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 ~~1C~~ 1B T3
Application Title: (e.g. Smith St trenching works)	T3 Bankstown Line Tranche 1B Specific Minor Works
Application Number:	SSJ1A-PCMW-011 Doc Number: SMCSWSSJ-JHL-WEC-EM-REC-000008
Application Date:	Rev00 – 21 May 2019 Rev01 – 14 June 2019 Rev02 – 18 June 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 (Conditions)
Minor Works Categories: • Highlight as applicable. • If Items 4, 8 or 11 are applicable, this form must be endorsed by an Environmental Representative.	1. Survey, survey facilitation and investigations works (including road and building dilapidation survey works, drilling and excavation). 2. Treatment of contaminated sites. 3. Establishment of ancillary facilities (excluding demolition), including construction of ancillary facility access roads and providing facility utilities. 4. Operation of ancillary facilities that have minimal impact on the environment and community. 5. Minor clearing and relocation of vegetation (including native). 6. Installation of mitigation measures, including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments. 7. Property acquisition adjustment works, including installation of property fencing and utility relocation and adjustments to properties. 8. Utility relocation and connections. 9. Maintenance of existing buildings and structures. 10. 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. 11. 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:	*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'.*

Will the proposed works affect or 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

Describe the proposed Minor Works:

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

Site Description Overview

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

A number of low impact activities are to occur along the T3 Bankstown Line (The T3 line). The T3 Line is comprised of stations, overbridges, overhead wiring structures, track, services and ballast, extending from Sydenham Station to Bankstown Station.

Within the area between Sydenham and Campsie Stations, low impact early works are proposed.

These proposed works will be outside of Archaeological Management Zones (AMZs) and State Heritage Register (SHR) listed curtilages.

T3 Line Sydenham Station to Campsie Station

The T3 line runs adjacent to a number of land zoning types between Sydenham Station and Campsie 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 Campsie stations). Other local waterways such as channels, culverts and stormwater systems are present at several locations along the alignment.

The majority of vegetation in the area comprises exotic or planted native species on highly modified landforms. A number of Threatened Plant Communities, threatened plant species and habitat trees have been identified within the rail corridor and project area. Refer to Appendix 1 for additional information within relevant maps.

The proposed works will not impact these threatened plant communities.

Description of Works

Combined Service Route

A number of sections of the Combined Service Route (CSR) will be installed under this PCMW. This will include sections of Galvanised Steel Trough (GST) and Ground Level Trough (GLT).

In addition, temporary Sydney Trains signals and communication cable routes will be constructed in the vicinity of Albermarle St, Marrickville and Campsie Station.

Some sections of GST will be attached to existing rail bridges in a number of locations, specifically;

- Victoria Road, Marrickville
- Ness Avenue, Dulwich Hill

To support these works, scaffolding will be set-up at the abutments of the above bridges. The scaffolding will be in place temporarily to allow for safe working at heights and access to these locations.

In other areas, the CSR will pass under the following bridges so should not have an impact on local traffic:

- Livingstone Road, Marrickville
- Albermarle St, Marrickville (Sydney Trains GLT realignment)

Partial road closures will be undertaken in accordance with the Pre-Construction Traffic Management Document and the appropriate Road Occupancy Licence/Traffic Management Plan.

Excavators, vacuum trucks and hand tools will be used to undertake excavations associated with the CSR installation. Elevated Work Platforms (EWP) or Cherry Picker will be used to install GST to bridges. A telehandler or multi-crane will be used to move components such as GSTand GLT into places as necessary.

These works do not include the installation, removal or relocation of existing CSR cables. These works relate to the infrastructure used to carry the services associated with the Sydney Metro CSR. As such, these works are not considered to be Utility Works, in accordance with the SSI 8256 Conditions of Approval.

Refer to Appendix 1 for locations of CSR early works.

High Voltage Adjustments

Minor adjustments to the High Voltage (HV) feeder between Canterbury and Campsie Stations will be undertaken in preparation for retaining wall works. In particular, adjustments to the power pole jewellery (the components generally located on the cross bar of the power pole) will occur to allow the wires to be easily disconnected if needed during future maintenance. The HV feeder line and power poles works will result in negligible visual changes.

An EWP or Cherry Picker and hand tools will be used to make HV feeder adjustments.

There is no known requirement for trimming or removal of trees to facilitate these works during this pre-Construction phase.

This work would be considered Utility Work in accordance with the SSI 8256 Conditions of Approval. As such, the Utility Management Strategy for SMEW must be approved by DPE prior to these works occurring.

This work is currently scheduled to commence on the 10th of August 2019.

Refer to Appendix 1 for location of HV feeder work locations.

Hi-rail Access Pads

Hi-rail access pads will be set-up to facilitate plant access for upcoming possession works. Hi-rail access pads will be in place during possessions and comprise of foam mats or ballast. Ballast hi-rail pads will be installed with a tipper, excavator and wacker packer. An excavator will remove the pad at the end of the possessions.

Any materials will be removed at the end of SMEW works, unless otherwise agreed with Sydney Metro.

Refer to Appendix 1 for indicative locations of hi-rail access pad to be installed.

Plant List

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

- 1-3t Excavators
- 6t Excavator
- 8t Excavator
- 13t Hi-rail Excavator
- Hi-rail vacuum trucks
- Vacuum truck
- Site utes
- Telehandler
- Multi-crane
- 2t tipper
- 3T balloon tyred dump trucks
- Delivery truck/hiab
- 13t Bogie Trucks
- Portable lighting towers
- Generators
- Road Sweeper
- Water cart/water trailer
- Elevated work platform or cherry picker
- Hi-rail Elevated Work Platforms
- Handheld compactor (wacker packer)
- Hand tools

Working Hours

Works will be undertaken during standard construction hours, where possible.

Some works, such as works within the “danger zone” will occur outside of standard construction hours during rail possessions. This would be managed under and Out of Hours Works Approval (OOHW Approval) and in accordance with the Sydney Metro City & Southwest Out of Hours Work Protocol.

	General Notes Plant would access site via existing Sydney Trains access gates – no new gates will need to be installed. 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. Any works undertaken outside of standard construction hours will be accounted for within a single OOHW assessment for all OOHW to occur within the same period, as such, noise modelling will be undertaken holistically. There are no other known cumulative impacts with works under other current or planned PCMW.
Planned Commencement Date:	It is intended that the works associated with this MWA will commence on the following dates: 22nd • CSR: ~~14th~~ June 2019 • HV works: 10th August 2019 These works (CSR and HV) are anticipated to be completed by December 2019. However this is pending access requirements and final detailed design. It should also be noted that these will not be the only CSR and HV works for the project. All other work will be actioned under the CEMP once approved. All relevant activities will be included within community notifications to be distributed no later than 7 days before commencement.
Local Sensitivities: Describe the presence (if any) of local sensitive environmental areas and community receptors	T3 Line between Sydenham Station and Bankstown Station • There are a number of residential properties located within close proximity to the corridor as identified in Appendix 1. It is understood that these properties may be sensitive to excessive noise, particularly during OOHW. As such, additional notification via door knocks for nearby residents will be undertaken for OOHW. An OOHW Application will be developed for all works to occur outside standard construction hours. • Works will occur in close proximity to the Marrickville Railway Station Group and Canterbury railway Station Group. However, no works will occur within these curtilages under this MWA. • All works will operate under the Sydney Metro Unexpected Finds Procedure. • Preliminary environmental site assessment identified the potential risk of contamination within the investigation area, with potential contamination sources being 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 o Heavy metals o Herbicides. This MWA does not require significant soil disturbance works. However, workers will report any suspect 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 o Petroleum aromatic hydrocarbons in groundwater • One area of Endangered Ecological Community (EEC) under the TSC Act has been identified within the vicinity of the work zone. The EEC relates to Sydney Turpentine Ironbark Forest located on the country side of the Garnet Street overbridge (Hurlstone Park) as shown in Appendix 1. Vegetation protection works may occur in the vicinity of the ECC, however no works will occur within the EEC. Appropriate delineation and signage will be in place. Degraded Turpentine – Grey Ironbark forest has also been identified within a number of other locations within the rail corridor as identified within Appendix 1. Vegetation protection works would also occur to protect these vegetation communities where works are expected to occur. • Works will occur in the vicinity of local stormwater systems and the Cooks River (rail bridge over river). There is minimal erosion and sedimentation risk associated with these low impact works. Erosion and Sediment Controls Plans will be created as required. • Visual amenity – the works will be consistent with the current industrial nature of the rail corridor. Lighting associated with the works will be pointed away from nearby receivers to minimise impacts.

	• 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 to early works, has been submitted to SCO. These works will not proceed until SCO has agreed that the Proposal is sufficient. • Pedestrian access will be maintained in any area where works are occurring, noting that pedestrian access is not permitted within the rail corridor. This includes where temporary fencing or barriers are used to delineate work-sites.

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 Environmental Control Maps for the proposed works are included in Appendix 1. JHLOR's unexpected finds procedure for contamination and acid sulphate soil (ASS) is included in Appendix 2. Maps showing location of potential ASS are included within 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 already?	Consultation will be carried out in conjunction with Sydney Metro's Community Communication Strategy, prior to any works being undertaken. No consultation for these works has been currently been undertaken. It is intended this will be included as part of the monthly mail out in June 2019 with additional notifications as required.
What community consultation is planned to be undertaken?	The community must be notified in writing at least 7 days prior to any works commencing (i.e. a Letterbox drop/email notification). Where an Out of Hours Works Application indicates that Additional Mitigation Measures are required, other forms of communication may be required (e.g. door knocks, phone calls, specific notifications). A draft of this has been included within Appendix 3.
If drafted already, attach applicable Community Notification in Appendix 3.	

Part 6: Contact Details

Nominate contractor's project manager, environmental and communications contact(s).

Name:	Lee Taylor	**Position:**	Project Director	**Phone:**	0498 228 501
	Cameron Newling		Environmental Manager		0419 727 445
	Loretta Mihaljek		Communication and Stakeholder Manager		0412 129 064

Part 7: Signature			
This signature acknowledges that the proposed Minor Works will be undertaken in accordance with this application, have minimal environmental impact and are not defined as 'construction' in accordance with the applicable planning approval.			
Name:	Cameron Newling		
Signature:	pp 	**Date:**	18/06/2019

Determination Page

(TfNSW/Environmental Representative Use Only)

12. Endorsement/Approval

These signatures represent formal endorsement/approval for the proposed Minor Works to commence in accordance with this application and the applicable planning approval requirements (subject to any determination from the applicable planning authority as may be required by the planning approval conditions).

	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)
Signature:			
Name:	May Li Foong	FIL CERONE	Jo Robertson
Date:	18/6/19	21/6/19.	19/6/19
Comments:	Works have been notified in June community notification		*Supporting letter attached as Appendix 4 if necessary.*
Conditions:			*Supporting letter attached as Appendix 4 if necessary.*

☑	Approved (by TfNSW)
☒	Endorsed (by Environmental Representative)
☐	Rejected

Appendix 1: Work areas, Environmental Risk Assessment

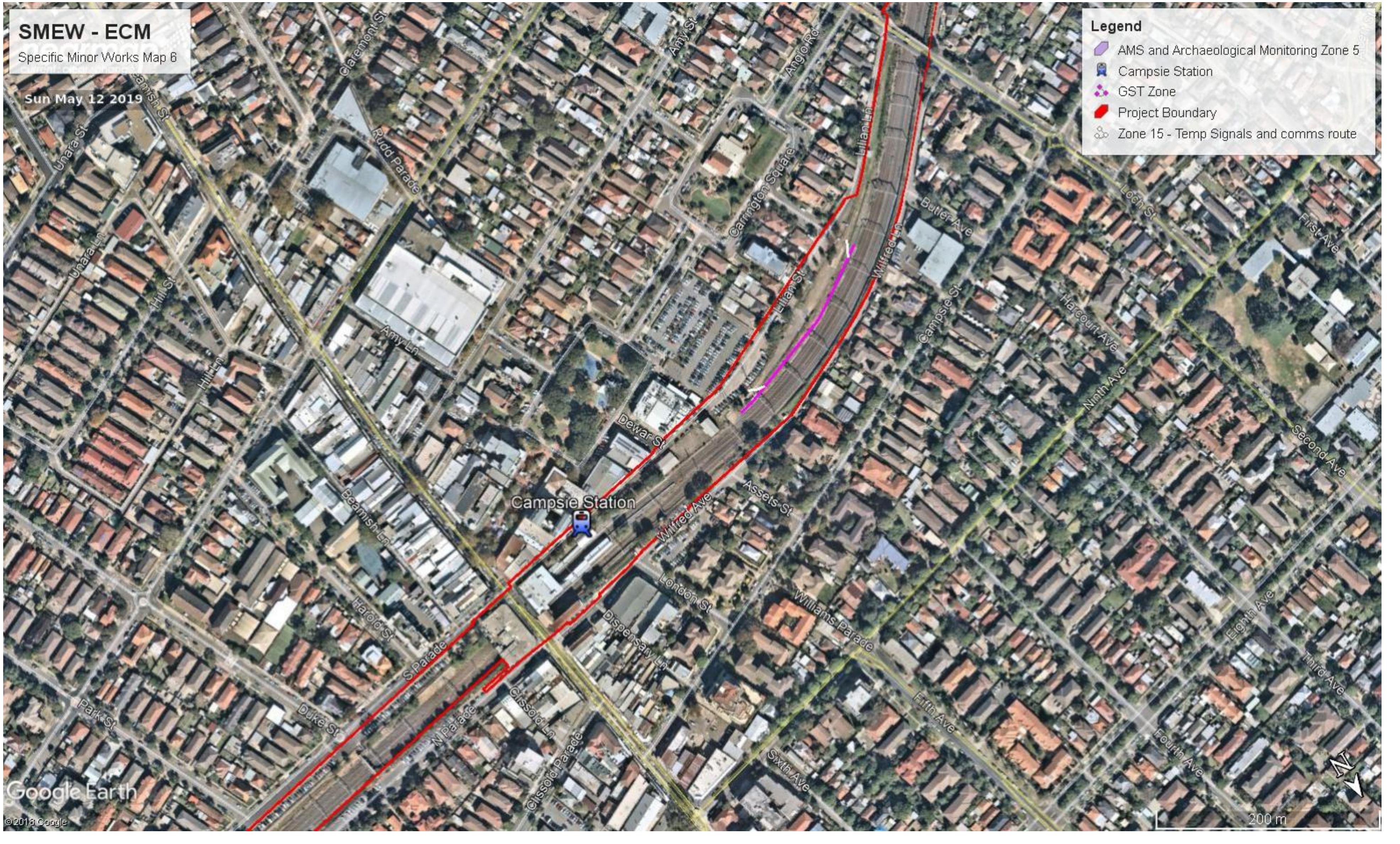

SMEW - ECM
Specific Minor Works Map 1
Sun May 12 2019
Legend
AMS and Archaeological Monitoring Zone
Archaeological Monitoring/Salvage 1
GLT Zone 3-2
GST Attached to Bridge Zone 1-2
GST Zone 3
Marrickville Station
Project Boundary
Marrickville Station
Google Earth
200 m


SMEW - ECM
Specific Minor Works Map 2
Sun May 12 2019
Legend
AMS and Archaeological Monitoring Zone 1
Degraded Turpentine - Grey Ironbark open forest on shale
Dulwich Hill Station
GLT
GST
Project Boundary
Zone 5 - Sydney Trains GLT relocation
Dulwich Hill Station
Beauchamp St
Warren Rd
Wrights Ave
Ossgood Ave
Wicks Ave
Tamar St
School Parade
Dudley St
Wardell Rd
Moncur St
Kays Ave E
Albermarle St
Route 19 Cycleway
Bedford Crescent
Wardell Ln
Wilga Ave
Keith Ln
Keith St
Jersey St
Livingstone Rd
Randall St
Kays Ave W
Marrickville Ave
Hollands Ave
Challis Ave
Macarthur Parade
Margaret St
Robert Ln
Pine St
Google Earth
©2018 Google
200 m


SMEW - ECM
Specific Minor Works Map 3
Sun May 12 2019
Legend
Degraded Turpentine - Grey Ironbark open forest on shale
GST Attached to Bridge Zone 7-2
GST
Hurlstone Park Station
Project Boundary
Turpentine - Grey Ironbark open forest on shale
Hurlstone Park Stat
Tennyson St
Balfour St
Ewart St
Ness Ave
The Parade
Garnet St
Floss St
Crinan St
Duntroon St
Marcia Ln
Marcia St
Hampden St
Short St
Wallace Ln
Wallace Ave
Barre St
Crinan Ln
Myra Ln
Terrace Ln
Terrace Rd
Hercules St
Myra Rd
Garnet Ln
Barton Ave
Woodside Ave
Google Earth
©2018 Google
200 m


SMEW - ECM
Specific Minor Works Map 4
Sun May 12 2019
Legend
AMS and Archaeological Monitoring Zone 5
Archaeological Monitoring/Salvage 2
GLT
GST
GST Attached to Bridge Zone 9-2
Hurlstone Park Station
Project Boundary
Hurlstone Park Station
Smith Ave
Dunlop St
Hopetoun St
Burnett St
Railway St
Foord Ave
Kerr Ave
Cooks River Cycleway
Hurlstone Ave
Hutton St
Canberra St
Kilbride St
Crinan St
Mill La
Mill St
Dunstaffenage St
Canterton St
Acton St
Metford St
Chudleigh St
Euston Rd
Floss St
Google Earth
©2018 Google
200 m
N


SMEW - ECM
Specific Minor Works Map 5
Sun May 12 2019
Legend
AMS and Archaeological Monitoring Zone 5
Archaeological Monitoring/Salvage 2
Canterbury Railway Station Group SHR Curtilage
Canterbury Station
High Voltage Wire
HV Power Pole
Project Boundary
HV Power Pole D
HV Power Pole P
HV Power Pole
HV Power Pole O
HV Power Pole N
HV Power Pole M
HV Power Pole L
HV Power Pole K
HV Power Pole J
HV Power Pole H
Canterbury Station
Charles St
Broughton St
Cooks River Cycleway
Google Earth
© 2018 Google
200 m


SMEW - ECM
Specific Minor Works Map 6
Sun May 12 2019
Legend
AMS and Archaeological Monitoring Zone 5
Campsie Station
GST Zone
Project Boundary
Zone 15 - Temp Signals and comms route
Campsie Station
Claremont St
Amy St
Anglo Rd
Rudd Parade
Carrington Square
Lilian Ln
Lilian St
Butler Ave
Wilfred Ln
Campsie St
Harcourt Ave
Ninth Ave
Loch St
First Ave
Second Ave
Unara St
Unara Ln
Hill St
Hill Ln
Amy Ln
Beamish St
Beamish Ln
Dewar St
Wilfred Ave
Assets St
London St
Williams Parade
Dispensary Ln
Harold St
S Parade
N Parade
Duke St
Park St
Clissold Ln
Clissold Parade
Sixth Ave
Fifth Ave
Fourth Ave
Eighth Ave
Third Ave
200 m
Google Earth
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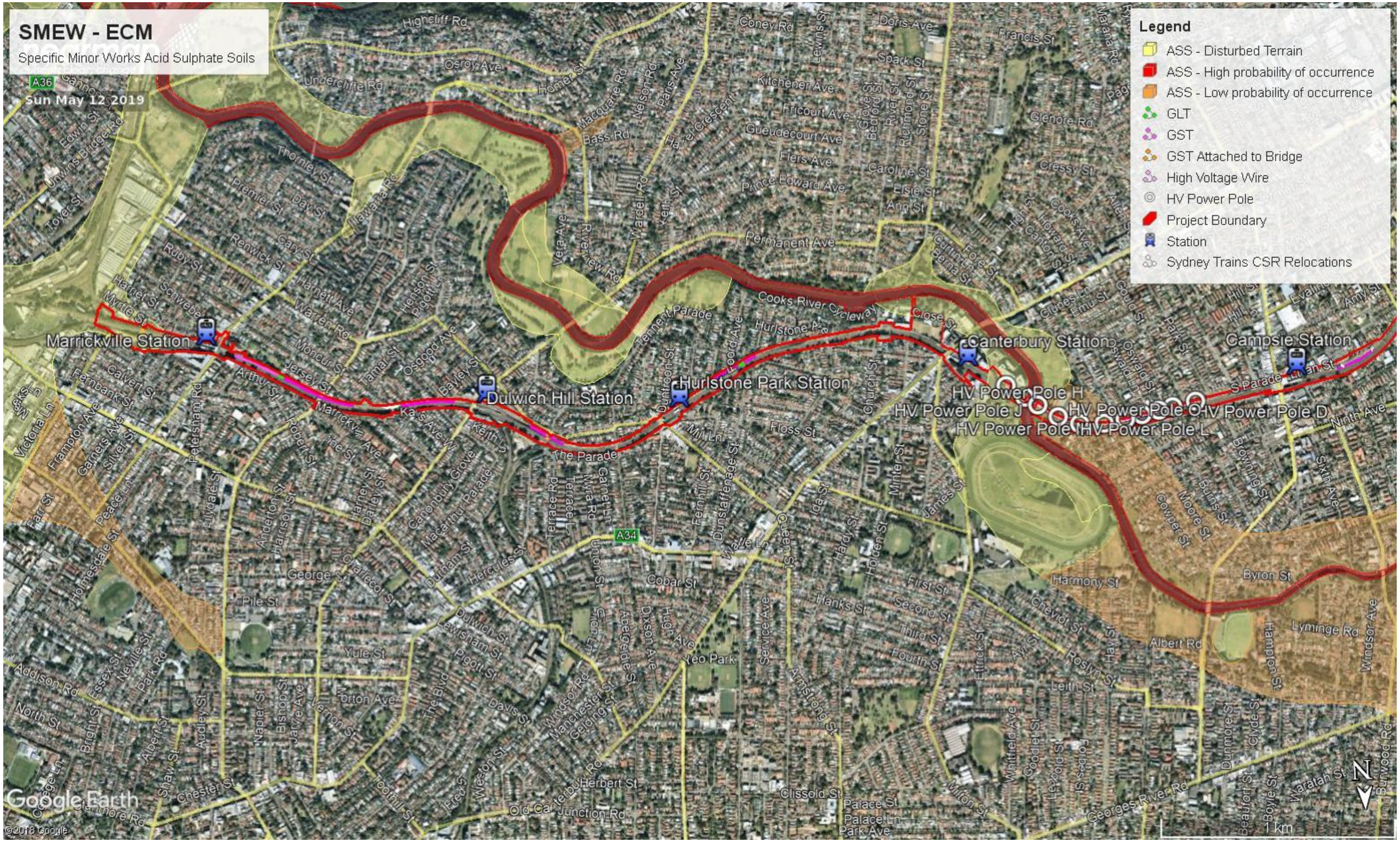
SMEW - ECM
Specific Minor Works Acid Sulphate Soils
Sun May 12 2019
Legend
ASS - Disturbed Terrain
ASS - High probability of occurrence
ASS - Low probability of occurrence
GLT
GST
GST Attached to Bridge
High Voltage Wire
HV Power Pole
Project Boundary
Station
Sydney Trains CSR Relocations
Marrickville Station
Dulwich Hill Station
Hurlstone Park Station
Canterbury Station
Campsie Station
HV Power Pole H
HV Power Pole J
HV Power Pole K
HV Power Pole L
HV Power Pole G
HV Power Pole D
1 km
Google Earth
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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 Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		C x	L =	Risk		C x	L =	Risk
Specific Minor Works								

Items of heritage significance uncovered during works	Damage to heritage items or archaeological deposits.	**C3**	**L5**	**Med**	• Induction to include heritage management requirements.
					• Implement Sydney Metro Unexpected Finds Procedure V1.4 during 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
						C3	**L6**	**Low**

Noise from plant and people	Noise from plant impacting on sensitive receivers. Noise impacts outside standard construction hours.	**C5**	**L4**	**Low**	• Induction to include noise mitigation and “good neighbour” approach. • Plant to be turned off upon arrival at work front • 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. • Follow the appropriate approvals process and submit OOHW applications for Environmental Representative approval. Mitigation measures to be implemented in accordance with the Sydney Metro City & Southwest Construction Noise and Vibration Strategy, including appropriate notification (CNVS) as well as the Community Communications Strategy (CCS).	**C5**	**L6**	**Low**

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		C x	L =	Risk		C x	L =	Risk
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. • Refuelling to occur more than 20m away from drainage lines • A portable spill kit is to be carried within all plant and site vehicles. • Site induction includes spill response awareness.	C5	L5	Low
Erosion and sediment controls	Sediment laden runoff from works	C4	L4	Med	• Induction to include ERSED protection measures. • Produce an ESCP for stockpiling or other works as required.	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. • Implement unexpected contaminations and acid sulphate soils finds procedure. • The waste must be lawfully transported and disposed of to a licenced facility. • Exposed Potential Acid Sulphate Soil within the excavations will be kept wet during the works. 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
Vegetation	Removal or pruning of vegetation without approval Damage to vegetation 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 EECs and Threatened Species, including degraded STIF • Works will not occur within areas of EEC or the TPZ of any Threatened plant species or habitat trees.	C4	L5	Low

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		C x	L =	Risk		C x	L =	Risk
Traffic	Traffic and pedestrian access Parking Impacts	C6	L4	Low	• Works to occur under a Road Occupancy Licence/Traffic Control Plan as required • Appropriate barricading and signage for pedestrian detours, as required • Workers are to park within the rail corridor where possible. • Workers are to park legally and are to observe any time restrictions. • Workers are to park in uncrowded areas where possible • Workers are to prioritise parking to community members where possible. • Pedestrian access will be maintained to stations • Environmental briefing to include traffic and access management requirements	C6	L4	Low
Air quality	Dust generation during excavation and stockpiling	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 Approval for Utility Works	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. • Implement approved Utility Management Strategy for Utility Works	C4	L5	Low
Water	Groundwater to be discharged	C4	L4	Med	• Any dewatering will occur in accordance with the Sydney Metro Water Discharge and Reuse Guideline • Any excess groundwater that is encountered as part of the works will be tested, and if necessary treated, prior to discharge to land in accordance with the Sydney Metro Water Discharge and Reuse Approval. Otherwise groundwater will be lawfully disposed of in accordance with the Waste Classification Guidelines (NSW EPA, 2014).	C4	L5	Low

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		C x	L =	Risk		C x	L =	Risk
Visual Amenity	Light Spill	C4	L4	Med	• Lighting towers are to be positioned to minimise any light impacts to nearby properties	C4	L5	Low

Sydney Metro Risk Matrix

A1 Consequence Table

Consequence Table						
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/apprehension. 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 scrutiny/attention.	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 TfNSW.	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

A2 Likelihood Criteria

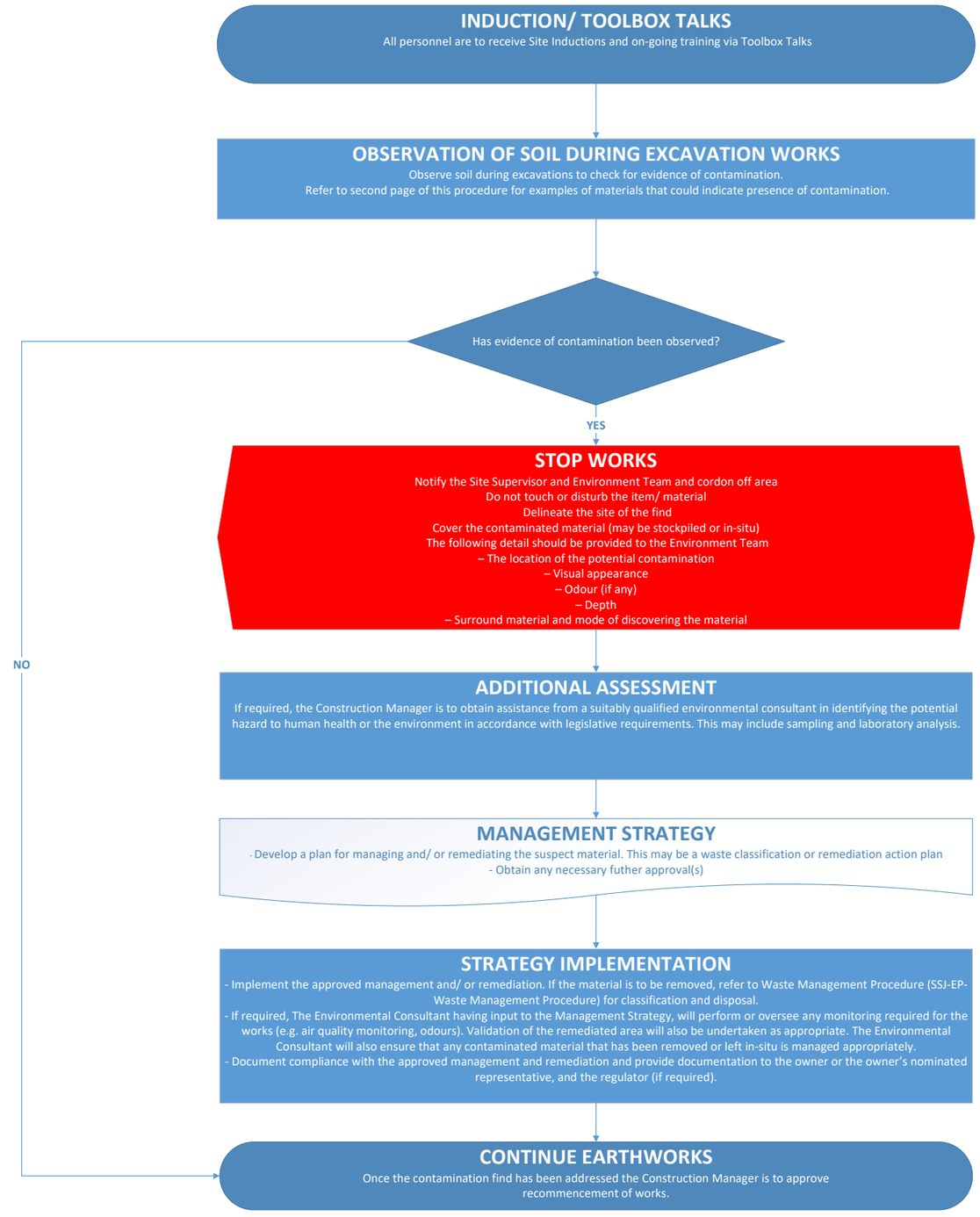
Likelihood						
Rating	**L6**	**L5**	**L4**	**L3**	**L2**	**L1**
Descriptor/ Definition	**Almost Unprecedented**	**Very Unlikely**	**Unlikely**	**Likely**	**Very Likely**	**Almost Certain**
Qualitative Expectation	Not expected to ever occur during time of activity or project	Not expected to occur during 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 High – B – 22-30 Medium – C – 11-21 Low – D – 1-10			CONSEQUENCE					
			Insignificant	Minor	Moderate	Major	Severe	Catastrophic
			C6	C5	C4	C3	C2	C1
LIKELIHOOD	Almost certain	L1	20	22	29	32	34	36
	Very Likely	L2	14	18	23	28	31	35
	Likely	L3	9	12	16	24	27	33
	Unlikely	L4	6	7	11	17	25	30
	Very Unlikely	L5	3	4	8	13	19	26
	Almost Unprecedented	L6	1	2	5	10	15	21

Appendix 2: Unexpected Finds Procedure

CONTAMINATION AND ACID SULPHATE SOIL UNEXPECTED FINDS PROCEDURE



RESPONSIBILITY

- ENVIRONMENT TEAM
  CONSTRUCTION TEAM
- CONSTRUCTION TEAM
- CONSTRUCTION TEAM
  ENVIRONMENT TEAM
  SITE SUPERVISOR
- CONSTRUCTION MANAGER
  ENVIRONMENTAL
  CONSULTANT
- ENVIRONMENT TEAM
  ENVIRONMENTAL
  CONSULTANT
- ENVIRONMENT TEAM
  CONSTRUCTION TEAM
  ENVIRONMENTAL
  CONSULTANT
- CONSTRUCTION
  MANAGER

CONTAMINATION AND ACID SULPHATE SOIL UNEXPECTED 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)

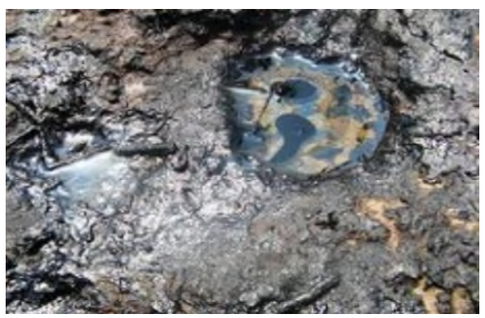
Asbestos
Asbestos finds are to be managed in accordance with the Project WHS Management Plan

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 Consturction Spil and Wster 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: Draft Community Notification

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 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)	
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

Sydneymetro.info
1800 171 386
sydneymetro@transport.nsw.gov.au

If you require the services of an interpreter, please contact the **Translating and Interpreting Service on 131 450** and ask them to call **Sydney Metro on 1800 171 386**. The interpreter will then assist you with translation.

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

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 SouthwestMetro@transport.nsw.gov.au

Sydneymetro.info
1800 171 386
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