences to be in place as required to redirect traffic and pedestrians. Appropriate community notifications to be in place for road occupancy Parking within rail corridor where possible Observe time restrictions for parking areas Prioritise community parking where possible Maintain pedestrian access Ongoing monitoring and assessment of construction traffic access to Punchbowl site compound. Additional controls will be added as required. 	C4	L5	Low
Visual Amenity	Impacts from light spill	C5	L4	Low	Position lighting towers to minimise impacts to nearby receivers	C4	L5	Low
Hydrology	Flooding impacts from compound	C 5	L4	Low	Compound to be on stiltsMaintain overland flow paths	C4	L5	Low

Sydney Metro Risk Matrix

A1 Consequence Table

		Co	onsequence Tal	ole		
Rating	C6	C5	C4	C3	C2	C1
Descriptor/ Impact Area	Insignificant	Minor	Moderate	Major	Severe	Catastrophic
Health and Safety (Injury and Disease)	Illness, first aid or injury not requiring medical treatment.	Illness or minor injuries requiring medical treatment.	Single recoverable lost time injury or illness, alternate/restricted duties injury, or short-term occupational illness.	1-10 major injuries requiring hospitalisation and numerous days lost, or medium-term occupational illness.	Single fatality and/or 10-20 major injuries/permanent disabilities/chronic diseases.	Multiple fatalities and/or >20 major injuries/permanent disabilities/chronic diseases.
Environment	No appreciable changes to environment and/or highly localised event.	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries.	Short-term and/or well-contained environmental effects. Minor remedial actions probably required.	Impacts external ecosystem and considerable remediation is required.	Long-term environmental impairment in neighbouring or valued eco . Extensive remediation required.	Irreversible large- scale environmental impact with loss of valued eco .
Customer Experience/ Operational Reliability	Short duration disruptions affecting part of one transport mode.	Minor disruptions affecting several parts of one transport mode.	Serious disruptions affecting operation of one complete transport mode.	Major disruptions affecting operations of one transport mode with network- wide effects on one or more other modes of transport.	Short duration shutdowns or substantial disruptions affecting multiple transport modes with sector- wide cascading effects.	Extensive shutdowns or extended disruptions with economy-wide effects.
Government/ Stakeholder / Public Trust/ Confidence	Negative article in local media. No discernible reaction/apprehensi on. Goodwill, confidence and trust retained.	Unease – Series of negative articles in local/state media. Confidence remains with some minor loss of goodwill or trust. Recoverable with little effort or cost. Some continuing scrutinylattention.	Disappointment – Extended negative local/state media coverage. Confidence and trust dented but are quickly recoverable at modest cost within existing budget and resources.	Concern – Short- term negative state/national media coverage. Confidence and trust are diminished but are recoverable with time, staff effort and additional funding.	Displeasure — Extended negative state/national media coverage. Confidence and trust are damaged but recoverable at considerable cost, time and staff effort.	Outrage – Material change in the public perception of the organisation. Confidence and trust are severely damaged, possibly irreparably, and full recovery both questionable and costly.
Regulatory or Legal Breach	Low-level non- compliance with legal and/or regulatory requirement or duty by individuals or TRNSW.	Minor non- compliance with legal and/or regulatory requirement or duty. Investigation and/or report to authority.	Moderate non- compliance. Subject to comment and monitoring from applicable regulator. Small fine and no disruption to services.	Major breach resulting in enforcement action and/or prohibition notices. Substantial fine and no disruption to services.	Substantial breach resulting in prosecution, fines and/or litigation. Licence or accreditation restricted or conditional affecting ability to operate.	Prosecution leading to imprisonment of TfNSW executive. Loss of operating licence.
Management Effort/ Organisational Fatigue	An event, the impact of which can be absorbed as part of normal activity.	An event, the impact of which can be absorbed but some additional management effort is required.	An event, the impact of which can be absorbed but much broader management effort is required.	Major event which can be absorbed, but substantial management effort is required.	Severe event which requires extensive management effort but can be survived.	Catastrophic event with the clear potential to lead to the collapse of the organisation.
Benefit Realisation of Initiative, Program or Project	No time delay with initiative or project but it will incur a slight decrease in the benefits realised.	Minor delay with the initiative and/or a minor decrease in the benefits realised; or minor delay on the project or another project, with no public implications.	Several delays with the initiative and/or moderate decrease in benefits realised; or completion date missed for non- critical path project.	Major delays with the initiative and/or major decrease in benefits realised; or publicly announced portion/milestone missed or final completion date missed with demonstrable mitigating external circumstances.	Severe delays with initiative, which impacts across divisions and/or significant decrease in benefits realised; or publicly announced portion/milestone missed or final completion date missed on critical path project.	Failure to realise benefits of the initiative which adversely affects the enterprise-wide operations of TfNSW; or publicly announced portion/ milestone significantly missed or final completion date significantly missed on critical path project.
Budget, Costs or Revenue	<\$100k	\$100k - \$1m	\$1m - \$10m	\$10m – \$50m	\$50m – \$100m	> \$100m
		l	l	l .		l

A2 Likelihood Criteria

	Likelihood							
Rating	L6	L5	L4	L3	L2	L1		
Descriptor/ Definition	Almost Unprecedented	Very Unlikely	Unlikely	Likely	Very Likely	Almost Certain		
Qualitative Expectation	Not expected to ever occur during time of activity or project	Not expected to occur during the time of activity or project	More likely not to occur than occur during time of activity or project	More likely to occur than not occur during time of activity or project	Expected to occur occasionally during time of activity or project	Expected to occur frequently during time of activity or project		
Sydney Metro Probability Analysis	<10%	10-25%	25-50%	50-75%	75-90%	>90%		
Quantitative Frequency	Less than once every 100 years	Once every 10 to 100 years	Once every 1 to 10 years	Once each year	1-10 times every year	10 times or more every year		

A3 Risk Matrix

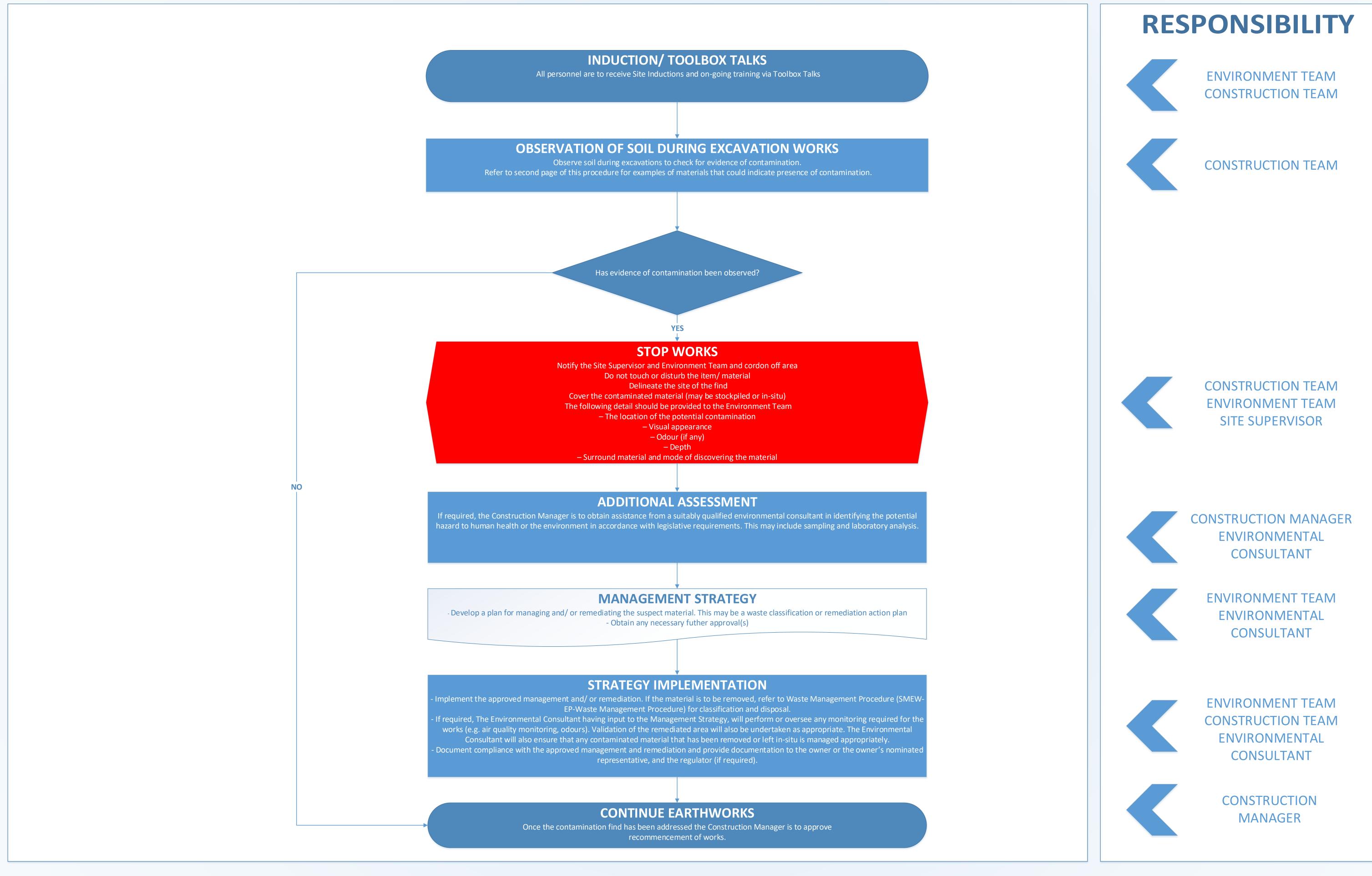
	Risk Rating: Very High – A – 31-36				CONSEC	QUENCE		
	High-B-2	22-30	Insignificant	Minor	Moderate	Major	Severe	Catastrophic
	Medium - C - Low - D -:		C6	C5	C4	C3	C2	C1
	Almost certain	LI	20	22	29	32	34	36
	Very Vision	L2	14	18	23	28	31	35
ПКЕПНООВ	Hosty	L3	9	12	16	24	27	33
LIKEU	Vedicio	L4	6	7	11	17	25	30
	Very Very	L5	3	4	8	13	19	26
	Almost Unpreced ented	L6	1	2	5	10	15	21

Appendix 2: Environmental Management Documentation

Unexpected Contaminated Land Procedure and Asbestos Finds Procedure











EVIDENCE OF CONTAMINATION

Example of materials that could indicate the presence of contamination include (but are not necessarily limited to):

- . Asbestos cement fragments or other potentially asbestos containing materials
- . Odorous or stained soil;
- Buried chemical drums or containers
- . High proportion of waste materials or building debris
- . Tarry or ashy material
- . Brightly or unusually coloured material
- . A yellow and/or red mottling in the soil profile indicates there may be Acid Sulfate Soils (ASS)

Asbestos

Asbestos finds are to be managed in accordance with the Project WHS Management Plan

Acid Sulfate Soils (ASS)

ASS are naturally occurring soils, sediments or organic substrates that are formed under waterlogged conditions in coastal areas. When exposed to air after being disturbed, soils containing iron sulfides produce sulfuric acid and often release toxic quantities of iron, aluminium and heavy metals. If ASS is encountered, possible management strategies include:

- . Modifying the works to avoid the area of ASS
- Delineation and removal to a suitably licenced facility
- . Onsite treatment to neutralise the ASS, which could include the application of lime.

Note: The management of any ASS needs to include appropriate erosion and sedimentation controls to minimise the potential for pollution to waters. Refer to the Construction Spoil and Water Management Plan.

Management and Disposal of Contaminated Material

Specific approval may be required to implement management strategies and a Safe Work Methods Statement (SWMS) must be prepared prior to undertaking any remediation work, except in emergency situations.

Contaminated material will be disposed of in accordance with the Waste Management Procedure.









Appendix 3: Community Notification



City & Southwest

MONTHLY NOTIFICATION - BANKSTOWN LINE METRO UPGRADE

MAY - JUNE 2019

Sydney Metro is Australia's biggest public transport project.

Services start in 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new CBD metro railway stations underground at Martin Place, Pitt Street and Barangaroo and new metro platforms under Central.

In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre.

Bankstown Line metro upgrade

Over the next month early work investigations will be carried out along the Bankstown Line between Belmore and Bankstown (weather and site conditions permitting).

Day work

Project standard working hours are Monday to Friday 7am - 6pm and Saturday 8am - 6pm (or 8am to 1pm for work inside the corridor)

inside the corrido	r)
Location	Activities
Whole corridor (Belmore – Bankstown)	 Site establishment work within the rail corridor, including site preparation, installation of haul roads and temporary fencing Locating and confirming underground services using hand held equipment, cameras and non-destructive digging throughout the rail corridor Survey work in stations (Belmore to Punchbowl), in the rail corridor and nearby public areas Geotechnical investigations in stations (Belmore to Punchbowl) and throughout the rail corridor including minor excavation or drilling, sampling and testing Survey and inspections of rail bridges from the rail corridor and nearby public areas Minor clearing and grubbing throughout the rail corridor Equipment used for the above work will include vacuum suction trucks, dump trucks, excavators, drill rigs, crane trucks and lifting machinery, power and hand tools Delivery and removal of material and equipment using rail access gates Belmore: Tobruk Avenue, Hall Street, Loftus Street, Redman Parade, Acacia Lane and Railway Parade Lakemba: Railway Parade and The Boulevarde Wiley Park: Shadforth Street, Cornelia Street, Urunga Parade and The Boulevarde Punchbowl: Urunga Parade, The Boulevarde, South Terrace and Wattle Street
Punchbowl	 Installation of a temporary site compound inside the rail corridor at Urunga Street near Punchbowl station (subject to approval - a detailed notification will be distributed to the local area before commencing this work)



Out-of-hours work

Due to the nature of some activities and for the safety of workers, some work will occur outside standard construction hours when trains are not running. Out-of-hours work activities include:

Date/Time	Location/s	Activities
Commencing Monday 27 May 2019 for approximately 5 weeks during the following periods: From 6pm to 6am each night (excluding Sunday nights) From 1pm to 6pm on Saturdays	Inside rail corridor between Belmore and Bankstown (see map below)	 Surveys and inspections of stations and rail track Hand held equipment and torches will be used. Lights will be directed away from residential properties when in use Access to the rail corridor will be via the existing rail corridor and pedestrian gates located between Belmore and Bankstown stations This work is not expected to be noisy

Access to buildings and driveways will be maintained at all times. Some of this work may be noisy, however we will take every possible step to minimise noise such as switching off equipment when not in use and installing non-tonal reversing beepers on vehicles.

Keeping you informed

Properties close to the rail corridor will receive notifications when work is scheduled to occur. Sydney Trains will deliver notifications for work done during scheduled rail maintenance periods and Sydney Metro will keep you informed of all other work. If you'd prefer to receive updates by email, please contact us using the details below.

Thank you for your cooperation while we complete this essential work.

If you have any questions please contact **Melanie** on **1800 171 386** (24 hour community information line) or <u>Southwestmetro@transport.nsw.gov.au</u>







City & Southwest

NOTIFICATION - BANKSTOWN LINE METRO UPGRADE

JUNE 2019

Sydney Metro is Australia's biggest public transport project.

Services start in 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new CBD metro railway stations underground at Martin Place, Pitt Street and Barangaroo and new metro platforms under Central.

In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre.

Temporary site compound - Punchbowl

To support upcoming early work activities for the Bankstown Line metro upgrade project Sydney Metro will be establishing a temporary site compound and storage area within the rail corridor at Urunga Parade, Punchbowl:

Day work				
Project standard working hours are Monday to Friday 7am - 6pm and Saturday 8am - 6pm (1pm - 6pm inside the rail corridor)				
Location	Activities			
Punchbowl	 Installation of temporary site compound inside the rail corridor at Urunga Parade from Monday 3 June for approximately 3 months (with possible extension to early 2020, subject to approval) Site compound will include storage areas for plant and equipment including: site sheds, 			

crane trucks, lifting machinery, power and hand tools

containers, toilets, portable lighting, vacuum suction trucks, dump trucks, excavators,

Out-of-hours work

Due to the nature of some activities and for the safety of workers, some work will occur outside standard construction hours when trains are not running. Some equipment will also be delivered outside standard construction hours in line with RMS requirements for transporting oversized vehicles. Out-of-hours work activities include:

Delivery and removal of material and equipment will be via Urunga Parade.

Date/Time	Location	Activities
6pm Friday 21 June to 2am Monday 24 June	Punchbowl site compound	Delivery of plant and materials via Urunga Parade

Access to buildings and driveways will be maintained at all times. Where required, traffic control and directional signage will be in place for the safety of workers and the community. Some of this work may be noisy, however we will take every possible step to minimise noise such as switching off equipment when not in use and installing nontonal reversing beepers on vehicles.

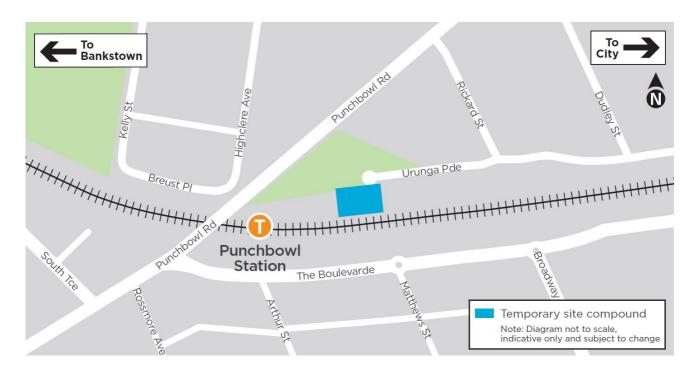


Keeping you informed

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City & Southwest

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In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre.

Bankstown Line metro upgrade

Over the next month early work activities will continue along the Bankstown line between **Sydenham and Campsie** (weather and site conditions permitting):

Day work

Project standard working hours are Monday to Friday 7am - 6pm and Saturday 8am - 6pm (or 8am to 1pm for work inside the corridor)

inside the corridor)				
Location	Activities			
Whole corridor (Sydenham – Campsie)	 Site establishment work within the rail corridor, including site preparation, installation of haul roads and temporary fencing Survey work in stations, the rail corridor and nearby public areas Locating and confirming underground services in the rail corridor using hand held equipment, cameras and non-destructive digging Geotechnical investigations throughout the rail corridor including minor drilling sampling and testing the ground Clearing and grubbing throughout the rail corridor Installation of cable routes within the rail corridor Equipment used for the above work will include vacuum suction trucks, dump trucks, excavators, crane trucks and lifting machinery, power and hand tools. Rail access gates along the corridor from Fraser Park to Campsie will be used for delivery and removal of plant, equipment and materials: Marrickville: Fraser Park, Victoria Road, Wooley Lane and Randall Street Dulwich Hill: Kays Ave East, Corner of Ewart Street and Terrace Road, Ewart Street and Floss Street Hurlstone Park: Railway Street, Keir Avenue, Hurlstone Avenue and Hutton Street Canterbury: Sugar House Road, Charles Street, Cooks River Path and South Parade Campsie: Lillian Street 			

Out-of-hours work

Due to the nature of some activities and for the safety of workers, some work will occur outside standard construction hours when trains are not running. Out-of-hours work activities include:

Date/Time	Location/s	Activities
Commencing Saturday 1 June for approximately 4 weeks during the following periods: From 10pm to 4am each night (excluding Sunday nights) From 1pm to 6pm on Saturdays	Inside the rail corridor between Sydenham and Campsie	 Surveys and inspections of stations and rail track Hand held equipment and torches will be used. Lights will be directed away from residential properties when in use Access to the rail corridor will be via the existing rail corridor and pedestrian gates located between Sydenham and Campsie stations This work is not expected to be noisy.
From 2am, Saturday 22 June to 2am, Monday 24 June (Subject to approval - additional notification will be distributed to the local area prior to works commencing)	Victoria Road bridge, Marrickville	 Temporary lane closure on Victoria road to allow installation of cable routes onto the rail bridge Traffic control and directional signage will be in place for the safety of workers and the community.

Access to buildings and driveways will be maintained at all times. Some of this work may be noisy, however we will take every possible step to minimise noise such as switching off equipment when not in use and installing non-tonal reversing beepers on vehicles.

Keeping you informed

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