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:	Downer EDI Works
Project:	Sydney Metro South West – Package 5 (Punchbowl, Campsie, Dulwich Hill) AND Package 6 (Belmore, Wiley Park and Hurlstone Park)
Application Title: (e.g. Smith St trenching works)	Package 5 and Package 6 – Pre-Construction Site Establishment
Application Number:	Downer PCMWA 001
Application Date:	Rev 0: 19/02/2021, Rev 01 04/03/21
Planning Approval:	Sydney Metro City and Southwest Infrastructure Approval SSI-8256 (inclusive of CSSI 8256 MOD 1 determined 22 October 2020 and accompanying updated REMM's modification report) 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) (inclusive of Revised Mitigation Measures: REMM)
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). 2. Treatment of contaminated sites. 3. Establishment of ancillary facilities (excluding demolition) 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. **Note: for the purposes of this application the three highlighted scenarios shall be referred to as their itemised name of 1, 3 or 6 for the remainder of this application**.

Planning Authority Determination: Will the proposed works affect or have the potential to affect heritage items, threatened species, populations or endangered ecological communities?	*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'.* No – it is anticipated that there will be no impacts associated with the minor works that will affect State and or Local Heritage listed items, areas of known or expected archaeological potential, threatened species, populations or endangered ecological communities. In addition, Downer will implement the *Sydney Metro Unexpected Finds Procedure* v2.0 throughout the establishment of site accommodation and installation of site environmental and safety control measures. **Item 1:** All survey works shall be on foot, non-destructive and non-penetrative – limited to handheld digital survey equipment. **Item 3:** Establishment of ancillary facilities shall be limited to the Project approved construction compounds as per SPIR Appendix B, Figure 2.1. It is noted that the establishment of ancillary facilities at Belmore Station will occur within an area of known or expected archaeological potential (the Belmore Archaeological Management Zone), however as the proposed area is paved of hard stand and there will be no excavation, or any ground penetration associated with the use of the area there will be no impact or additional mitigation measure required. **Item 6:** The installation of heritage and ecological exclusion zones and safeguards shall be conducted in consultation with the Projects Heritage Consultant and Ecologist respectively.

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 Location and Descriptions:** In accordance with the Environmental Impact Statement (EIS) and Submissions and Preferred Infrastructure Report (SPIR) the Project areas are within the rail corridor of the T3 Bankstown Line which is comprised of stations, overbridges, overhead wiring structures, track, services and ballast, extending from Sydenham Station to Bankstown Station. Within the Package 5 and Package 6 works area, the use of laydown and the installation and operation of minor ancillary facilities (referred to as a "site compound" within this document), installation of environmental controls and exclusion zones and on-foot non-invasive survey is proposed within the rail corridor between Sydenham and Bankstown Stations. Specifically, within the Project boundary of Package 5 (Punchbowl, Campsie, Dulwich Hill) and Package 6 (Belmore, Wiley Park and Hurlstone Park), as shown in Appendix 1. **General Biophysical environment:** Within the rail corridor, the majority of the Project sites consists of fill associated with railway embankments, or exposed bedrock associated with cuttings and overlain with rail ballast or fill. Saline soils are located west of Punchbowl Station, with some isolated areas of high salinity potential. Acid sulphate soils are located along the Cooks River. All six of the stations as part of this application are located within the Cooks River catchment. However, none of the Project sites are within a 250m crossing point of the Cooks River. Punchbowl Station is located within the Salt Pan Creek catchment. Within both catchments, water generally drains to nearby watercourses via stormwater drainage infrastructure. Water quality within the two catchments is generally poor because of the influence of run-off from urban areas. However, water quality improves in downstream areas within both catchments. The closest water course to any of the projects sites is the unnamed concrete lined channel at Wiley Park, this approximately 100m from the site and not at risk from the establishment of ancillary facilities. The majority of the Project sites have been heavily modified by past and ongoing disturbances associated with urban development and the active rail corridor. Vegetation within the Project sites is dominated by grasses, small shrubs, and a variety of weeds, with some scattered trees. The majority of vegetation comprises exotic or planted native species on highly modified landforms. This includes vegetation in the form of street trees in the vicinity of stations and also along the corridor. There are small isolated patches of remnant or regrowth native vegetation in small portions of the study area associated with rail cuttings with less disturbed soil profiles. Two threatened ecological communities, listed under the Threatened Species Conservation Act 1995 (TSC Act), occur in the wider Project area: • Sydney Turpentine Ironbark Forest in the Sydney Basin Bioregion

- Shale Gravel Transition Forest.

One threatened fauna species, the Grey-headed Flying-fox, was recorded in the wider study area during site surveys for the EIS. Four other species listed as vulnerable under the TSC Act are likely to occur at least on occasion: the Eastern Bentwing Bat, Large-footed Myotis, Eastern Freetail Bat and Yellow-bellied Sheath-tail Bat.

Potential habitat for the endangered Long-nosed Bandicoot population is present in parts.

The rail corridor also contains around 650 stems of the endangered Downy Wattle (Acacia Pubescens, which is listed as a vulnerable species under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the TSC Act. These stems are in proximity to Punchbowl Station.

The installation of exclusion zones and environmental controls, non-invasive service searches and the delivery and installation of site ancillary facilities (site sheds) shall not impact on any areas of biodiversity value, involve and groundbreaking or excavation or impact and watercourses. Appendix 1 identifies the location of the proposed works in relation to environmental sensitive areas and receivers.

Land use:

All of the six stations and the total scope associated with this application are situation the active rail corridor of the T3 Bankstown Line and surrounded by highly urbanised mixed land uses, primarily low to medium density residential and commercial plus community, health, education, and recreation. The community has been suitable notified of the planned site establishment works as per Appendix 3.

Station locations and heritage significance:

Package 6:

Wiley Park:

Wiley Park Station is located to the west of the King Georges Road overbridge. The station area is bounded by Stanlea Parade walkway to the north, by King Georges Road to the east and The Boulevarde to the south. The station entrance is located on the overbridge. Wiley Park Station is listed on the RailCorp S.170 Heritage and Conservation Register (4801946) and Canterbury LEP 2012 (I159) as holding local heritage significance.

Hurlstone Park:

Hurlstone Park Station is located to the west of the Crinan Street overbridge. The station area is bounded by Crinan and Floss streets and residential dwellings to the north, Duntroon Street and residential dwellings to the south, and Crinan Street to the west (on the bridge). The station entrance is on the overbridge. Hurlstone Park Station is listed on the RailCorp S.170 Heritage and Conservation Register (4802051) and Canterbury LEP 2012 (I124) as holding local heritage significance.

Belmore:

Belmore Station is located to the east of the Burwood Road overbridge. To the north and south, the station area is bounded by commuter car parks fronting Redman Parade and Tobruk Avenue respectively. To the west, the station area is bounded by Burwood Road. The existing station entrance is located on the Burwood Road overbridge. Belmore Railway Station Group is listed on the State Heritage Register (SHR) (01081), Canterbury Local Environment Plan (LEP) 2012 (I11) and RailCorp s.170 Heritage and Conservation Register (4801084). The site compounds to be established is located outside the State Heritage Register curtilage and outside of Belmore potential archaeological deposits (PAD) (S2B PAD01), of which is outside of the project boundary. The location for the occupation of the existing Belmore offices is within the AMZ, no penetrative works shall occur resulting in no considered impact. The location for the temporary facilities is outside of the AMZ, The Projects unexpected finds procedure shall be implemented as a mitigation measure.

Package 5:

Campsie:

Campsie Station is located to the west of the Beamish Street overbridge. The station area is bounded by Lilian Lane/South Parade to the south, Wilfred Avenue/North Parade to the north, and Beamish Street to the east. The station entrance is located on the overbridge. RailCorp S.170 Heritage and Conservation Register (4801101) and Canterbury LEP 2012 (I140) as holding local heritage significance.

Dulwich Hill:

Dulwich Hill Station is located west of the Wardell Road overbridge. The station area is bounded by Bedford Crescent to the north, Ewart Lane to the south, and Wardell Road to the east. The station entrance is on Wardell Road. Dulwich Hill is listed on the RailCorp S.170 Heritage and Conservation Register (4801909) Marrickville Local Environment Plan (LEP) 2011 as “Dulwich Hill Railway Station Group”, LEP# I316 as holding local heritage significance.

Punchbowl:

Punchbowl Station is located to the east of the Punchbowl Road overbridge. The station area is bounded by commercial land uses and a car park fronting The Boulevarde to the south, Warren Reserve and Urunga Parade to the north, and Punchbowl Road to the west.

The station entrances are located on Punchbowl Road (via Warren Reserve) to the north, and The Boulevarde to the south. Punchbowl Station is listed as local heritage significance on the RailCorp S.170 Heritage and Conservation Register (4802009) and Canterbury LEP 2012 (I155). Punchbowl is also an area of potential archaeological deposits (PAD), S2B PAD02 which is located in a small park between Punchbowl Road and Urunga Parade. S2B PAD02 is within the Project area and would be impacted by works associated with construction of the northern entrance to Punchbowl Station. This is however subject to further assessment and falls outside of the scope of this application.

None of the proposed works in this application are considered to physically impact any built heritage fabric at any of the Projects. Whilst there will be short term and temporary visual impacts to heritage fabric the presence of temporary construction compounds, the locations and installations of the Projects ancillary facilities are in accordance with Appendix B, Figure 2.1 of the SPIR. None of the Proposed scopes at either Belmore of Punchbowl will involve ground disturbance removing the risk associated with any archaeological impacts.

Appendix 1 identifies the location of the proposed works in relation to environmental sensitive areas and receivers and provides extensive mitigation measures in accordance with the CEMF and the REMM.

Work methodologies and site location:

Item 1: Survey, survey facilitation and investigations works (including road and building dilapidation survey works).

Surveys and investigations to be conducted across all stations shall include:

1) Road conditions reports (all stations)
2) Station and precinct condition surveys / dilapidation reports (all stations)
3) Service searches (all stations)
4) Tree assessments / ecological pre-clearance surveys (all stations) to support Project tree reports
5) Environmental condition assessments of localised drains and waterways (all stations)
6) Pre-construction baseline water sampling at Wiley Park for the unnamed concrete lined channel in accordance with Table 11 and Table 13 of Section 6.4 of the Project Soil and Water Management Plan.

All survey and investigations shall be non-invasive and conducted on foot by suitably qualified professional relevant to the nature of the survey. Surveys shall in general be conducted by teams of two and involve handheld survey equipment. Any specific access requirements shall be arranged by Downer's Community Relations team as required.

Item 3: Site compounds:

In reference to the SPIR: *"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."

Appendix B – Figure 2.1 of the SPIR identifies a number of pre-approved compound areas. These location have been summarised below for the Stations relevant to this application. The below is a full list of available compounds. The compounds which are subject to this application have been highlighted and discussed in the text relevant to each station below and marked on the Project ECM's in Appendix 1.

SPIR reference	Location	Existing use
C3	Floss Street, Hurlstone Park	Roads reserve and rail corridor
C9	Tobruk Avenue, Belmore	Rail corridor, open space
C10	Redman Parade, Belmore	Parking and rail corridor
C11	Railway Parade, Belmore	Rail corridor, open space
C12	Bridge Road, Belmore	Sydney Trains maintenance facility
C16	The Boulevarde, Wiley Park	Rail corridor, road verge
C17	Urunga Parade, Wiley Park	Rail corridor, road verge
C2	Ewart Lane, Dulwich Hill	Rail corridor, parking

W3	Bedford Crescent, Dulwich Hill	Rail corridor and Council car park
C6	South Parade, Campsie	Rail corridor
C7	North Parade/Wilfred Avenue, Campsie	Rail corridor, road reserve with parking
C8	Lilian Street, Campsie	Rail corridor, parking
C18	Urunga Parade, Punchbowl	Rail corridor
C19	Urunga Parade, Punchbowl	Rail corridor, road reserve
C20	The Boulevarde, Punchbowl	Parking and corridor
C21	Bruest Place, Punchbowl	Rail corridor

Dulwich Hill:

Dulwich Hill approved site comppound "C2" is within the rail corridor, situated on unmade ground. There is suitable site access vis a stabilised ballast access enterance via Ewart Lane. The site is free from any trees and requires no vegetation clearence. During site establishment, a layer of hydrocarbon catching geofabric shall be installed followed by 200mm of "blue metal" aggregate to create a stabilised site throughout.

Following the completion of site stabilisation and ground level erosion and sediment controls the site accomodation shall be delivered using flat bed trucks and tilt trays. The flat bed trucks equipt with hib-ab crane function shall unload the accomodation units in sequence to reach the completed site layout formation. Further ballast shall be installed at a minimium of 5m back from the site entrance gate to add additional stabilised access and sediment fencing to be installed along the site perimeter at the boundary of Ewart Lane in accordance with the ESCP and Site Establishment Plan in Appendix 1.

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, as such there would be no or negligible change to flood risk in the area in the event of any extreme weather events. As the compound will be on stilts there will be negligible restrictions to flow and as such negligible changes to inundation periods.

The installation of the geofabric layer and blue metal and ballast access shall improve the current state of the site and minimise and scour and risk of any mud tracking onto local roads.

To minimise visual impacts from the compound shade cloth shall be erected along the existing boundary corridor fenceline.

Hurlstone Park:

Hurlstone Park approved compound "C3" is situated on Floss Street and sits within a combination of rail corridor and road reserve (commuter car park). Whilst approval for the use of "C3" has been obtained via the SPIR, further consultation must be conducted, and suitable agreements reached with City of Canterbury Bankstown Council (CCBC) for the portion of "C3" which sits within council land as per the Site Access Schedule. Agreement must be obtained prior to use of this portion of site and the conditions of REMM TC5 met to the satisfaction CCBC prior to mobilisation.

REMM TC5 states: *Where parking spaces are lost or access is impeded, particularly for extended periods, alternative parking would be provided wherever feasible and reasonable. This would include consideration of other privately owned (or vacant) land within close proximity to affected stations*.

TC5 also provides linkages to CSSI CoA E51 and REMM TC4 which also look to minimise the loss and or compensation for loss of parking and access.

Downer is currently undergoing consultation with CCBC for the access to the portion of "C3" under CCBC ownership and to satisfy TC5. The below summary and methodology of site set up and the layouts detailed in the ECM of Appendix 1 is subject to compliance of the above. This detail has been retained within this application for completeness and communication of the intent, once agreement with CCBC has been obtained. It is

	acknowledged this application would be conditionally approved pending further consultation prior to any mobilisation of the CCBC portion of C3. Access and egress to the site compound is obtained via Crinan street and the site is situated entirely on existing asphalt. There is a small cluster of trees in the south east corner of the site compound which shall be suitably demarcated with tree protection zones applied as part of the site establishment works. Localised erosion and sediment controls shall be applied as required at low points of the site around adjacent stormwater drainage inlets. Site accomodation shall be delivered using flat bed trucks and tilt trays. The flat bed trucks equipt with hib-ab crane function shall unload the accomodation units in sequence to reach the completed site layout formation. The site compound facility will be located on stilts, maintaining flow paths for any overland flow that might occur in the area. As there is no change to the existing ground conditions of the compound there shall be no net change in to flood risk in the area in the event of any extreme weather events. As the compound will be on stilts there will be negligible restrictions to flow and as such negligible changes to inundation periods. **Belmore:** The site compounds to be established for this phase of the Project shall be “C9” on Tobruk Avenue and “C12” on Bridge Road. Compound C12 is an existing permanent ancillary facility which is to be utilised as a Downer and Sydney Metro collaborative working space. There are no additional compound structures required at C12 and minor works shall be limited to delivery of staff equipment and minor internal cosmetic touch ups (paint refresh as required). The works at C9 shall involve the installation of initial environmental controls in accordance with ESCP and Site Establishment Plan in Appendix 1 which is focused on an initial layer of geofabric to create a barrier between the compound and the existing unmade ground followed by a semi permeable layer 200mm of “blue metal”. Sediment fencing shall be installed along the perimeter fencing and visual impacts minimised through the installation of shade cloth. Once the initial controls have been installed the site accomodation shall be delivered using flat bed trucks and tilt trays. The flat bed trucks equipt with hib-ab crane function shall unload the accomodation units in sequence to reach the completed site layout formation. There is no considered increase in any flood risk from the location and installation of the temporary compound and the accommodation units are free from any physical impact to any heritage listed items. The compound presents a suitable distance and the physical barriers of the live tracks from the Belmore PAD. **Campsie:** The site compound for Campsie Station specific to this application shall be installed as per compound “C8” which is situated within the rail corridor with access and egress via Lilian Street. The area within C8 to be utilised for the installation of site accommodation is entirely on asphalt with no additional ground stabilisation controls required. The location is situated between the two existing Sydney Trains buildings marked for demolition in the Stage 3 demolition plans and within the wider footprint of the yet to be constructed Metro Service Building. It is noted that the “Linewide Contractor” may require access in the wider vicinity at a later date for the construction of the Traction Substation. Downer shall manage this interface to ensure suitable and maintained access as required. Site accomodation shall be delivered using flat bed trucks and tilt trays. The flat bed trucks equipt with hib-ab crane function shall unload the accomodation units in sequence to reach the completed site layout formation. The site compound facility will be located on stilts, maintaining flow paths for any overland flow that might occur in the area. As there is no change to the existing ground conditions of the compound there shall be no net change in to flood risk in the area in the event of any extreme weather events. As all features of the compound (inclusive of the generator and storage container) will be on stilts inclusive of the there will be negligible restrictions to flow and as such negligible changes to inundation periods. In accordance with CSSI CoA E8 “flooding” the location and configuration of the compound would “not worsen the existing characteristics of the area” **Wiley Park:** The Wiley Park compound to be established is noted as “C16” in the SPIR and access and egress via The Boulevarde, Wiley Park. In accordance with the process noted for the above stations which are currently not on hard stand, a layer of hydrocarbon catching geofabric shall be installed followed by 200mm of “blue metal” aggregate to create a stabilised site throughout. Following the completion of site stabilisation and sediment controls the site accommodation shall be delivered using flatbed trucks and tilt trays. The flatbed trucks equipped with hib-ab crane function shall unload the accommodation units in sequence to reach the completed site layout formation. Further ballast shall be installed at a minimum of 5m back from the site entrance gate to add additional stabilised access and sediment fencing to be installed along the site perimeter at the boundary of The Boulevarde in accordance with the ESCP and Site Establishment Plans in Appendix 1.

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, as such there would be no or negligible change to flood risk in the area in the event of any extreme weather events. As the compound will be on stilts there will be negligible restrictions to flow and as such negligible changes to inundation periods.

The installation of the geofabric layer and blue metal and ballast access shall improve the current state of the site and minimise any scour and risk of any mud tracking onto local roads.

To minimise visual impacts from the compound shade cloth shall be erected along the existing boundary corridor fence line.

It is noted that there is the presence of a row of trees along the boundary fence between the rail corridor and The Boulevarde. Site accommodation units shall be positioned to provide suitable offset distance to avoid encroaching any structural root zones and the trees drip lines.

Punchbowl:

The Punchbowl Station compound selected is "C18", situated within the rail corridor and has access and egress via Urunga Parade. Co-ordination for this use of C18 shall be completed with the Corridor Contractor prior to use of this specific area. If coordination is unable to be resolved within a suitable time frame compound "C19" adjacent to the boundary of C18 shall be adopted with the identical configuration and risks / control measures as C18 based on identical lands within the same section of Rail Corridor.

In accordance with the process noted for the above stations which are currently not on hard stand, a layer of hydrocarbon catching geofabric shall be installed followed by 200mm of "blue metal" aggregate to create a stabilised site throughout.

Following the completion of site stabilisation and sediment controls the site accommodation shall be delivered using flatbed trucks and tilt trays. The flatbed trucks equipped with hi-ab crane function shall unload the accommodation units in sequence to reach the completed site layout formation. Further ballast shall be installed at a minimum of 5m back from the site entrance gate to add additional stabilised access and sediment fencing to be installed along the site perimeter at the boundary of The Boulevarde in accordance with the ESCP and Site Establishment Plan in Appendix 1.

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, as such there would be no or negligible change to flood risk in the area in the event of any extreme weather events. As the compound will be on stilts there will be negligible restrictions to flow and as such negligible changes to inundation periods.

The installation of the geofabric layer and blue metal and ballast access shall improve the current state of the site and minimise any scour and risk of any mud tracking onto local roads. Similarly, to Wiley Park it is noted that there is the presence of a row of trees along the boundary fence between the rail corridor and Urunga Parade. Site accommodation units shall be positioned to provide suitable offset distance to avoid encroaching any structural root zones and the trees drip lines.

To minimise visual impacts from the compound shade cloth shall be erected along the existing boundary corridor fence line.

Item 6: Installation of mitigation measures, including erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments.

Installation of the above mitigation measures (erosion and sediment controls, temporary exclusion fencing for sensitive areas and acoustic treatments) for the purposes of this application shall be in accordance with the ECM's as listed in Appendix 1 at all stations. Delineation of Tree Protection Zones shall be conducted in accordance with arborist and ecologist advice following Item 1 surveys. The installation of the physical exclusion zone around the PAD at Belmore shall be installed under consultation and advice from the Projects Heritage Consultant and implemented in accordance with the Archaeological Method Statement. All future and station specific exclusion zones shall be incorporated into task specific methodologies and ECM's as the project works progress.

Plant list (all stations)

- Excavators (5t-13t) – only for distribution of blue metal
- Delivery truck
- Site utes
- 2t tipper
- Road Sweeper
- 13t Bogie Trucks or dump trucks

	• Hand tools • Handheld survey equipment • Hiab • Water cart/trailer (as required for any dust suppression) **Working Hours** All works associated with this application shall be conducted 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 temporary generators for initial site power (maximum 2 weeks following site establishment) only be operated during Standard Hours (SH) or during separate approved Out of Hours Works.
Planned Commencement Date:	All three minor works scope items (1,3 and 6) are planned to commence simultaneously across the 6 stations listed in this application during Standard Construction Hours (SH) from Monday 8th March 2021 and be complete by Friday 2nd April 2021.
Local Sensitivities: Describe the presence (if any) of local sensitive environmental areas and community receptors	T3 Line between Dulwich Hill and Punchbowl 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 (not planned). The works specific to this application shall be conducted during standard hours (SH) with works in accordance with the Project CNVMP and CNVIA. 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 technical 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 assessments 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: • Asbestos • Hydrocarbons • Heavy metals • Herbicides. All works are non-invasive and therefore risks associated with the disturbance of contamination are negligible. Workers will report any finds in accordance with the Sydney Metro unexpected finds procedure for contamination as detailed in Appendix 2. Acid sulphate soils with respect to Package 5 and 6 stations have been assessed as Class 5 presenting the lowest risk. Works are non-invasive and therefore risks associated with the disturbance of PASS/ASS are negligible. Minor works at Belmore Station will occur within the archaeological management zones as defined in the AARD. However, as the works within this zone are specifically related to the delivery and installation of staff office facilities into the existing Belmore site offices the risk is considered as negligible and do not require an AMS. This has been further confirmed by the Projects Heritage and Archaeological Consultants, Artefact and evidenced within Appendix 5. The compound noted as a portion of C9 and as per the ECM in Appendix 1 is outside of the AMZ with no ground disturbance – as such no further mitigation measures are required (also noted in Appendix 5) 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 or any works 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. The closest patch is located adjacent to compound "C21" which is not to be utilised or is part of this application. 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. In addition, there is an existing stand of degraded Sydney Turpentine-Ironbark Forest (STIF) at Dulwich Hill, within the corridor adjacent to Dudley Street. Whilst this is noted, there is physical separation between the nominated compound of "C2" to the flora. This is further highlighted on the Projects ECM. A number of habitat features are present within the work area including; • 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. 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 when required for future OOHW scenarios. 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. Traffic Control Plans have been provided in relevant to the specific works in Appendix 6. Pedestrian access will be maintained in any area where works are occurring, noting that pedestrian access is not permitted within the rail corridor and reduction or loss of any parking for any extended period of time would only occur at Hurlstone Park. The above section specifically related to Hurlstone Park addresses the relevant CoA and REMM's noting that no works shall commence within the CCBC portion of the C3 until the relevant CoA's and REMM's have been addressed to the satisfaction of CCBC and Sydney Metro. Temporary access during the installation of the Belmore site compound shall be managed and maintained during the delivery of site accommodation through localised Traffic Control Plans and Traffic Controllers to assist and guide pedestrians / station users. (See Appendix 6)

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. Unexpected finds procedure as detailed in Annex 2. Community Notifications in Annex 3. Artefact Heritage advice in Annex 5 Traffic Control Plans in Annex 6

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?	Prior to any minor works 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, specifically those related to the context of this application to facilitate site establishment.

Part 5: Community Consultation	
What community consultation has been undertaken already?	Construction laydown, site establishment, and precinct wide dilapidations are included within the March 2021 Monthly Community Notice for each station and included in Appendix 3.
What community consultation is planned to be undertaken?	Ongoing consultation will occur through the Monthly Community Notice with the addition of the installation of signage to advise the community of any impacts to any parking. The use / type of signage shall be confirmed with Sydney Metro within the specified timeframes prior to any occupancy and subject to landowner agreements (Hurlstone Park as discussed above). The community will be notified of any use of these areas outside of standard construction hours in accordance with the Additional Mitigation Measures specified in the Construction Noise and Vibration Strategy. Where laydown will be used within 50m of a resident, a door knock will occur seven days prior to inform the resident prior to the areas use.
If drafted already, attach applicable Community Notification as Appendix 3.	

Part 6: Contact Details

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

Name:	Kristo Bugarija	**Position:**	Senior Project Manager	**Phone:**	[redacted]
	Gareth O'Brien		Environment and Sustainability Manager		[redacted]
	Julie Henderson		Community Relations Manager		[redacted]

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:	Gareth O'Brien		
Signature:	J.O'Brien	**Date:**	Rev 0: 19/02/2021 Rev 1: 03/03/2021

Determination Page

TfNSW/Environmental Representative Use Only)

12. Endorsement/Approval

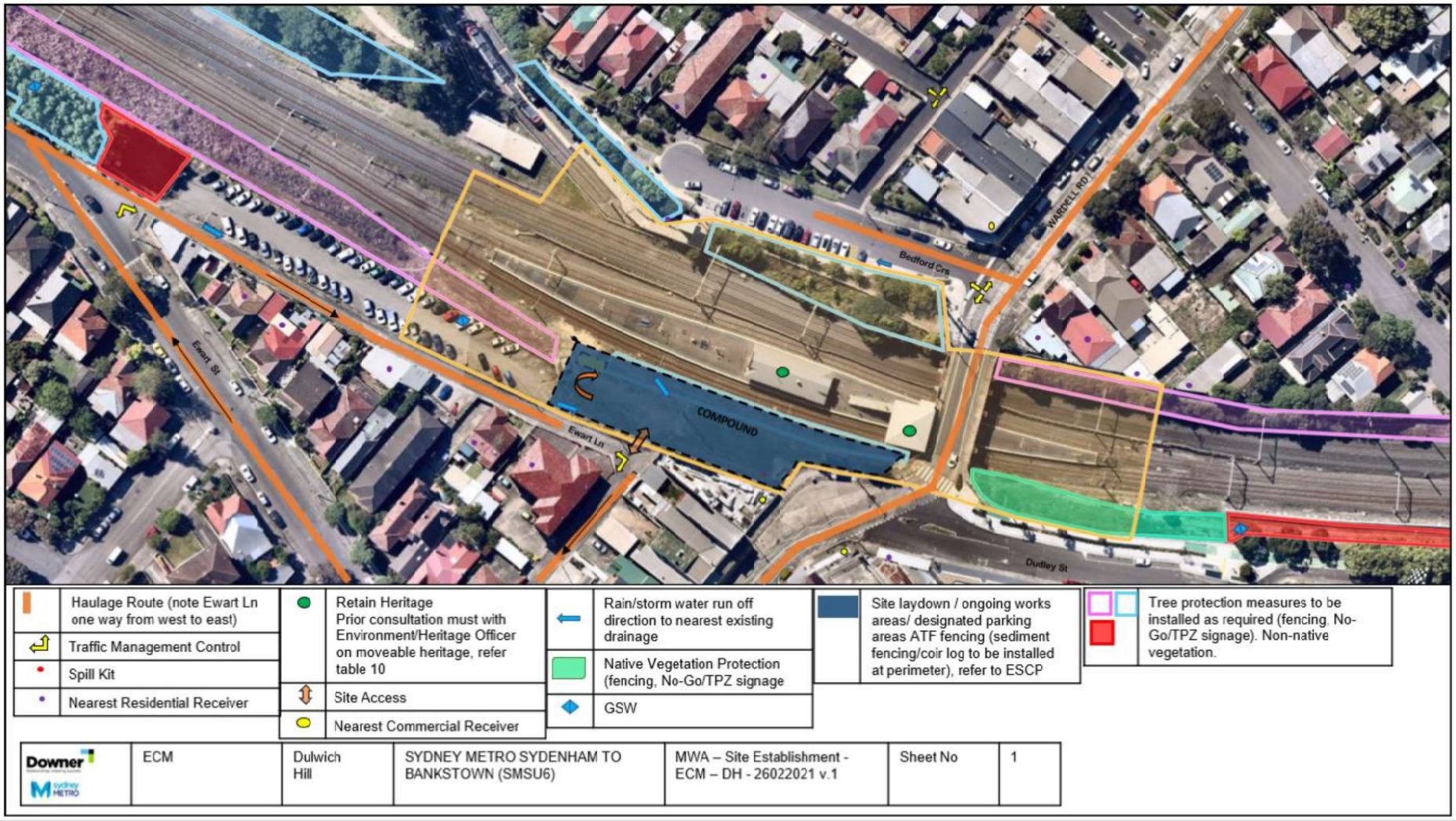
These signatures represent formal endorsement/approval for the proposed Minor Works to commence in accordance with this application and the applicable planning approval requirements (subject to any determination from the applicable planning authority as may be required by the planning approval conditions).

	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	
Date:	5/3/21	5 March 2021	
Comments:			*Supporting letter attached as Appendix 4 if necessary.*
Conditions:	As per Part 5		*Supporting letter attached as Appendix 4 if necessary.*

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

Appendix 1:

Environmental Control Map and Environmental Risk Assessment.


COMPOUND
Ewart St
Ewart Ln
Bedford Crs
WARDELL RD
Dudley St
Haulage Route (note Ewart Ln one way from west to east)
Traffic Management Control
Spill Kit
Nearest Residential Receiver
Retain Heritage
Prior consultation must with Environment/Heritage Officer on moveable heritage, refer table 10
Site Access
Nearest Commercial Receiver
Rain/storm water run off direction to nearest existing drainage
Native Vegetation Protection (fencing, No-Go/TPZ signage
GSW
Site laydown / ongoing works areas/ designated parking areas ATF fencing (sediment fencing/coir log to be installed at perimeter), refer to ESCP
Tree protection measures to be installed as required (fencing. No-Go/TPZ signage). Non-native vegetation.
Downer
ECM
Dulwich Hill
SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)
MWA – Site Establishment - ECM – DH - 26022021 v.1
Sheet No
1

Erosion Sediment Control Plan – Site Establishment (section 5.1.4 of CEMP)
Clearly delineate access points (ECM)
Exclusion zones would be designated on construction sites to limit disturbance (ECM)
No stockpiles of materials or storage of fuels or chemicals would be located adjacent to the existing culverts (not applicable to DH)
Locations of nearest existing drainage channels and stormwater inlets to the works are displayed on the ESCP map
Silt socks and or coir logs will be installed around stormwater inlet pits where appropriate and where they will not cause or exacerbate flooding (not within 50m of works
All erosion and sediment controls will be inspected by the Environmental Manager (or delegate) at least weekly, before forecast rainfall exceeding 20 mm in 24 hours, after rainfall exceeding 20 mm in 24 hours and before a site closure of two days or more. Maintenance will be carried out as required prior to the next forecast rainfall event
Site supervisors will undertake daily erosion and sediment control checks and record any issues within site diaries. Site supervisors will ensure controls are maintained and in working order

Figure 2 – Initial Site Setup

Site Establishment		
1. Install protective GeoFab layer on ground surface. With 200mm "blue metal" 2. Protect vicinity stormwater inlets with geofab, sediment fence/socks as required.	3. Install sediment fence at the boundary to separate off/onsite water 4. No heavy good vehicles to enter site. 5. Access and egress to be stabilized with ballast 5m strip	6. All temporary office and containers to be elevated to prevent restrictions to flows. 7. Refer to ERSD Controls as per section 5.1.4 of CEMP

Downer / Sydney Metro	ECM	Dulwich Hill	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	MWA – Site Establishment - ECM – DH - 26022021 v.1	Sheet No	2

SMSU6: ENVIRONMENTAL CONTROL MAP – DULWICH HILL STATION

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Dulwich Hill Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarija	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	**Dulwich Hill is item of local significance listed on Marrickville LEP 2011 (#I316) and RailCorp s170 heritage register listing #4801909. All works need to be contained within the approved work boundary. Moderate direct and visual impact to items of heritage significance that must be delineated, and all works to proceed in accordance with** Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 10) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP) and Unexpected Finds Procedure.
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accordance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffc conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)	
• Section 3.6 of CEMP and Section 5 of NVMP • CoA E19 – E26	
Mon – Fri:	07h00 to 18h00
Sat:	08h00 to 18h00
No works on Sundays or public holidays	
As per CoAE24 high noise generating works during standard working hours to be completed during the following periods:	
Mon – Fri:	08h00 to 18h00
Sat:	08h00 to 13h00

* High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.

Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES

Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).

General	
Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have been completed and service locations are marked out prior to commencing work.	

Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF	
Control/Mitigation	Resp
Stationary noise sources such as generators will be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks on the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	

Soil and Water ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per: • CoA E8 , E9, E38-E41 • SPIR REMM: SC1 – SC8, FHW1 – FHW10, HRS4, • Section 15 of CEMF	
Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reused or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from Environmental Advisor for any reuse or discharge of water.	SS
Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA

SMSU6: ENVIRONMENTAL CONTROL MAP – DULWICH HILL STATION

A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix D: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	Resp
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, hardstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specifications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF	
Control/Mitigation	Resp
All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 10 in Moveable Heritage Strategy of HMP) includes platform buildings, booking offices, retail shop. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.	

Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure [SM-18-00105232] – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix D: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	Resp
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodiversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	
REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately;	SS

Call a Project Ecologist/spotter/catcher onsite for advise	
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'nogo zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix D: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	Resp
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of an unexpected find.	All
Any construction waste generated will be stored in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indicators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS
CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with	

appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity. Lighting) • SPIR REMM: • Section 8 of CEMF	
Control/Mitigation	Resp
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	Resp
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	Resp
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	Resp
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All

Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	**Location/Feature**
The existing entrance would be retained and upgraded.	Entry/Exit
New elevated concourse, accessed from a new station entrance at Bedford Crescent (northern side). The future extension of the new elevated	Concourse

SMSU6: ENVIRONMENTAL CONTROL MAP – DULWICH HILL STATION

concourse to Ewart Lane has been safeguarded.	
New elevated concourse provided with new lifts and stairs connecting platform to light rail stop	Lift & Stairs
The existing heritage listed overhead booking office and heritage buildings on platform 1 and 2 retained and repurposed.	Heritage - Booking Office & Platforms 1&2
Existing retail within overhead booking office retained.	Retail Outlet
Station Area	**Location/Feature**
Existing bus stops on Dudley St and Wardell Rd retained	Bus Stops
Existing pedestrian pathways surrounding the station would be upgraded, including from Ewart Lane to Wardell Road and from Keith Lane to Bedford Crescent.	Pedestrian pathways
The two existing accessible parking spaces on the southern side of the Bedford Crescent retained	Parking - retained
One new accessible parking space provided on the southern side of the Bedford Crescent.	Parking - new
Existing bike parking on Wardell Rd to the south of station and on Bedford Crescent retained and new parking provided.	Bike Parking existing & new
New kiss and ride and taxi facilities provided on the southern side of Bedford Crescent at its eastern end.	Kiss Ride, Taxi

Downer Relationships creating success / sydney METRO	DRAWING TITLE	ENVIRONMENTAL CONTROL MAP	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU5)	REVIEWED	A. SHARMAN
	LOCATION	PUNCHBOWL STATION	REVISION NO.	MWA – Site Establishment - ECM – PB – 26022021 v.1
	SHEET NUMBER	1	REVISION DATE	26022021

Figure 1 – Magnified vision of Construction Compound / ERSD Controls as per section 5.1.4 of CEMP, Refer to sheet 3 of ECM

Site Establishment – ESCP (5.1.4 CEMP)

- Install protective GeoFab layer on ground surface. With 200mm "blue metal".
- Protect vicinity stormwater inlets with geofab, sediment fence/socks.
- Install sediment fence at the boundary to separate off/onsite water.
- No heavy good vehicles to enter site.
- Access and egress to be stabilized with ballast 5m strip.
- All temporary office not to encroach on structural root zones of trees or drip line.
- All erosion and sediment controls will be inspected by the Environmental Manager (or delegate) at least weekly, before forecast rainfall exceeding 20 mm in 24 hours, after rainfall exceeding 20 mm in 24 hours and before a site closure of two days or more. Maintenance will be carried out as required prior to the next forecast rainfall event
- Site supervisors will undertake daily erosion and sediment control checks and record any issues within site diaries. Site supervisors will ensure controls are maintained and in working order
- Silt socks and or coir logs will be installed around stormwater inlet pits where appropriate and where they will not cause or exacerbate flooding

Non Native Vegetation Protection

Ancillary Facility Construction Compound

Install sediment controls to ensure no mud/soil tracking off-onsite from vehicles refer to ERSD controls on sheet 3 of ECM

Kerb side rain/storm water run off direction to nearest existing drainage channels and nearest stormwater inlets located east on Rickard St (not within 50m of work)

DRAWING TITLE	**ENVIRONMENTAL CONTROL MAP**	DRAWN	DOWNER
PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU5)	REVIEWED	A. SHARMAN
LOCATION	PUNCHBOWL STATION	REVISION NO.	MWA – Site Establishment - ECM – PB – 26022021 v.1
SHEET NUMBER	2	REVISION DATE	26022021

SMSU6: ENVIRONMENTAL CONTROL MAP – PUNCHBOWL STATION

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Punchbowl Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarija	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	**Punchbowl is item of local significance listed on Canterbury LEP 2012 (#I155) and RailCorp s170 heritage register listing #4802009. All works need to be contained within the approved work boundary. Moderate direct and visual impact to items of heritage significance that must be delineated, and all works to proceed in accordance with** Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 12) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP) and Unexpected Finds Procedure. **Construction may disturb potential Aboriginal archaeological deposit of moderate significance and low to moderate potential for intact deposits (S2B PAD 02) adjacent to station.**
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accordance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffic conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)	
• Section 3.6 of CEMP and Section 5 of NVMP • CoA E19 – E26	
Mon – Fri:	07h00 to 18h00
Sat:	08h00 to 18h00
No works on Sundays or public holidays	

As per CoAE24 high noise generating works during standard working hours to be completed during the following periods:
Mon – Fri: 08h00 to 18h00
Sat: 08h00 to 13h00
* High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.

Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES

Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).

General	
Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have been completed and service locations are marked out prior to commencing work.	

Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF	
Control/Mitigation	Resp
Stationary noise sources such as generators will be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks on the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	

Soil and Water

ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per:
- CoA E8 , E9, E38-E41
- SFIR REMM: SC1 – SC8, FHW1 – FHW10, HR54,
- Section 15 of CEMF

Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reused or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from Environmental Advisor for any reuse or discharge of water.	SS

SMSU6: ENVIRONMENTAL CONTROL MAP – PUNCHBOWL STATION

Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA
A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix D: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	**Resp**
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, hardstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specifications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF	
Control/Mitigation	**Resp**

All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 12 in Moveable Heritage Strategy of HMP) **includes platform, station building, booking offices. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.**	
Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure (SM-18-00105232) – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix D: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	**Resp**
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodiversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non-Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	

REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately; Call a Project Ecologist/spotter/catcher onsite for advise	SS
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'no go zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix D: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	**Resp**
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of an unexpected find.	All
Any construction waste generated will be stored in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indicators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS

CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity, Lighting) • SPIR REMM: • Section 8 of CEMF	
Control/Mitigation	**Resp**
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	**Resp**
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	**Resp**
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	**Resp**
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All

Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	**Location/Feature**

SMSU6: ENVIRONMENTAL CONTROL MAP – PUNCHBOWL STATION

The existing entrance would be retained and upgraded.	Entry/Exit
Existing concourse footbridge extended for new lifts and stairs.	Concourse
Three new lifts and two new stairs provided & replace existing stairs to both entrances.	Lift & Stairs
The existing heritage listed platform relevelled & retain station building plus overhead booking office..	Heritage – Platform, station building & booking office
Station Area	**Location/Feature**
Retain existing bus stops on Punchbowl Road and The Boulevarde.	Bus Stops
New pedestrian crossing on Punchbowl Road north-east of Bruest Place.	Pedestrian crossing
Retain & upgrade existing pedestrian underpass below Punchbowl Road.	Pedestrian underpass
Retain existing parking adjacent to the southern station entrance.	Parking - retained
New bike parking at Northern and Southern station entrances.	Bike Parking new
	Kiss Ride, Taxi
Kerbside facilities provided on the The Boulevarde	Kerbside

Downer / sydney METRO	DRAWING TITLE	ENVIRONMENTAL CONTROL MAP	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	REVIEWED	A. SHARMAN
	LOCATION	HULRSTONE PARK STATION	REVISION NO.	MWA – Site Establishment - ECM – HP – 26022021 v.1
	SHEET NUMBER	1	REVISION DATE	26022021

Figure 1: Magnified view of site (area) establishment

	Laydown Area / ERSD Controls / Onsite Sheds/Facilities
	Kerb side rain/storm water run off direction to nearest existing drainage channels and stormwater inlets
	Storm water inlet
	Spill Kit
	Site Access

Erosion Sediment Control Plan – Site Establishment (section 5.1.4 of CEMP)
Clearly delineate access points (ECM)
Exclusion zones would be designated on construction sites to limit disturbance (ECM)
No stockpiles of materials or storage of fuels or chemicals would be located adjacent to the existing culverts (not applicable to HP)
Locations of nearest existing drainage channels and stormwater inlets to the works are displayed on the ESCP map
Silt socks and or coir logs will be installed around stormwater inlet pits where appropriate and where they will not cause or exacerbate flooding
All erosion and sediment controls will be inspected by the Environmental Manager (or delegate) at least weekly, before forecast rainfall exceeding 20 mm in 24 hours, after rainfall exceeding 20 mm in 24 hours and before a site closure of two days or more. Maintenance will be carried out as required prior to the next forecast rainfall event
Site supervisors will undertake daily erosion and sediment control checks and record any issues within site diaries. Site supervisors will ensure controls are maintained and in working order
1. All accommodation to be elevated on 200mm stilts. 2. All accommodation to be installed on existing asphalt with no breaking of ground. 3. No heavy good vehicles to enter site.

Downer / sydney METRO	DRAWING TITLE	ENVIRONMENTAL CONTROL MAP (ERSD Controls, ESCP)	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	REVIEWED	A. SHARMAN
	LOCATION	HULRSTONE PARK STATION	REVISION NO.	MWA – Site Establishment - ECM – HP - 26022021 v.1
	SHEET NUMBER	2	26022021	26022021

SMSU6: ENVIRONMENTAL CONTROL MAP – HURLSTONE PARK STATION

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Hurlstone Park Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarija	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb-20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	Hurlstone Park is listed on RailCorp s170 heritage register listing underbridge #4805737 & Canterbury LEP 2012 #I126 and Floss Street #4802051 & Canterbury LEP 2012 #I124. All works need to be contained within the approved work boundary. Moderate direct/visual impacts to items of heritage significance that must be delineated, and all works to proceed in accordance with Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 10) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP) and Unexpected Finds Procedure. Some significant heritage items include 1911-1919 Type 11 Buildings would be conserved and three footbridges with moderate significance.
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accordance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffic conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)
• Section 3.6 of CEMP and Section 5 of NVMP • CoA E19 – E26
Mon – Fri: 07h00 to 18h00
Sat: 08h00 to 18h00
No works on Sundays or public holidays
As per CoAE24 high noise generating works during standard working hours to be completed during the following periods: Mon – Fri: 08h00 to 18h00 Sat: 08h00 to 13h00 * High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.
Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES	
Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).	
General	
Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have bees completed and service locations are marked out prior to commencing work.	
Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF	
Control/Mitigation	Resp
Stationary noise sources such as generators will be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks on the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	
Soil and Water ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per: • CoA E8 , E9, E38-E41 • SPIR REMM: SC1 – SC8, FHW1 – FHW10, HRS4, • Section 15 of CEMF	
Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reused or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from Environmental Advisor for any reuse or discharge of water.	SS

SMSU6: ENVIRONMENTAL CONTROL MAP – HURLSTONE PARK STATION

Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA
A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix E: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	Resp
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely lix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, handstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specfications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF • SPIR REMM: AH1 – AH5, NAH1 – NAH23	
Control/Mitigation	Resp

All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 10 in Moveable Heritage Strategy of HMP) includes islands, platform buildings, booking offices, footbridge, overbridges. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.	
Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure [SM-18-00105232] – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix E: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	Resp
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodiversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	

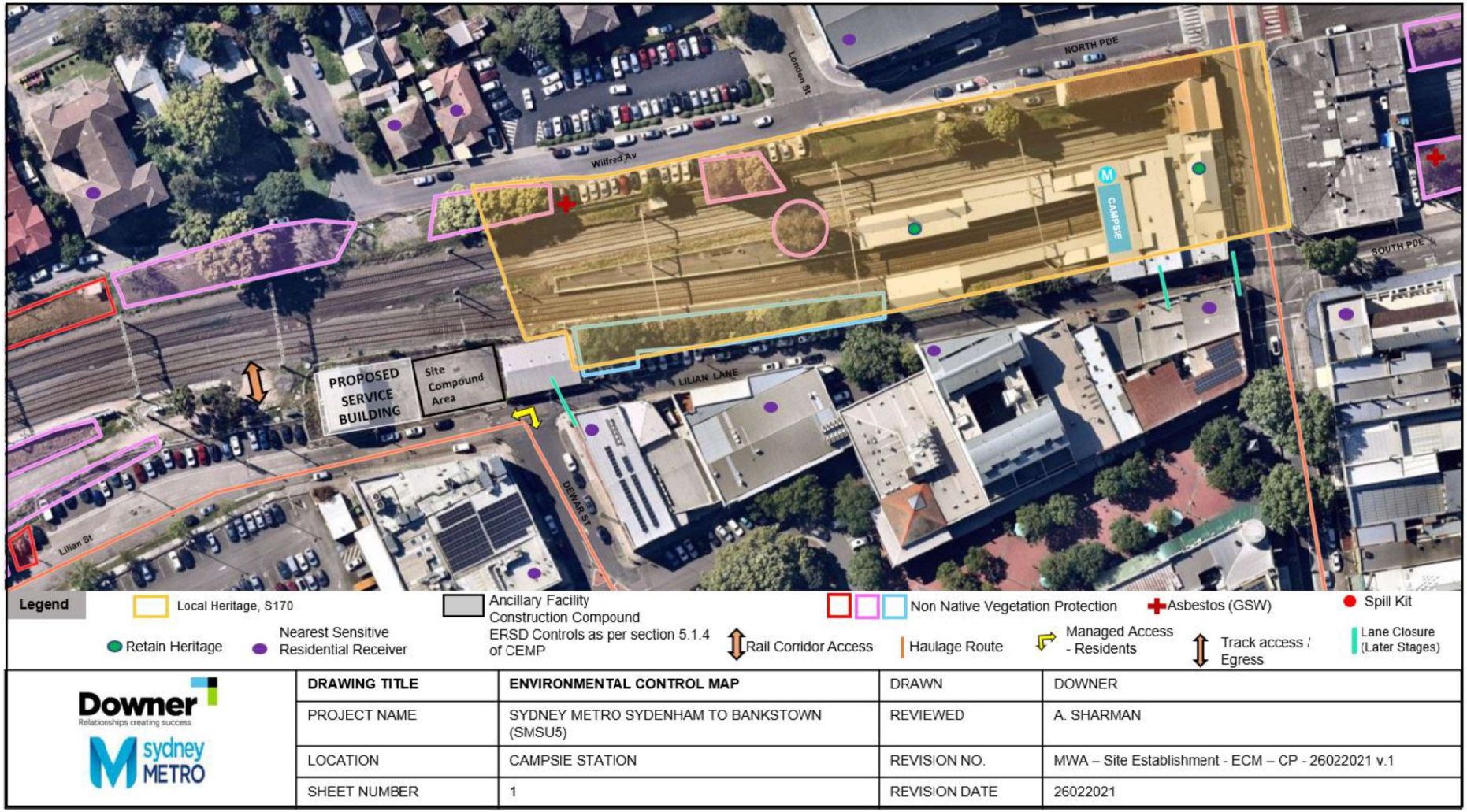
REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately; Call a Project Ecologist/spotter/catcher onsite for advise	SS
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'no go zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix E: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	Resp
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of an unexpected find.	All
Any construction waste generated will be storec in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indcators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS

CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity, Lighting) • SPIR REMM: • Section B of CEMF	
Control/Mitigation	Resp
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	Resp
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	Resp
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	Resp
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All

Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	Location/Feature

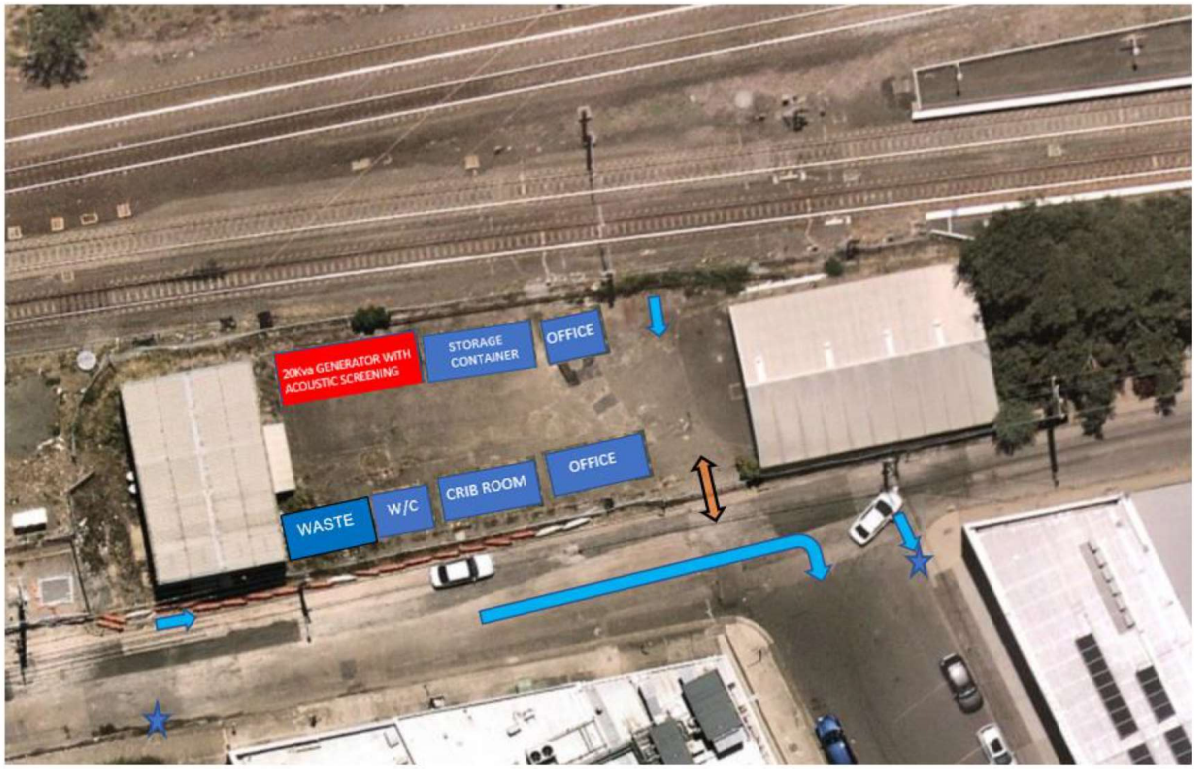
SMSU6: ENVIRONMENTAL CONTROL MAP – HURLSTONE PARK STATION

The existing entrance would be retained and upgraded.	Entry/Exit
Two new lifts would be provided.	Lifts
Existing stairs removed and replaced.	Stairs
The existing heritage listed overhead booking office and heritage buildings on platform 1 and 2 retained and repurposed.	Heritage - Booking Office & Platforms 1&2
Station Area	**Location/Feature**
Existing bus stops on the overbridge retained	Bus stops – overbridge
New kerbside facilities would be located on Floss St, on the eastern side on the overbridge adjacent to the station.	Kerbside uses
Existing accessible parking spaces on Floss ST & Duntroon St on the northern side of the rail corridor would be retained.	Parking - retained
New accessible parking would be provided on Duntroon St on the southern side of the rail corridor.	Parking - new
Existing bike parking on Crinan St outside the station entrance would be retained and additional bike parking provided.	Bike Parking existing & new



Downer / sydney METRO	**DRAWING TITLE**	**ENVIRONMENTAL CONTROL MAP**	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU5)	REVIEWED	A. SHARMAN
	LOCATION	CAMPSIE STATION	REVISION NO.	MWA – Site Establishment - ECM – CP - 26022021 v.1
	SHEET NUMBER	1	REVISION DATE	26022021

Downer Relationships creating success / sydney METRO	**DRAWING TITLE**	**ENVIRONMENTAL CONTROL MAP**	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU5)	REVIEWED	A. SHARMAN
	LOCATION	CAMPSIE STATION	REVISION NO.	MWA – Site Establishment - ECM – CP - 26022021 v.1
	SHEET NUMBER	2	REVISION DATE	26022021



Erosion Sediment Control Plan – Site Establishment (section 5.1.4 of CEMP)		
Clearly delineate access points (ECM)		
Exclusion zones would be designated on construction sites to limit disturbance (ECM)		
No stockpiles of materials or storage of fuels or chemicals would be located adjacent to the existing culverts (not applicable to CP)		
Locations of nearest existing drainage channels and stormwater inlets to the works are displayed on the ESCP map		
Silt socks and or coir logs will be installed around stormwater inlet pits where appropriate and where they will not cause or exacerbate flooding		
All erosion and sediment controls will be inspected by the Environmental Manager (or delegate) at least weekly, before forecast rainfall exceeding 20 mm in 24 hours, after rainfall exceeding 20 mm in 24 hours and before a site closure of two days or more. Maintenance will be carried out as required prior to the next forecast rainfall event		
Site supervisors will undertake daily erosion and sediment control checks and record any issues within site diaries. Site supervisors will ensure controls are maintained and in working order		
★	Storm water inlet	1. All accommodation to be elevated on 200mm stilts. 2. All accommodation to be installed on existing asphalt with no breaking of ground. 3. No heavy good vehicles to enter site.
➡	Direction of storm water	
⟺	Site access	

Downer / sydney METRO	**DRAWING TITLE**	**ENVIRONMENTAL CONTROL MAP (ERSD Controls, ESCP)**	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU5)	REVIEWED	A. SHARMAN
	LOCATION	CAMPSIE STATION	REVISION NO.	MWA – Site Establishment - ECM – CP - 26022021 v.1
	SHEET NUMBER	3	REVISION DATE	26022021

SMSU6: ENVIRONMENTAL CONTROL MAP – CAMPSIE STATION

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Campsie Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarija	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	**Campsie is item of local significance listed on Canterbury LEP 2012 (#I40) and RailCorp s170 heritage register listing #4801101. All works need to be contained within the approved work boundary. Moderate direct and visual impact to items of heritage significance that must be delineatec, and all works to proceed in accordance with Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 11) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP and Unexpected Finds Procedure.**
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accorcance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffic conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)	
• Section 3.6 of CEMP and Section 5 of NVMP • CoA E19 – E26	
Mon – Fri:	07h00 to 18h00
Sat:	08h00 to 18h00
No works on Sundays or public holidays	
As per CoAE24 high noise generating works during standard working hours to be completed during the following periods:	
Mon – Fri:	08h00 to 18h00
Sat:	08h00 to 13h00

* High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.

Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES	
Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).	
General	
Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have been completed and service locations are marked out prior to commencing work.	
Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF	
Control/Mitigation	Resp
Stationary noise sources such as generators will be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks on the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	
Soil and Water **ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per:** **• CoA E8 , E9, E38-E41** **• SPIR REMM: SC1 – SC8, FHW1 – FHW10, HRS4,** **• Section 15 of CEMF**	
Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reused or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from Environmental Advisor for any reuse or discharge of water.	SS
Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA

SMSU6: ENVIRONMENTAL CONTROL MAP – CAMPSIE STATION

A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix D: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	**Resp**
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, hardstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specifications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF	
Control/Mitigation	**Resp**
All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 11 in Moveable Heritage Strategy of HMP) includes platforms buildings. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.	

Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure (SM-18-00105232) – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix D: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	**Resp**
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP.	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodiversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	
REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately;	SS

Call a Project Ecologist/spotter/catcher onsite for advise	
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'no go zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix D: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	**Resp**
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of an unexpected find.	All
Any construction waste generated will be stored in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indicators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS
CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with	

appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity, Lighting) • SPIR REMM • Section 8 of CEMF	
Control/Mitigation	**Resp**
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	**Resp**
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	**Resp**
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	**Resp**
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All
Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	**Location/Feature**
The existing station entrance at Beamish St retain and upgraded.	Entry/Exit
The existing heritage listed platforms re-levelled.	Heritage - Platforms
Retain and repurpose existing heritage buildings on platform 1 & 2.	Heritage - Buildings
Station Area	**Location/Feature**
Retain existing bus stop near the station.	Bus Stop
Retain existing accessible parking on North Parade, Wilfred Avenue and South Parade.	Parking - retained

SMSU6: ENVIRONMENTAL CONTROL MAP – CAMPSIE STATION

Provide new bike parking at North Parade.	Bike Parking - new
Retain existing bike parking on Beamish St	Bike Parking - existing
Retain existing kiss and ride facility on the South Parade and provide new accessible park.	Kiss & Ride
Retain existing taxi stand on North Parade.	Taxi

Downer Relationships creating success	DRAWING TITLE	ENVIRONMENTAL CONTROL MAP	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	REVIEWED	A. SHARMAN
	LOCATION	WILEY PARK STATION	REVISION NO.	MWA – Site Establishment - ECM – WP - 19022021 v.2
	SHEET NUMBER	1	REVISION DATE	TBA

Site Establishment

1. Install protective GeoFab layer on ground surface. With 200mm "blue metal"
2. Protect vicinity stormwater inlets with geofab, sediment fence/socks
3. Install sediment fence at the boundary to separate off/onsite water
4. No heavy good vehicles to enter site.
5. Access and egress to be stabilized with ballast 5m strip
6. All temporary office not to encroach on structural root zones or drip lines of trees.
7. Refer to ERSD Controls as per section 5.1.4 of CEMP.

Figures 1: Magnified vision of construction compound area. Install ERSD Controls as per section 5.1.4 of CEMP, Refer to sheet 2, 3 of ECM

Hi-Rail Access

Site Access Ingress/Egress

Storm water drain inlet, install geofab protection

Kerb Side Rain/Storm Water Run off Direction – Nearest existing drainage channels and stormwater inlets

Downer Relationships creating success	**DRAWING TITLE**	**ENVIRONMENTAL CONTROL MAP (ERSD Controls, ESCP)**	DRAWN	DOWNER
	PROJECT NAME	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	REVIEWED	A. SHARMAN
	LOCATION	WILEY PARK STATION	REVISION NO.	MWA – Site Establishment - ECM – WP – 26022021 v.1
	SHEET NUMBER	2	REVISION DATE	TBA

SMSU6: ENVIRONMENTAL CONTROL MAP – WILEY PARK STATION

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Wiley Park Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarija	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	Wiley Park is listed on Canterbury LEP 2012 and RailCorp s170 heritage register #4801946. This station is being fully redeveloped and constituting the loss of Inter-War railway architecture building and would no longer meet the threshold for local significance and would likely to be delisted. Three footbridges of moderate significance would be removed. All works need to be contained within the approved work boundary. Any direct/visual impacts to items of heritage significance that must be carefully assessed & delineated, and all works to proceed in accordance with Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 12) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP and Unexpected Finds Procedure.
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accordance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffic conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)
• Section 3.6 of CEMP and Section 5 of NVMP
• CoA E19 – E26

Mon – Fri: 07h00 to 18h00
Sat: 08h00 to 18h00
No works on Sundays or public holidays

As per CoAE24 high noise generating works during standard working hours to be completed during the following periods:
Mon – Fri: 08h00 to 18h00
Sat: 08h00 to 13h00
* High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.

Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES

Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).

General

Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to :contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have been completed and service locations are marked out prior to commencing work.	

Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF

Control/Mitigation	Resp
Stationary noise sources such as generators wil be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks or the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	

Soil and Water

ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per:
- CoA E8 , E9, E38-E41
- SPIR REMM: SC1 – SC8, FHW1 – FHW10, HRS4,
- Section 15 of CEMF

Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reusec or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from	SS

SMSU6: ENVIRONMENTAL CONTROL MAP – WILEY PARK STATION

Environmental Advisor for any reuse or discharge of water.	
Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA
A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix E: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	Resp
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, hardstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specifications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF	
Control/Mitigation	Resp

All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 12 in Moveable Heritage Strategy of HMP) includes islands, platform buildings, booking offices, footbridge, overbridges. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.	
Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure [SM-18-00105232] – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix E: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	Resp
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	

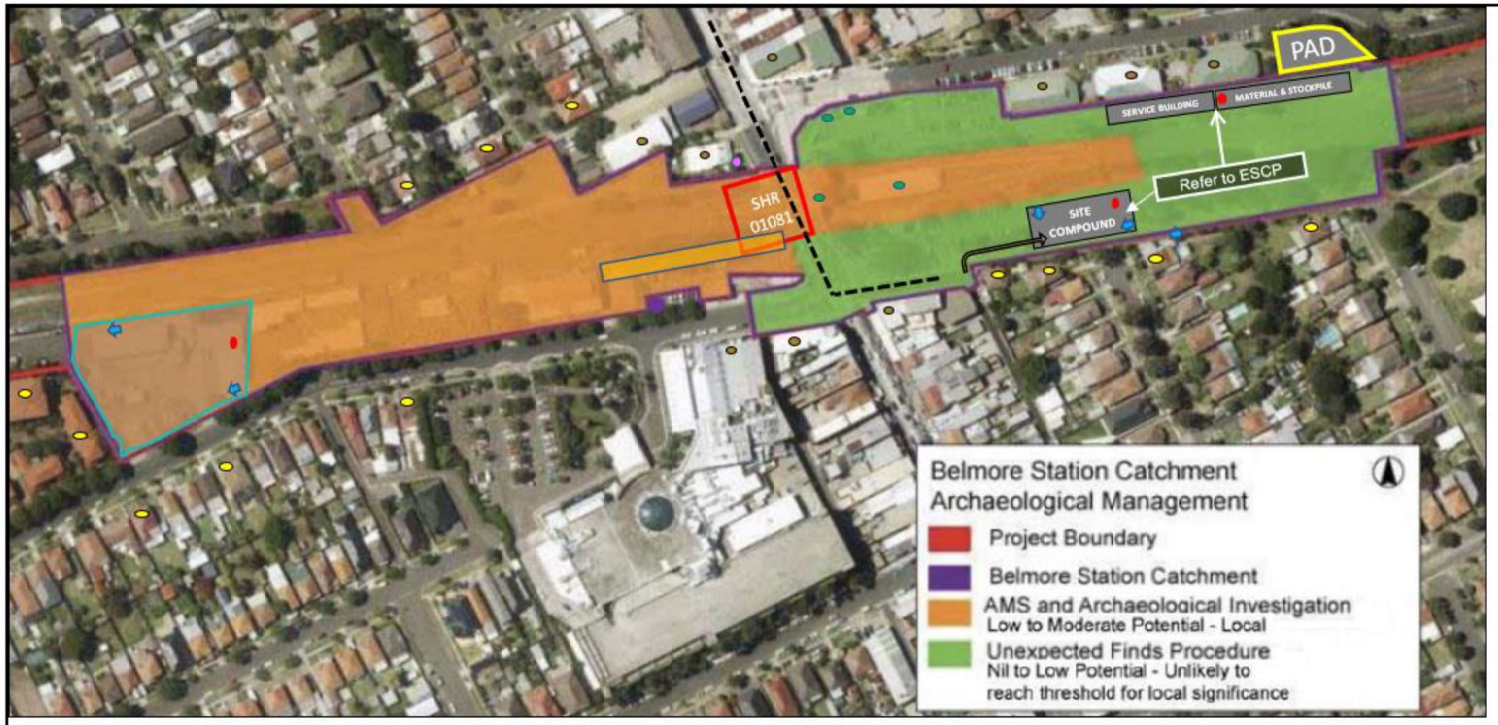
REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately; Call a Project Ecologist/spotter/catcher onsite for advise.	SS
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'no go zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix E: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	Resp
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of an unexpected find.	All
Any construction waste generated will be stored in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indicators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS

CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity, Lighting) • SPIR REMM: • Section 8 of CEMF	
Control/Mitigation	Resp
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	Resp
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	Resp
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	Resp
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All

Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	Location/Feature

SMSU6: ENVIRONMENTAL CONTROL MAP – WILEY PARK STATION

The existing station entrance would be retained and upgraded.	Entry/Exit
Existing retail shop and disused premises at station entrance would be demolished.	Retail shop & disused premises - demolish
Two new lifts would be provided.	Lifts - new
The existing heritage listed platform would be re-levelled.	Heritage - platform
The existing heritage listed overhead booking office, concourse and platform buildings would be retained and re-levelled.	Heritage – overhead booking office, concourse and platform buildings
Station Area	**Location/Feature**
Existing bus stops retained.	Bus stop
Existing pedestrian pathways surrounding the station would be upgraded.	Pedestrian pathway
New bike parking area would be provided on The Boulevarde and at the station entrance.	Bike area - new
New kerbside facilities and accessible parking would be provided on The Boulevarde, east of King George Road.	Kerbside facilities and parking



	Spill Kit
	Nearest Commercial Receiver
	Nearest Residential Receiver
	Retain Heritage Prior consultation must with Environment/Heritage Officer on moveable heritage, refer table 11
	Archaeological Management Zone
	Potential Archaeological Deposit physical exclusion zone to be established prior to any works
	Site laydown / ongoing works areas/ designated parking areas ATF fencing (sediment fencing/coir log to be installed at perimeter)
	Rain/storm water run off direction to nearest existing drainage, refer to ESCP
	Currently utilised Ancillary Facility as project management office (within AMS)
	Site compound access via Tobruk carpark
	Haulage Route

Downer / sydney METRO	Environmental Control Map	Belmore	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	MWA – Site Establishment - ECM – BE - 26022021 v.2	Sheet No	1

Erosion Sediment Control Plan – Site Establishment (section 5.1.4 of CEMP)	
Clearly delineate access points (ECM)	
Exclusion zones would be designated on construction sites to limit disturbance (ECM)	
No stockpiles of materials or storage of fuels or chemicals would be located adjacent to the existing culverts (N/A to Belmore)	
Locations of nearest existing drainage channels and stormwater inlets to the works are displayed on the ESCP map	
Silt socks and or coir logs will be installed around stormwater inlet pits where appropriate and where they will not cause or exacerbate flooding	
All erosion and sediment controls will be inspected by the Environmental Manager (or delegate) at least weekly, before forecast rainfall exceeding 20 mm in 24 hours, after rainfall exceeding 20 mm in 24 hours and before a site closure of two days or more. Maintenance will be carried out as required prior to the next forecast rainfall event	
Site supervisors will undertake daily erosion and sediment control checks and record any issues within site diaries. Site supervisors will ensure controls are maintained and in working order	
⇦	Rail corridor rain/storm water run off direction to nearest existing drainage channels and stormwater inlets
●	Spill Kit
▭	Main Office Compound (Currently utilised Ancillary Facility as project management office)

Figure 2: Magnified view of site compound/laydown area – Site Establishment Access via Tobruk Carpark

★	**Stormwater Inlet** Figure 1: One inlet within site compound, the other inlets are located outside the compound on Bridge Rd Figure 2: Nearest channel is located outside the site compound on the pedestrian walkway (to the south of site compound). The flow direction towards Bridge Rd/Acacia St (not within 100 meters of works)
	1. Install protective GeoFab layer on ground surface. With 200mm "blue metal" 2. Protect vicinity stormwater inlets with geofab, sediment fence/socks 3. Install sediment fence at the boundary to separate off/onsite water 4. No heavy good vehicles to enter site. 5. All temporary office and containers to be elevated to prevent restrictions to flows.

Downer / sydney METRO	Environmental Control Map - ESCP	Belmore	SYDNEY METRO SYDENHAM TO BANKSTOWN (SMSU6)	MWA – Site Establishment - ECM – BE - 26022021 v.1	Sheet No	2

SMSU6: ENVIRONMENTAL CONTROL MAP – BELMORE

GENERAL	
Project	Southwest Metro Station Upgrade Works Package 6
ECM	This ECM is a supplementary document to the SMSU6 CEMP and prepared in accordance with CoA SSI 8256, SM City & Southwest Sydenham to Bankstown Environmental Impact Statement, SPIR and SR.
Activity	Station Upgrade to Metro Standards
Site	Belmore Station
Planning Approval	SSI 8256
Document Version	0
Site Awareness	The team will be trained on this ECM, general environmental issues, location of sensitive areas and ERSD controls; Works will be subject to inspections and approval by TfNSW NER/ER and Downer Environmental Team; This document will be displayed on site notice board at all times.

PROJECT CONTACT DETAILS		
Title	Name	Number
SM/TfNSW Environment Manager (NER)	Tim Solomon	[redacted]
Downer Project Director	Kristo Bugarja	
Downer Project Engineer	Peter D'Costa	
Downer Site Supervisor	Nick De Palma	
Downer Environment Sustainability Manager	Gareth O'Brien	
Downer Environment Advisor	Abe Sharman	
Community Manager	Julie Henderson	
Heritage Advisor	Sandra Wallace	
SM Project Info Line	1800 171 386 1800 612 173 (West)	
TfNSW 24-hr Complaint Line	1800 775 465	
EPA/OEH Pollution Hotline	131 555	
Emergency	000	
WIRES	1300 094 73	

ACTIVITY DETAIL
Description
Early works, site establishment, minor ancillary facilities
Duration
Feb20-Mar20; continual update of this ECM will be undertaken to suit any specific requirements for each stages of works, with all mitigation measures approved by SM NER/ER prior to possession.

KEY ENVIRONMENTAL RISKS	
Heritage	Belmore is State Heritage listed and works need to be contained within the approved work boundary. Moderate direct/visual impacts to three items of heritage significance that must be delineated, and all works to proceed in accordance with Moveable Heritage Strategy (Section 5.2.6 of HMP, Table 11) and Heritage Salvage Register (N/A for Construction as per Section 5.2.7 of HMP and Unexpected Finds Procedure. Note* Belmore Station is State Heritage Register #4801084, Canterbury LEP 2012 and RailCorp s170 heritage register #4801084.
Air quality	Monitor access points to public roads; debris on public roads generated by construction is to be removed/cleared.
Contamination	Medium risk of unexpected contamination finds; Low risk of plant/equipment spills; Low risk of sedimentation runoff; Works to cease immediately if suspected contamination is encountered with area of contamination delineated with signage; Occupational hygienist to attend and provide recommendations in accordance with SM/TfNSW/EPA/Downer guidelines.
Traffic and Transport	Works located on active train lines with public transport commuters with impacts to current traffic conditions including a mix of pedestrians, cyclists, local paring and road traffic.
Noise	Work compounds situated near sensitive receivers including commercial, educational, industrial, residential and place of worship, active and passive recreation areas.

INCIDENT RESPONSE AND REPORTING - Appendix F of CEMP
All incidents would be reported in accordance with SM Environmental Incident Classification and Reporting Procedure (SM-17-00000096).

WORKING HOURS - City and Southwest Construction Noise and Vibration Strategy (SM ES-ST-210)	
• Section 3.6 of CEMP and Section 5 of NVMP • CoA E19 – E26	
Mon – Fri:	07h00 to 18h00
Sat:	08h00 to 18h00
No works on Sundays or public holidays	
As per CoAE24 high noise generating works during standard working hours to be completed during the following periods:	
Mon – Fri:	08h00 to 18h00
Sat:	08h00 to 13h00

* High noise generating activities near receivers should be carried out in blocks that do not exceed three hours each, with a one-hour respite period in between.

Out of Hours Works Assessment Procedure (SM ES-PW-310) to be applied, all works outside standard working hours are considered Out of Hours Works (OOHW) and require approval prior to commencing. The OOHW application form SM-17-00000115 (enclosed in Appendix D of NVMP) to be used in accordance with SM-17-00005396 City & Southwest out of hours work protocol.

MITIGATION MEASURES

Mitigation measures are based on CoA, REMM, CEMF and CEMP and sub-plans (awaiting approval).

General	
Control/Mitigation	Resp
All site personnel (including sub-contractors) to have completed the project induction, including: ▪ Location and proximity of nearest sensitive receivers; ▪ Heritage present on site; ▪ Vegetation to be removed or protected; ▪ Access and egress points; ▪ Unexpected finds procedure for sensitive areas not limiting to contamination, heritage, flora & fauna.	SS / EA / PE
Emergency and Incident response includes incident notification to be undertaken in accordance with the requirements of CoA A36 and A37 and the Sydney Metro Incident and Non-compliance Reporting Procedure SM-17-00000096.	All
Pre-start attendance register, and toolbox attendance register are signed by all site personnel.	SS
No works outside the approved marked boundary.	
Ensure all service identification tasks have been completed and service locations are marked out prior to commencing work.	

Noise and Vibration - CoA E18-34, SPIR REMM: NVC1 – NVC16, Section 9 of CEMF	
Control/Mitigation	Resp
Stationary noise sources such as generators will be enclosed or shielded where practicable.	SS
No swearing or unnecessary shouting or loud stereos/radios on site.	All
No dropping of materials from height, throwing of metal items and slamming of doors.	
Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.	
Plan traffic flow, parking and loading/ unloading areas to minimise reversing movements within the site.	SS
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	All
Loading and unloading of materials/deliveries to occur as far as possible away from sensitive receivers.	
Plant used intermittently to be throttled down or shut down.	
As required by OOHW approval, attended noise monitoring to be undertaken at the most impacted receiver location.	SS / EA / PE
Ongoing noise and / or vibration monitoring not limiting to OOHW would be undertaking during construction at sensitive receivers during critical periods (ie times when noise emissions are expected to be at their highest) to identify and assist in managing high risk noise events.	
Residential grade mufflers are to be fitted on all mobile plant used on Sydney Metro construction projects.	SS
Regular inspection and maintenance of all plant and machinery	
Identifies defective silencing equipment on the items of plant by regular compliance checks on the noise emissions of all plant and machinery used for the Project would indicate whether noise emissions from plant items were higher than predicted.	
Air brake silencers are correctly installed and fully operational for any heavy vehicle	

Soil and Water

ESCP as per section 5.1.4 of SWMP and Mitigation Measures as per:

- CoA E8 , E9, E38-E41
- SPIR REMM: SC1 – SC8, FHW1 – FHW10, HRS4,
- Section 15 of CEMF

Control/Mitigation	Resp
All chemicals and hazardous liquids would be stored away from drainage lines in a bunded and impervious enclosure.	PE
Spill kits to be located close to active work areas and near chemical and hazardous liquid storage areas as indicated in the ECM.	SS
All staff would be made aware of the location of the spill kits.	SS EA
Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks.	SS
In the event of a pollution incident, works would cease in the immediate vicinity and Site Supervisor would immediately notify the Downer Project Manager who would notify NER/ER and SM Project Director.	All
All spoil to be removed from site would be classified according to the NSW Waste Classification Guidelines and disposed at an appropriate landfill. Material to be reused or stockpiled on site permanently is to be tested for contamination per the NEPM (ASC) criteria for commercial/industrial land use.	SS/ PE
Immediately report incidents where water has been discharged and not wholly contained within the project boundary.	All
Application as per Water Discharge and Reuse Procedure (SM ES-PW-309) required followed by approval from Environmental Advisor for any reuse or discharge of water.	SS
Any contaminated material stockpiles (asbestos) will be covered on-site and short-term material stockpiles (>5 days not in use) with potential to generate dust will be wetted down or covered to prevent fugitive dust emissions or run-off during wet weather. Long-term stockpiles (>30 days) will be stabilised and /or covered in accordance with "Blue Book" requirements	SS EA

SMSU6: ENVIRONMENTAL CONTROL MAP – BELMORE

A dewatering permit is to be in place for all dewatering activities, including the dewatering of any groundwater.	EA / PE/ SS
Air Quality - Appendix E: Environmental Procedures CEMP CoA E2, SPIR REMM AQ1	
Control/Mitigation	**Resp**
Cover stockpiles when not in use to prevent wind erosion and dust.	SS / SE
Cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading.	
Prevent mud and dirt being tracked onto sealed road surfaces. If mud or dirt has been tracked out of site, sweep/remove this material.	
Apply water (with an onsite water cart) on to dampen exposed surfaces (e.g., unpaved roads, stockpiles, hardstand areas and other exposed surfaces).	
Plant and machinery not to be left idling.	
All plant and machinery would be fitted with emission control devices complying with relevant Australian Standards.	
Machinery and plant that will be kept on site will be serviced as per manufactures specifications.	
Vehicle movements would be limited to designed entries and exits, work areas, haulage routes and parking areas.	
Dust generation would be monitored visually, and where required, dust control measures such as water spraying would be implemented to control the generation of dust.	
Access points would be inspected to determine whether sediment is being transferred to the surrounding road network. If required, sediment would be promptly removed from roads to minimise dust generation.	
Stabilisation of any exposed surfaces as soon as practicable.	
Daily inspections and regular surveillance would be undertaken to identify any vehicles, plant or equipment that is causing visible emissions. If any defective vehicles, plants or equipment are identified, operation of this machinery would cease and service/maintenance would be undertaken.	SS
Stockpiles will be maintained and contained appropriately, which could include covering or regular watering to minimise dust.	
Heritage • CoA E10-E17 • SPIR REMM: AH1 – AH5, NAH1 – NAH23 • Section 10 of CEMF	
Control/Mitigation	**Resp**
All personnel working on site are to be aware of all the heritage elements in the work area and "No go" areas to be clearly communicated.	All
Multiple items of heritage significance to consider (refer this ECM, Section 5.2 Built Heritage Mgt and Table 11 in Moveable Heritage Strategy of HMP) includes islands, platform buildings, booking offices, footbridge, overbridges. All these needs to be visibly delineated to minimise the risk of undertaking disturbance.	

Stop all work immediately when items/ areas of potential heritage are suspected and notify Downer Project Manager and Environment Heritage Officer.	
Sydney Metro Unexpected Heritage Finds Procedure [SM-18-00105232] – Appendix D of HMP will be implemented in case of any unexpected aboriginal or non-aboriginal heritage item is found on site; The site to be delineated with signage as 'no' go' zone, and heritage advisor will be immediately informed and consulted for advise.	
Flora & Fauna - Appendix E: Environmental Procedures CEMP CoA – E3-E6, REMM SPIR REMM, CEMF Section 11	
Control/Mitigation	**Resp**
Unless stated on the ECM or prior approved by Environmental Advisor, no vegetation is to be removed on site as per section 3.13 Hold Points of CEMP	SS / SE
Any vegetation not approved for removal or trimming to follow the Flow Chart on clearing procedure under Appendix E (Procedure 1: Biodiversity) of CEMP.	EA
REMM B2 - Pre-clearing surveys and inspections for endangered and threatened flora and fauna species would be undertaken by qualified ecologists prior to any clearing occurring. The surveys and inspections, and any subsequent relocation of species, would be undertaken in accordance with the measures provided in the biodiversity assessment report.	EA
REMM B3 - Areas of biodiversity value outside the project area would be marked on plans, and fenced or signposted where practicable, to prevent unnecessary disturbance.	SS / EA
REMM B4 - Impacts to Native and Non Native Vegetation (Downy Wattle Turpentine - Grey Ironbark open forest on shale, Degraded Turpentine – Grey Ironbark open forest on shale and Broad-leaved Ironbark – Grey Box) would be avoided. The locations of these species and communities would be marked on plans, fenced on site, and avoided.	
REMM B5 - Equipment storage and stockpiling would be restricted to identified compound sites and already cleared land.	SS
REMM B6 - A trained ecologist would be present during the clearing of native vegetation or removal of potential fauna habitat to avoid impacts on resident fauna and to salvage habitat resources as far as is practicable.	EA
REMM B7 - Priority weeds would be managed in accordance with the *Biosecurity Act 2015*. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide.	
REMM LV12 - Trees to be retained would be protected by establishing Tree Protection Zone prior to the commencement of construction including any tree pruning to be undertaken guided by a tree report prepared by a qualified arborist and upon approval from Sydney Metro.	
Immediately report any damage to 1) threatened species 2) retained trees or trees that have been trimmed or removed without approval, and all work to stop immediately;	SS

Call a Project Ecologist/spotter/catcher onsite for advise.	
If animals are encountered, leave them alone and contact Site Supervisor and Environmental Advisor.	All
Protection 'no go zone' to be place for any threatened species	All
Modify the route of trenching to avoid any damage to trees and tree roots.	SS
All stockpiles must be located outside of Tree Protection/Drip Zone	SS
Soil with weed material be removed prior to any movement off site. To reduce the spread of weeds no soil in to be transported into the works areas. Ensure that all machinery, vehicles and equipment are free of weed material before entering and exiting the works areas.	SS
Waste and Spoil - Appendix E: Environmental Procedures CEMP CoA – E73 to E76 REMM – WM1 to WM7	
Control/Mitigation	**Resp**
Waste disposal locations and applicable EPLs are to be identified prior to disposal and are subject to Downer approval prior to removal from site. – HOLD POINT	All
All recyclable waste would be recycled where possible.	
Material or spoil that has the potential to contain asbestos or other contaminants will be tested and will be managed by an appropriately licensed contractor as required.	
All wastes will be removed from site at the completion of the project and will be tracked.	SS
In accordance with CoA E40, the Unexpected Contaminated Land Procedure and Asbestos Finds Procedure (refer Appendix B of CEMP) to be followed in the event of as unexpected find.	All
Any construction waste generated will be stored in bins as appropriate.	SS
Cover stockpiles with geofab or like material and secure the base to avoid erosion and sediment controls.	
CoA E73 - Any items or infrastructure that are salvageable must be identified in the relevant CEMP Sub-plan (Condition C3). Note: reuse of items may include signal boxes, indicators, ballast or other rail infrastructure. These items should be offered to Sydney Trains or reuse.	
CoA E74 - The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the Protection of the Environment Operations Act 1997, under the Protection of the Environment Operations (Waste) Regulation 2014, and orders or exemptions made under the regulation.	EA / SS
CoA E75 - Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
CoA E76 - All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with	

appropriate records and disposal dockets retained for audit purposes.	
REMM WM2 - A recycling target of at least 90 per cent would be adopted.	All
REMM WM3 - Spoil would be managed in accordance with the spoil management hierarchy.	
REMM WM4 - Target 100 per cent reuse of reusable spoil.	SS / EA
Traffic • CoA E46 – E53, E54 (Visual amenity, Lighting) • SPIR REMM • Section 8 of CEMF	
Control/Mitigation	**Resp**
Manage traffic in accordance with mitigation measures from Traffic Management Plan.	SS / PM
Obtain Road Occupancy License as when required.	PM
Implement Traffic Controls as per conditions of approval of TCP by the relevant council.	SS
All vehicles to enter rail corridor from designated access points on site.	All
Plant and machinery not to be left idling.	
Pedestrian or cyclist access will be maintained in public spaces or redirected as appropriate.	
Chemical, Fuel Storage and Use	
Control/Mitigation	**Resp**
No chemicals or fuel required to be stored onsite.	All
Any required chemicals on site must be verified and registered in SDS and SDS kept on site.	WHS / SS
Place spill kits in compound and portable spill kits in vehicles	SS
Refuelling to occur in designated/approved area only with spill tray, absorbent pads, socks placed	
All plant and machinery to be daily checked (pre-starts) to ensure n leaking oil, fuel or other liquids.	
Imported Material	
Control/Mitigation	**Resp**
All imported material will be sourced from a licensed supplier with onsite storage to only occur with controls in place.	All
No Go Zone	
Control/Mitigation	**Resp**
All construction activities will be restricted to the project boundary. Any activity outside the project boundary must be approved prior by SM /ER	All

Overall Scope of Works as per Preferred Project Works – SPIR Volume 1 June 2018	
Station Works	**Location/Feature**
The existing entrance would be retained and upgraded.	Entry/Exit
Existing heritage listed platforms re-levelled.	Heritage - Platforms
Retain the existing heritage building within car park to the north of the station.	Heritage – Car Park building
The existing heritage listed platform building retained and repurposed.	Heritage - Booking Office & Platforms

SMSU6: ENVIRONMENTAL CONTROL MAP – BELMORE

Station Area	Location/Feature
Existing bus stops in vicinity retained.	Bus stop
New taxis and kiss and ride facilities would be provided on Toburk Avenue	New facilities – taxis, kiss ride
New accessible parking spaces would be provided in the Toburk Avenue car park.	Parking - New
Retain existing parking along Redman Parade.	Parking – existing
New bike area provided within Toburk Avenue car park	Bike area - new
Retain existing bike parking on Burwood road to the north of the station entrance.	Bike area - existing

This appendix includes a risk assessment for the Project. All relevant environmental issues have been assessed in accordance with the table below:

Risk Assessment Rankings:

- >31 Very High;
- 22 to 30 High;
- 11 to 21 Medium; and
- 1 to 10 Low.

Issues or activities that represent a Very High risk after the application of control measures are not to be undertaken.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
Approvals and Licensing									
Not identifying appropriate approvals, licenses or permits required and proceeding without them	Works delayed, infringements, prosecution, poor community relations and reputational loss.	L4	C3	17	Review the project planning approval and statutory documentation for requirements relevant to the Project. Identify and implement approval requirements within the CEMP, sub-plans and ERAPs (noted as in draft) Check contract documentation. Identify and implement requirements from the Contract. Establish a register of approvals, licenses and permits.	L5	C3	13	Maintain Compliance Risk Matrix Undertake environmental audits as per Section 3.9 of the CEMP
Noise									
Noise from general construction activities resulting in impact to residents	Disturbance to residents or neighbouring businesses. Potential for complaints.	L2	C5	18	Mitigation measures as per the CNVIS and NVMP are to be implemented (noted as in draft) Respond to community enquiries and complaints in accordance with Sydney Metro requirements and implement the OCCS. Consult with the community in relation to upcoming activities that may result in concern. Monitor noise for compliance as the works progress at receiver locations. Provide periods of respite for high noise generating activities. Apply noise mitigation measures during entire project. Noise efficient equipment to be used on site.	L3	C5	12	Noise performance will be continually monitored as per the requirements of the NVMP. The Sydney Metro Construction Noise and Vibration Strategy is to be implemented
Water Quality, Erosion and Sedimentation									
Sediment laden runoff from construction works leaving site	Degradation of local watercourses. Increased turbidity in local water ways	L4	C4	11	Mitigation Measures as per SWMP (noted as in draft) and any ESCP to be implemented (appendix 1)	L5	C4	8	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
	resulting in impact on aquatic life. Fines for sediment escaping site.				Install erosion and sediment controls within the project area. Ensure measures are inspected and maintained as the works progress and also prior to and post rainfall events. Provide training and awareness on the need to prevent pollution. Relevant people to undertake Erosion and Sediment Control training.				
Waste									
Waste disposal during site establishment	Incorrect disposal of waste, further costs incurred for classifications and disposal, fines may be issued.	L3	C5	12	Implement the controls within Appendix E - Procedure 4: Waste and Spoil of the CEMP (noted as in draft) Identify opportunities to incorporate recovered materials into the permanent works. Provide facilities on site for source separation and recycling. Ensure accurate waste records are retained. Removal of wastes from the site would only be undertaken by a licensed contractor as required by the POEO Act and with appropriate approvals, if required, for contaminated materials, etc. All material to be recovered off-site to be appropriately classified in accordance with the Resource Recovery Exemptions. All material that requires off-site disposal to be appropriately tested and classified against the Waste Classification Guidelines (NSW EPA, 2014)	L4	C5	7	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Monitor and ensure reporting of all movements of waste form the worksite.
Contamination									

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
Management of contaminated or untreated materials	Non-compliant material and contaminated water entering surrounding waterways. Decrease in health of nearby ecosystems.	L3	C4	16	Implement contamination management procedures from within SWMP (noted as in draft). Identify any contamination hotspots and incorporate procedures for these locations into construction documentation. Apply the unexpected finds procedure within the SWMP. Induct personnel on unexpected finds procedure.	L4	C4	11	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Monitor and ensure reporting of all movements of waste from the worksite.
Potential for discovery of unexpected contaminated spoil during site establishment .	Health effects resulting from airborne contamination, e.g. asbestos. Complaints received from odours released during excavations. Classification of spoil is changed and disposal options altered, costs incurred associated with disposal of higher classification of waste.	L4	C4	11	If contaminated soil is encountered, all works are to stop in the vicinity of the find and investigations commence. Unexpected finds procedure within the SWMP to be implemented. Induct personnel on location, type, nature, concentration of contaminants on site if found.	L5	C4	8	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Complete regular toolbox talks on how to manage unexpected finds.
Encountering asbestos / contaminated material on site	Transfer of material into previously uncontaminated area (outside work site) causing new contamination.	L3	C4	16	Inspections of excavated and filled surfaces would be made during Construction to determine the presence of visible asbestos. Conduct further site investigations to determine the presence and extent of contamination prior to Construction works commencing. Contaminated soils would not be stockpiled on the structural fill layer or	L4	C4	11	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Complete regular toolbox talks on how to manage unexpected finds.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
					formation layers to avoid cross contamination.				
Hazardous Materials									
Storage of hazardous substances, leaking plant and equipment and spillage from refuelling.	Localised ground contamination / pollution of stormwater and requiring clean-up and/or receiving fines. Risk of igniting volatile substances. Unauthorised access to site / potential vandalism/damage leading to pollution.	L3	C4	16	Induction, toolbox talks and training on appropriate handling and storage of liquids. All storm water drains should be identified prior to works and protection installed. Storage areas to be away from sensitive areas and appropriately bunded. SDS approved prior to bringing hazardous substances on site including risk assessment. Environmental Control Maps show storage locations and associated controls e.g. spill kits, etc. Training in use of spill kits. Contingency plans would be developed to deal with any spills which might occur during Construction. Clearly label containers. Regular auditing and inspection of storage areas and materials. Make storage areas restricted access areas. Reduce/eliminate need for hazardous substances. Ensure all work sites are secure before leaving the site. All liquids i.e. paint etc. are to be securely locked away at the end of each day	L5	C4	8	Regular inspections of storage areas
Fuel contaminated runoff from	Fuel contaminated runoff entering stormwater or	L3	C4	16	All storm water drains should be identified prior to works and controls implemented.	L4	C4	11	Regular inspections of works site to ensure all controls are in good condition and working.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
construction works leaving site	waterways (i.e. polluting – not compliant with discharge criteria).				Appropriate bunding/storage of substances. Toolbox on site procedures for sediment controls and chemical storage. Educate site staff on requirements and consequences of prosecution.				
Heritage									
Unexpected heritage items encountered.	Work delays, additional studies, approvals required, damage to heritage item.	L3	C4	16	Implement the mitigation measures within the HMP. General inductions toolbox training on heritage management protocols. Label any known heritage items on Environmental Control Maps. If suspected heritage item encountered. Works to stop immediately and implement the Sydney Metro Unexpected Heritage Finds Procedure (refer to HMP). Clearly highlight no-go zones on the ECM and communicate requirements to construction personnel during pre-start briefs, inductions and tool-box talks.	L4	C4	11	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Provide frequent toolbox talks on Unexpected Heritage Finds Procedure
Impact to Heritage Items	Damage to heritage fabric of heritage items by Project works	L3	C3	24	Implement the mitigation measures within the HMP. General inductions toolbox training on heritage management protocols. Label any known heritage items on Environmental Control Maps. No subsurface impact of removal of asphalt without prior heritage and environmental approval (Belmore). Work within the safe working distances nominated in the NVMP. Undertake vibration compliance monitoring as per the NVMP.	L4	C3	17	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition. Provide frequent toolbox talks on managing change.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
					Clearly highlight no-go zones on the ECM and communicate requirements to construction personnel during pre-start briefs, inductions and tool-box talks. Demarcation of worksites and communicate it clearly with all construction personnel. The method for the demolition of existing elements at the Project sites would be developed to minimise direct and indirect impacts to adjacent and / or adjoining heritage items.				
Biodiversity									
Loss, damage or injury to endangered or threatened species or localised trees within compounds.	Removal, death, damage or injury to endangered or threatened species by plant and equipment	L4	C3	17	Implement the controls within Appendix E – Procedure 1: Biodiversity of the CEMP (noted as in draft) All personnel attending site will be advised of controls and management during the onsite induction. Toolbox talks will be carried out prior to ground disturbance /site clearing works to ensure onsite personnel are made aware of potential loss of endangered species. If vegetation, other than grass and weeds, needs to be trimmed or removed, further assessment would be undertaken in accordance with the CEMF and CoA. If trees require trimming or removal, the requirements of CoA E5 would be implemented. If threatened flora or fauna species are identified on site, work in the vicinity of these species would stop immediately. spotter/catcher/botanist would be engaged to survey the localised area	L5	C3	13	Implement Vegetation Removal Permit System. Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition.

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
					and advise on the mitigation / control measures required.				
Air Quality									
General Construction works; site establishment	Dust activity in close proximity to residential and commercial premises, complaints received.	L3	C5	12	Implement the controls within Appendix E – Procedure 3: Air Quality from the CEMP (noted as in draft) Toolbox training on dust and air quality Management. Provide dust mitigation measures through water sprays/misting as required. Cover stockpiles when not in use. Erosion and Sediment Control Plans approved before works commence.	L4	C5	7	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition.
Exhaust from plant and equipment.	Emissions resulting in air pollution.	L3	C5	12	Inductions and toolbox training on dust and air quality management. Well maintained plant/ equipment and prestart checks and servicing. Non-compliant vehicles removed from site / repaired.	L4	C5	7	Review plant check list prior to operating on site. Undertake verification checks as required.
Traffic									
Loss of on-street car parking in adjacent residential streets and commercial areas / existing station carparks during construction.	Loss of parking availability to adjacent residential and commercial properties could result in community complaints.	L3	C5	12	Community notifications via monthly notifications and VMS boards / signage and consultation with adjacent businesses (localised cafes for example) in accordance with the OCCS. Additional consultation required with CCBC for the use of the Floss Street Carpark as discussed in the body of the above application to satisfy REMM TC4, TC5 and CoA C51 – NO USE UNTIL CONSULTATION COMPLETE Site vehicles shall be parked within the rail corridor and not affect public parking area where possible.	L4	C5	7	Complete relevant consultation with respect to Hurlstone Park. Complete regular toolbox talks on how to minimise impacts in relation to traffic. Undertake regular inspections of worksite and adjacent streets. Supervisor and traffic controller to enforce traffic management requirements

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
					Develop and implement CTMP (draft) / Traffic control procedures TCP's				
General construction traffic disturbing public access between local roads.	Disturbance to local residents resulting in complaints being made, limited access, potential for delays at local road access points resulting in complaints.	L3	C5	12	Deliveries of plant and materials shall be undertaken outside of peak periods where possible. Site vehicles shall be parked within the rail corridor and not affect public parking areas. Scheduled road movements shall be minimised where possible. Oversized deliveries would be undertaken in accordance with the requirements of NSW Police or Roads and Maritime Services. Approved Traffic Management Plans / TCP's in consultation with relevant authorities. Detour routes to be advertised/ notified. Approved access routes, detailed Traffic Control Plans to be implemented as required. Clear notifications / detour and directional signage	L4	C5	7	Complete regular toolbox talks on how to minimise impacts in relation to traffic. Undertake regular inspections of worksite and adjacent streets.
Visual Amenity									
Building Materials Stockpiles Temporary construction sheds and storage containers Plant and equipment movement Lighting	Surrounding aesthetic temporary altered during construction Lighting towers used during out of hours works may spill on nearby residents	L3	C5	12	The work area shall be maintained in an orderly manner Lighting required during night works shall be directed towards the work area and away from adjacent sensitive receivers	L4	C5	7	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition.
Ancillary facilities									

Aspect	Potential Environmental Impact	Initial Rating		Risk	Control Measures	Residual Rating		Risk	Management of Residual Risk
		L x	C			L x	C		
Appropriate selection and management of the ancillary facilities	Inadequate assessment of impacts to surrounding business and residential receivers and environmental receptors. Potential for complaints.	L4	C4	11	Any ancillary facility not identified in the project Planning Approval, must comply with the relevant CoA (A16-A18). Use of site compounds would comply with the requirements of the CEMP (noted as in draft) and Sub-plans, CoA, REMM and CEMF to ensure environmental impacts are adequately managed.	L5	C4	8	Undertake regular inspections of work areas pre, during and after works to ensure controls are in good condition.
Utilities									
Utility Management	Service strike leading to environmental degradation	L3	C4	16	Develop and implement the Utilities Management Strategy in accordance with the Utilities Management Framework Engage a Utilities Coordination Manager (UCM) to oversee the coordination of utility works across the project and with third part service providers. The UCM will collaborate with the Community and Stakeholder Manager, the Place Manager and, where required, the Community Complaint Mediator to mitigate impacts to the local community during utility works and to resolve any community complaints relating to utility works. Implement a Permit to Disturb Induction and toolbox talks Detailed Site Survey to be managed by an appropriately qualified surveyor.	L5	C4	8	Permit to Disturb Service searching Detailed Site Survey management

Sydney Metro Consequence Criteria

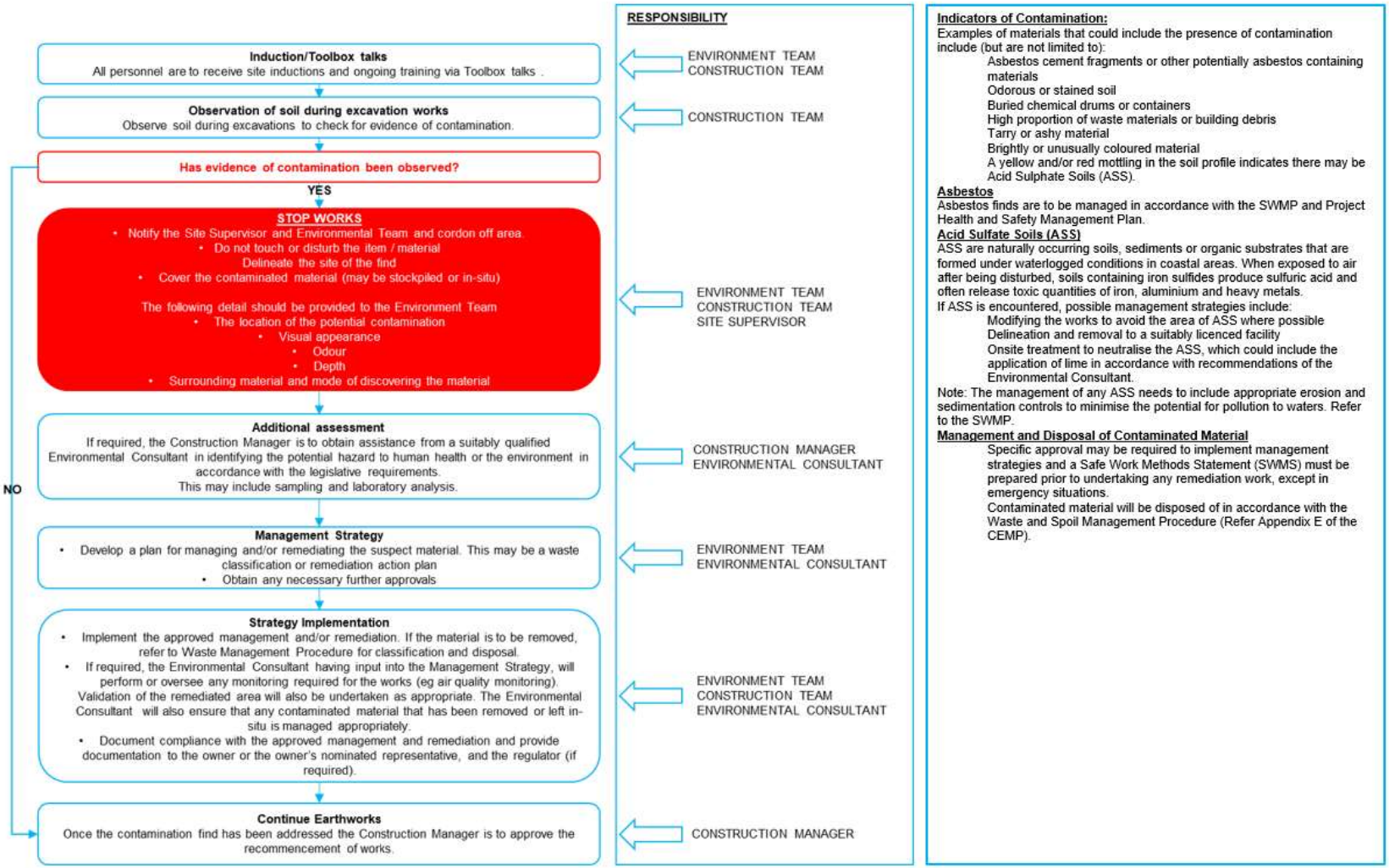
	ENTERPISE RISK CONSEQUENCES					
	C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
Environment	No appreciable changes to environment and/or highly localised event.	Change from normal conditions within environmental regulatory limits & environmental effects are within site boundaries.	Short-term and/or well-contained environmental effects. Minor remedial actions probably required.	Impacts external ecosystem & considerable remediation is required.	Long-term environmental impairment in neighbouring or valued ecosystems. Extensive remediation required.	Irreversible large-scale environmental impact with loss of valued ecosystems.

Sydney Metro Likelihood Criteria and Risk Matrix

Probability: One off event How likely?	Frequency: Repeated How often?	Likelihood		Consequences C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic *Transformational for opportunities*
Expected to occur frequently during time of activity or project. Greater than a 90% chance of occurring.	10 times or more every year	Almost certain	L1	20	22	29	32	34	36
Expected to occur occasionally during time of activity or project. A 75-90% chance of occurring.	1-10 times every year	Very Likely	L2	14	18	23	28	31	35
More likely to occur than not occur during time of activity or project A 50-75% chance of occurring.	Once each year	Likely	L3	9	12	16	24	27	33
More likely not to occur than occur during time of activity or project. A 25-50% chance of occurring.	Once every 1 to 10 years	Unlikely	L4	6	7	11	17	25	30
Not expected to occur during the time of activity or project. A 10-25% chance of occurring.	Once every 10 to 100 years	Very Unlikely	L5	3	4	8	13	19	26
Not expected to ever occur during time of activity or project. Less than 10% chance of occurring.	Less than once every 100 years	Almost Unprecedented	L6	1	2	5	10	15	21

Appendix 2: Unexpected finds procedure (contamination/ asbestos)

UNEXPECTED CONTAMINATED LAND AND ASBESTOS FINDS PROCEDURE



Indicators of Contamination:

Examples of materials that could include the presence of contamination include (but are not 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 Sulphate Soils (ASS).

Asbestos

Asbestos finds are to be managed in accordance with the SWMP and Project Health and Safety 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 where possible
- Delineation and removal to a suitably licenced facility
- Onsite treatment to neutralise the ASS, which could include the application of lime in accordance with recommendations of the Environmental Consultant.

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 SWMP.

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 and Spoil Management Procedure (Refer Appendix E of the CEMP).

Appendix 2.1: Unexpected finds procedure (heritage / archaeological)

Refer to Sydney Metro Unexpected Finds Procedure: [SM-18-00105232]

Appendix 3: Cover Page

Community Notification.

City & Southwest

Notification – Southwest Metro

Punchbowl to Bankstown – March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In March, early work will continue along the T3 Bankstown Line between Punchbowl and Bankstown stations (weather and site conditions permitting). Access to the rail corridor will be via existing corridor/pedestrian access gates. Day work will be undertaken during **project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.**

Location	Detail of day work
Punchbowl to Bankstown (along the rail corridor)	Activities will include: • Geotechnical, utilities and site investigations, tree assessments and surveys inside the rail corridor and in nearby public areas • Devegetation, tree trimming and removal throughout the rail corridor where required • Installation of fencing, cabling and galvanised steel troughing (GST) • Site compound establishment including installation of site sheds, subject to approval • Locating underground services, potholing and non destructive digging close to and inside the rail corridor • Visual inspections and survey of Punchbowl station buildings and roads adjacent to the rail alignment • Topographic scanning and drainage surveys in the rail corridor, at stations and in nearby public areas • Non intrusive survey of fencing along the railway corridor
Punchbowl Station	• Excavation and cabling works adjacent to the northern entrance at Punchbowl Station and the underpass: ○ The pedestrian underpass will be closed for two to three weeks during these works. Pedestrians will be diverted to use the existing footpath on Punchbowl Road and access the station via The Boulevarde. Detour signage will be in place to assist the public.
Punchbowl substation site	Activities at the substation site (north of South Terrace, east of Scott Street) will include: • Non destructive excavation and soil classification sampling • Installing a pole for temporary power connection

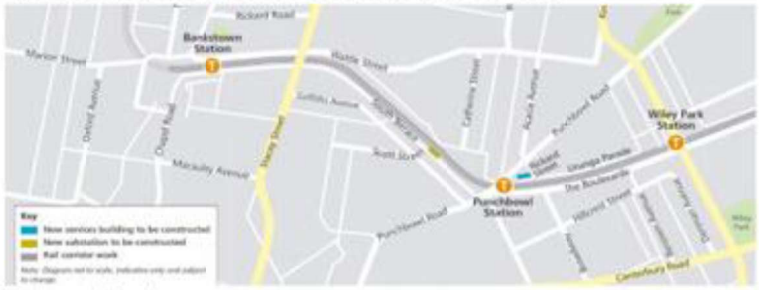
Out-of-hours work

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 Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: Between **10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Non intrusive survey of fencing along the railway corridor • Surveys at Bankstown Station consisting of test pits and boreholes at the platform and track level, and non intrusive drainage surveys • Installation of new cable routes • Non intrusive inspections and surveys at Punchbowl station and surrounds • Installation of hoarding at Punchbowl station (subject to approval) • Potholing and geotechnical investigations including non destructive digging, soil testing and surveys inside the rail corridor

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, tipper, motorised saws, concrete trucks, delivery vehicles, borehole driller, rollers, generators, whacker packer, dump trucks, plate compactor, mulcher, grass cutters, telehandler, piling rig, crane trucks, drilling rig, lifting machinery, elevated work platform, bobcats, concrete pumps, cable pulling equipment, lighting towers, forklift, water cart, hand and power tools.

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 using non tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**



Keeping you informed

Properties close to the rail corridor will receive notifications when construction work is scheduled to occur. You can contact us on **1800 171 386** (24 hour community information line). If you have questions about the **substations** please ask for **Grace** or email LinewideMetro@transport.nsw.gov.au. For all other works please ask for **Andie** or email SouthwestMetro@transport.nsw.gov.au. **Thank you for your cooperation while we complete this essential work.**

1800 171 386 Community information line open 24 hours
southwestmetro@transport.nsw.gov.au
Sydney Metro City & Southwest, PO Box K659, Haymarket NSW 1240
If you need an interpreter, contact TIS National on **131 450** and ask them to call **1800 171 386**

sydneymetro.info

City & Southwest

Notification – Southwest Metro

Dulwich Hill - March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In March, work will continue along the T3 Bankstown Line at Dulwich Hill, weather and site conditions permitting. Access to the rail corridor will be via existing corridor/pedestrian access gates. Day work will be during **project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.**

Location	Detail of day work
Dulwich Hill (at the station and along the rail corridor)	Activities will include: • Topographic scanning and drainage surveys in the rail corridor, at stations and in nearby public areas • Non-intrusive survey of fencing along the railway corridor • Geotechnical investigations, utilities surveys, tree and soil assessments inside the rail corridor and in nearby public areas • Installation and removal of haul roads and temporary fencing throughout the rail corridor • Devegetation and clearing throughout the rail corridor where required • Site compound establishment including installation of site sheds, subject to approval • Installation of temporary fencing, new cable routes, cabling and galvanised steel troughing (GST) • Transportation of earthworks material via the rail access gate near Ewart Street, Dulwich Hill • Visual inspections of station buildings and roads adjacent to the rail alignment • Locating underground services including non-destructive digging close to and inside the rail corridor • Installation of signal equipment and cabling
Substation site (off Randall Street behind Albermarle Street, Marrickville	Activities at the substation site will include: • Installation of pole for temporary power connection • Installation of tree protection on Randall Street • Temporary water and sewer connection for the work site • Installation of water filled barriers, site sheds and temporary fencing • Increasing the height of cables on Randall Street • Excavation works including installation of electrical conduits

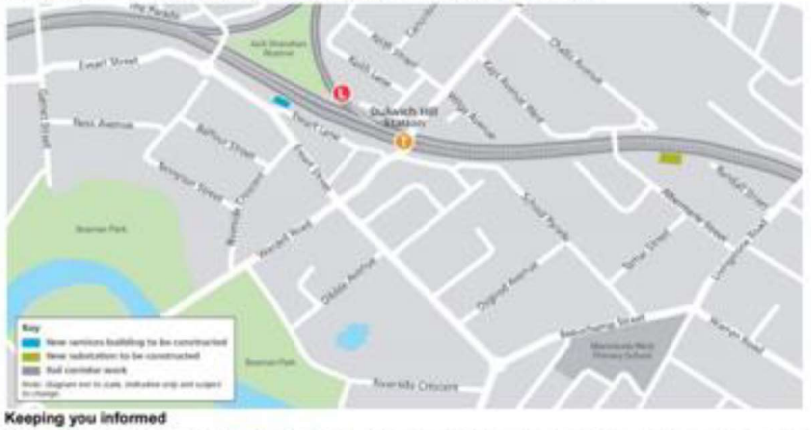
Out-of-hours work

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 Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: Between **10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Potholing and geotechnical investigations including non-destructive digging, soil testing and survey inside the rail corridor • Installing temporary fencing around work sites • Non-intrusive inspections and surveys at Dulwich Hill station and surrounds, including rail corridor fencing surveys and radio pole surveys • Potholing on the tracks near Dulwich Hill substation • Installing signal equipment and cabling inside the rail corridor Subject to approval, work over the weekend to support the station upgrade will include: • Piling works between the tracks at Dulwich Hill Station • Installation of hoarding

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, slasher, motorised saws, concrete trucks, delivery vehicles, borehole driller, rollers, generators, whacker packer, dump trucks, wood chipper, mulcher, grass cutters, telehandler, piling rig, crane trucks, drilling rig, lifting machinery, elevated work platform, bobcats, concrete pumps, cable pulling equipment, compactors, lighting towers, forklift, water cart, hand and power tools.

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 using non-tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**



Keeping you informed

Properties close to the rail corridor will receive notifications when construction work is scheduled to occur. You can contact us on **1800 171 386** (24 hour community information line). If you have questions about the **substations** please ask for **Grace** or email LinewideMetro@transport.nsw.gov.au. For all other works please ask for **Klia** or email SouthwestMetro@transport.nsw.gov.au. **Thank you for your cooperation while we complete this essential work.**

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City & Southwest

Notification – Southwest Metro

Wiley Park – March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In February 2021, a contract was awarded to Downer EDI Works to upgrade Hurlstone Park, Belmore and Wiley Park stations to metro rail standards. You will notice work taking place around the station in the coming months.

In March, early work will continue along the T3 Bankstown Line at Wiley Park (weather and site conditions permitting). Access to the rail corridor will be via existing corridor/pedestrian access gates. Day work will be undertaken during **project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.**

Location	Detail of day work
Wiley Park (at the station and along the rail corridor)	Activities will include: • Geotechnical, utilities and site investigations, tree assessments and surveys inside the rail corridor and in nearby public areas • Devegetation, tree trimming and removal throughout the rail corridor where required • Site compound establishment including installation of site sheds, subject to approval • Installation of fencing, cabling and galvanised steel troughing (GST) • Locating underground services, potholing and non destructive digging close to and inside the rail corridor • Visual inspections and surveys of Wiley Park station buildings and surrounding locations, including roads adjacent to the rail alignment • Topographic scanning and drainage surveys in the rail corridor, at stations and in nearby public areas • Non intrusive survey of fencing along the railway corridor

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 Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: Between **10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Non intrusive survey of fencing along the railway corridor • Installing support structures for new electrical conduits • Potholing and geotechnical investigations including non destructive digging, soil testing and surveys inside the rail corridor Subject to approval, work over the weekend to support the station upgrade will include: • Non intrusive inspections and surveys at the station and surrounds • Minor tree trimming and vegetation clearing where required • Installation of hoarding

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, tipper, motorised saws, concrete trucks, delivery vehicles, borehole driller, rollers, generators, whacker packer, dump trucks, plate compactor, mulcher, grass cutters, telehandler, piling rig, crane trucks, drilling rig, lifting machinery, elevated work platform, bobcats, concrete pumps, cable pulling equipment, lighting towers, forklift, water cart, hand and power tools.

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 using non tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**

Keeping you informed

Properties close to the rail corridor will receive notifications when construction work is scheduled to occur. You can contact us on **1800 171 386** (24 hour community information line). If you have questions about the **substations** please ask for **Grace** or email LinewideMetro@transport.nsw.gov.au. For all other works please ask for **Andie** or email SouthwestMetro@transport.nsw.gov.au. **Thank you for your cooperation while we complete this essential work.**

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City & Southwest

Notification – Southwest Metro

Hurlstone Park - March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In February 2021, a contract was awarded to Downer EDI Works to upgrade Hurlstone Park, Belmore and Wiley Park stations to metro rail standards. You will notice work taking place around the station in the coming months.

In March, work will continue along the rail corridor and at Hurlstone Park Station (weather and site conditions permitting). Access to the rail corridor will be via existing rail corridor/pedestrian access gates. **Day work will be undertaken during project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.** The map on page 2 shows location details.

Location	Detail of day work
Hurlstone Park (at the station and along the rail corridor)	Activities will include: • Topographic scanning and drainage surveys in the rail corridor, at stations and in nearby public areas • Investigations and non-intrusive pipe inspections on station platforms • Geotechnical investigations, utilities surveys, tree and soil assessments inside the rail corridor and in nearby public areas • Installation and removal of haul roads and temporary fencing throughout the rail corridor • Devegetation and clearing throughout the rail corridor where required • Installation of fencing, cable service routes and galvanised steel troughing (GST) • Transportation of earthworks material via the rail access gate near Hutton Street, Hurlstone Park • Site compound establishment including installation of site sheds, subject to approval • Maintenance of permanent security fencing including GST install near the Church Street footbridge, Canterbury (south side) • Removal of redundant services adjacent to Hutton Street • Non intrusive survey of fencing along the railway corridor • Locating underground services including non-destructive digging close to and inside the rail corridor • Surveys and visual inspections of station buildings and roads in proximity to the rail alignment • Installation of signal equipment and cabling
Canterbury substation (Hutton Street)	• Installing a private pole for temporary power connection • Tree trimming and removal where required • Installing site sheds, water filled barriers and temporary fencing • Temporary water connection for the work site, this includes some road work on Hutton Street • Excavation and installing in-ground electrical conduits

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 Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: **Between 10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Geotechnical investigations, including non-destructive digging, soil testing and surveying inside the rail corridor • Non intrusive survey of fencing along the railway corridor • Installing conduits, pits and signal equipment inside the rail corridor Subject to approval, work over the weekend to support the station upgrade will include: • Non-intrusive inspections and surveys at the station and surrounds • Minor tree trimming and vegetation clearing where required • Installation of hoarding

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, slashers, motorised saws, concrete trucks, sucker trucks, delivery vehicles, borehole drillers, rollers, generators, whacker packers, dump trucks, wood chippers, mulchers, grass cutters, telehandlers, crane trucks, drilling rigs, lifting machinery, elevated work platforms, bobcats, concrete pumps, cable pulling equipment, compactors, lighting towers, forklifts, water carts, vibrating plates, and hand and power tools.

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 using non-tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**

Keeping you informed

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City & Southwest

Notification – Southwest Metro

Belmore - March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In February 2021, a contract was awarded to Downer EDI Works to upgrade Hurlstone Park, Belmore and Wiley Park stations to metro rail standards. You will notice work taking place around the station in the coming months.

In March, work will continue along the rail corridor and at Belmore Station (weather and site conditions permitting). Access to the rail corridor will be via existing rail corridor/pedestrian access gates. **Day work will be undertaken during project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.** The map on page 2 shows location details.

Location	Detail of day work
Belmore (at the station and along the rail corridor)	Activities will include: • Investigations and non-intrusive pipe and fencing surveys on station platforms and along the rail corridor • Geotechnical/site investigations, tree assessments and surveys inside the rail corridor and surrounding areas • Devegetation, tree trimming and clearing throughout the rail corridor where required • Installation of fencing, cabling and galvanised streel troughing (GST) • Site compound establishment including installation of site sheds, subject to approval • Locating underground services and non-destructive digging close to and inside the rail corridor • Visual inspections and surveys of station buildings and roads adjacent to the rail corridor • Topographic/ scanning and drainage surveys in the rail corridor, at stations and in nearby public areas • Non intrusive survey of fencing along the railway corridor
Bridge Road, Belmore	• Activities at the site compound on Bridge Road near intersection with Peel Street will continue • Sites and offices will be set up inside the existing Sydney Trains facility (near the intersection with Marie Lane) to support Southwest Metro station upgrades
Lakemba substation	Activities at the substation site (north of The Boulevarde, west of Taylor Street) will include: • Non-destructive excavation and soil classification sampling • Installing a pole for temporary power connection

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 Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: **Between 10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Geotechnical investigations, including non-destructive digging, soil testing and surveying inside and along the rail corridor • Installing conduits, pits and signal equipment inside the rail corridor Subject to approval, work over the weekend to support the station upgrade will include: • Non-intrusive inspections and surveys at the station and surrounds • Installation of hoarding

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, slashers, motorised saws, concrete trucks, sucker trucks, delivery vehicles, borehole drillers, rollers, generators, whacker packers, dump trucks, wood chippers, grass cutters, telehandlers, crane trucks, drilling rigs, lifting machinery, elevated work platforms, bobcats, concrete pumps, cable pulling equipment, compactors, lighting towers, forklifts, water carts, and hand and power tools.

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 using non-tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**

Keeping you informed

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City & Southwest

Notification – Southwest Metro

Campsie - March 2021

Sydney Metro is Australia's biggest public transport project.

Services started in May 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 at 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. The upgrade of the T3 Bankstown Line to metro standards between Sydenham and Bankstown received planning approval on 19 December 2018.

In March, work along the T3 Bankstown Line in the rail corridor will continue at Campsie (weather and site conditions permitting). Access to the rail corridor will be via existing rail corridor/pedestrian access gates. **Day work will be undertaken during project standard construction hours Monday to Friday 7am-6pm and Saturday 8am-6pm.**

Location	Detail of day work
Campsie (along the rail corridor)	Activities will include: • Geotechnical and site investigations inside the rail corridor and in nearby public areas, including locating underground services, non-destructive digging, soil assessments, utilities surveys, tree assessments, topographic/ scanning and surveys • Devegetation and clearing throughout the rail corridor where required • Transportation of material • Installing fencing, cabling and galvanised streel troughing (GST) • Retaining wall installation works, landscaping, concrete piling and earthworks • Site compound establishment including installation of site sheds, subject to approval • Visual inspections of roads adjacent to the rail alignment • Installing high voltage cabling near the western end of Campsie Station • Non intrusive survey of fencing along the railway corridor
South Parade between Duke Street and Beamish Lane	• Installation of GST and fence reinstatement works in the rail corridor adjacent to this location. To enable works to proceed safely, **several car spaces on South Parade will be temporarily out of use** throughout the duration of work. Signage will be in place to advise the community.
Substation site (north of The Boulevarde, west of Taylor Street)	• Excavation and installing in-ground electrical conduits • Installing a pole for temporary power connection • Installing site sheds, temporary fencing and water filled barriers • Tree trimming and tree removal, where required • Temporary water connection, including some road work on 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. Some equipment will also be delivered outside standard construction hours in line with Transport for NSW requirements for the movement of oversized vehicles.

Date / time	Detail of work
During the scheduled rail shutdown weekend: Between **10:30pm Friday 19 March to 2am Monday 22 March 2021**	• Installation and removal of water barriers and temporary fencing adjacent to South Parade between Wonga Street and Gould Street • Non-intrusive inspections and surveys at Campsie Station and surrounds • Installation of hoarding at the station (subject to approval) • Geotechnical investigations, including potholing, non-destructive digging, soil testing and surveying inside the rail corridor • Installation of signal equipment and cabling • Non intrusive survey of fencing along the railway corridor • Installing high voltage cabling near the western end of Campsie Station

Equipment used for all the above work will include excavators, jack hammers, vacuum trucks, slasher, motorised saws, concrete trucks, delivery vehicles, borehole driller, rollers, generators, whacker packer, dump trucks, wood chipper, mulcher, grass cutters, telehandler, piling rig, crane trucks, drilling rig, lifting machinery, elevated work platform, bobcats, concrete pumps, cable pulling equipment, compactors, lighting towers, forklift, water cart, hand and power tools.

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 using non-tonal reversing beepers. **Where temporary footpath changes, car parking removal or lane closures are required for works, traffic control, pedestrian detours and signage will be in place to assist the community.**

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Appendix 4: Cover Page

Environmental Representative Supporting Letter.

Appendix 5: Artefact Evidence Response for Belmore

RE: Belmore AMZ and site establishment

JV Jayden van Beek <Jayden.vanbeek@artefact.net.au>
To Gareth O'Brien

Reply | Reply All | Forward | ...
Thu 4/03/2021 3:43 PM

[External Email] This email was sent from outside the organisation – be cautious, particularly with links and attachments.

Hi Gareth,

Because the use of the existing offices and the establishment of the new office compound would not require any subsurface impacts, there would be no archaeological impacts and therefore no archaeological mitigation is required. Although the new office compound would be located within the State heritage curtilage of Belmore Railway Station Group (SHR no. 01081), it would not cause any direct impacts to significant fabric.
I also note that any visual impacts of the compound on the Belmore Station SHR item would generally be negligible as the offices would largely be screened from view by the vegetation along the railway corridor and by the terrain.

As a result, because the compounds are within the approved compound locations the use of these are consistent with the Low Impact Activities outlined in the CSSI approval. Therefore, it is our understanding that no further mitigation measures, including further consultation, are required.

Please let us know if you need any further information.

Thanks,

Jayden van Beek
Senior Heritage Consultant

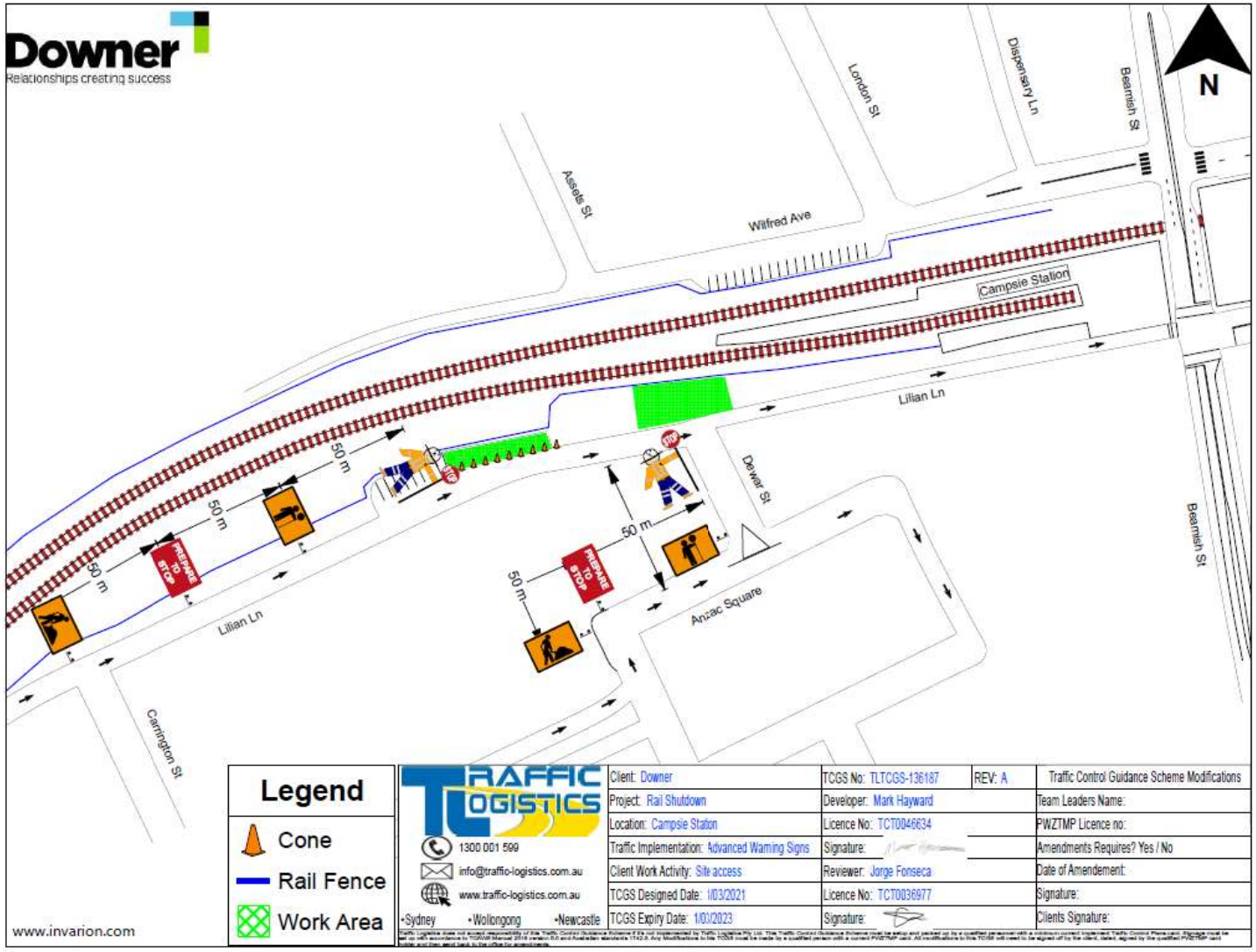
ARTEFACT
Cultural Heritage Management | Archaeology | Heritage Interpretation

[redacted]
Address: Suite 56, Jones Bay Wharf, 26-34 Pirrama Rd, Pyrmont NSW 2009
Web: www.artefact.net.au

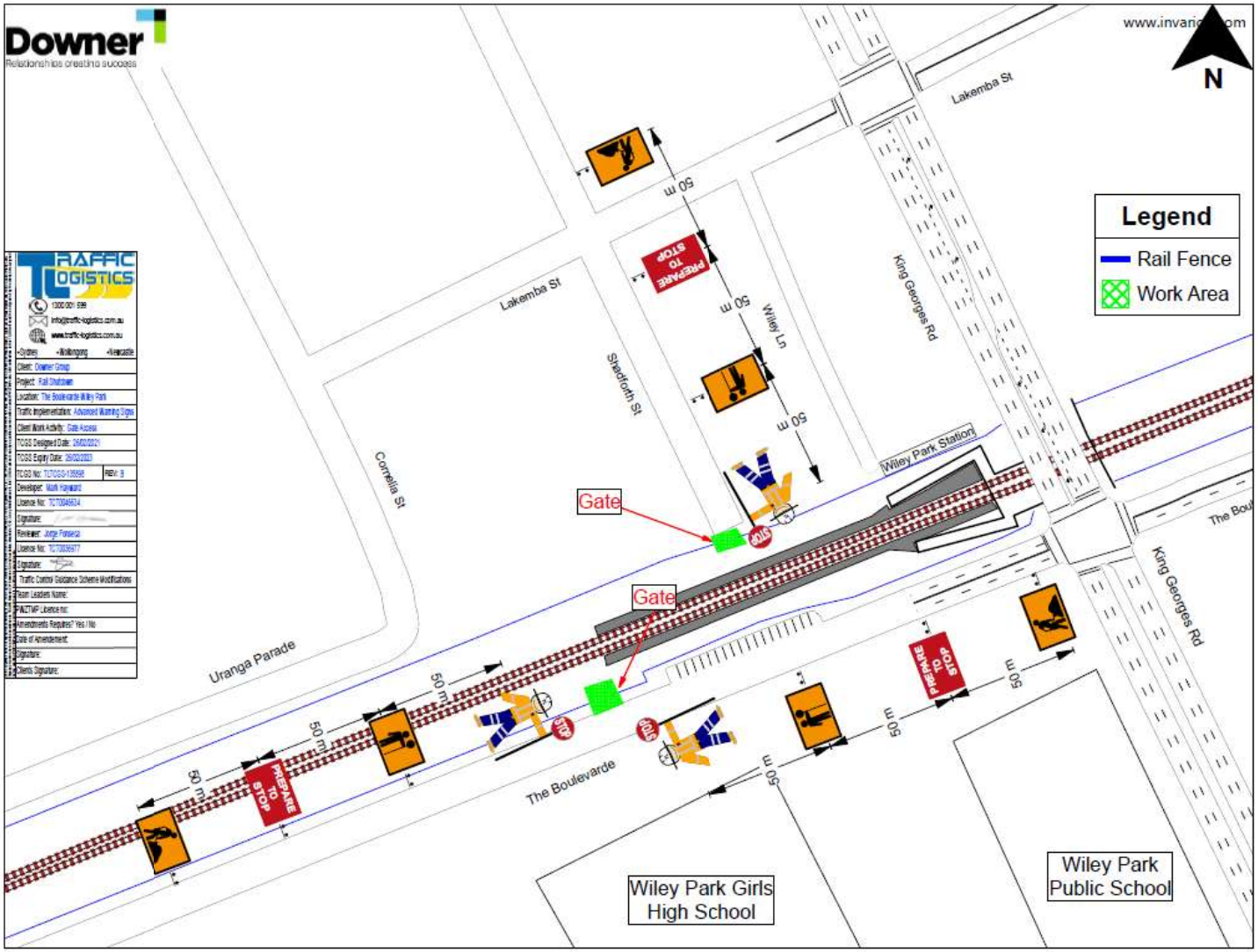
We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and emerging

Appendix 6: Traffic Control Plans

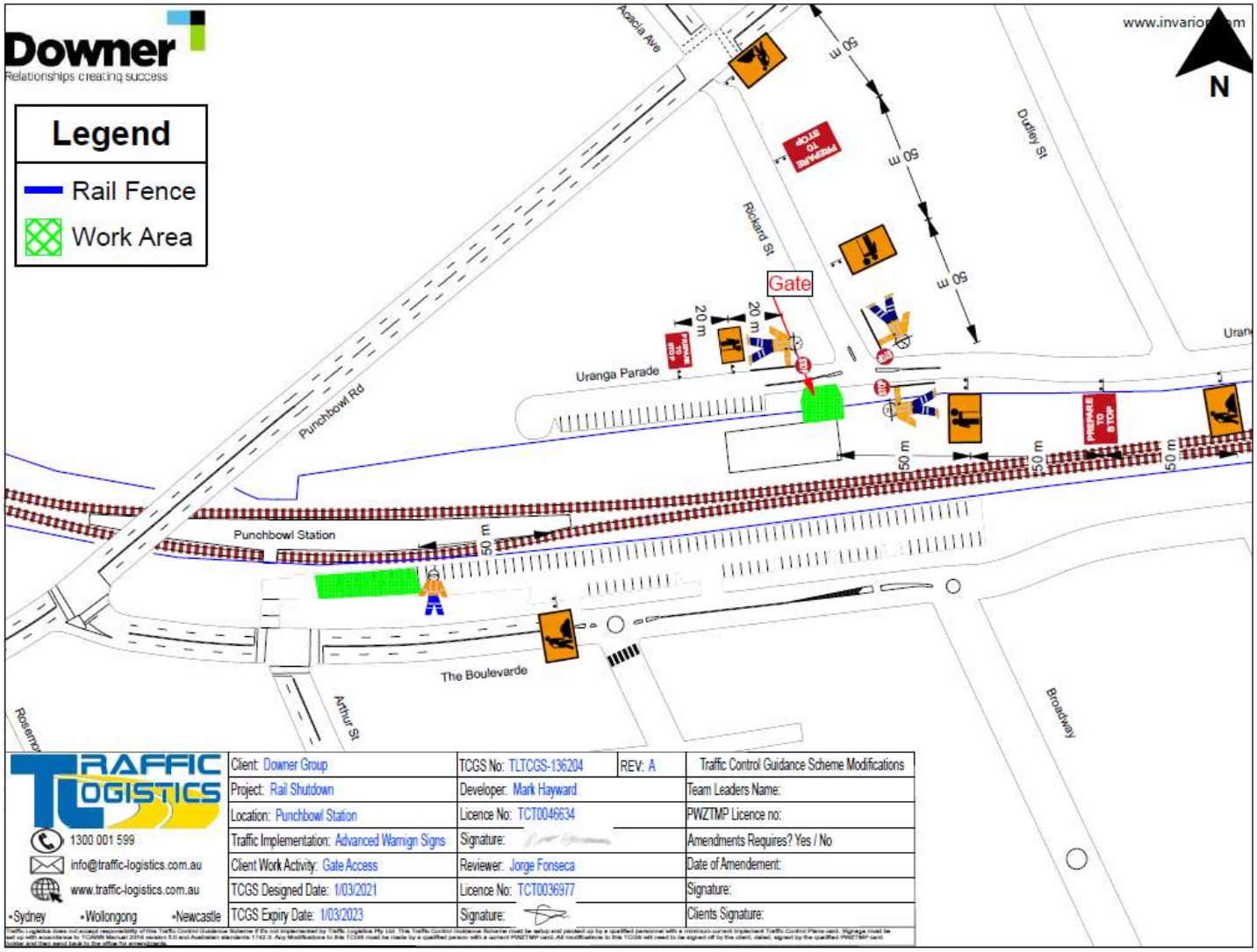
Campsie Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)



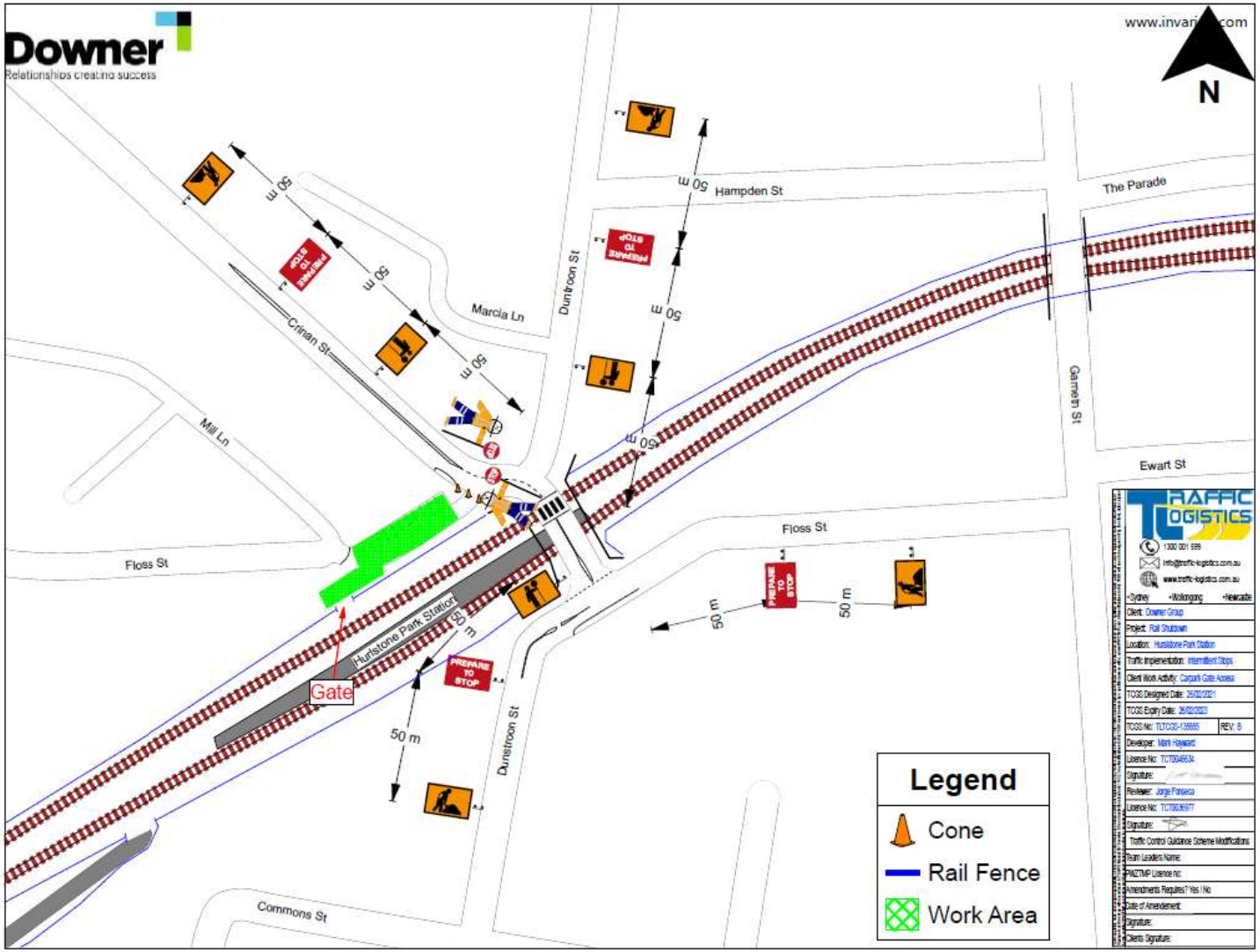
Wiley Park Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)



Punchbowl Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)



Hurlstone Park Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)



Dulwich Hill Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)

Belmore Station (note TCP scope should only be read in conjunction with the site establishment areas of the above application)