

Stacy Warren
Director Infrastructure
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

7 March 2018
Ref: 170108-ER-DPE-TSE-Feb 18

Dear Stacy

RE: Sydney Metro City & South West Chatswood to Sydenham CSSI 15_7400 – ER Monthly Report for February 2018 – TSE Contract

Healthy Buildings International (HBI) submits this report to the Secretary in accordance with:

- Condition A24 (I) of the Sydney Metro City & South West Chatswood to Sydenham CSSI 15_7400 Approval (9 January 2017) and SSI 15_7400 and associated modifications (MOD1_Victoria Cross and Artarmon (18 October 2017), MOD2_Central Walk (21 December 2017), and MOD4_Sydenham Station and Metro Facility South (13 December 2017); and
- As required by the subsequent appointment as the approved Environmental Representative (17 February 2017);

The attached summary details the key activities undertaken by Environmental Representatives for Sydney Metro – City and South West Chatswood to Sydenham during the month of **February 2018**.

Yours sincerely



Michael Woolley
Environmental Representative

Cc: Sydney Metro: Fil Cerone, Matt Marrinan, Ben Armstrong, Stuart Hodgson, Nicole Williams, Adam Koutsamanis, Nicole Vanella, Rob Muir (JHCPBG)
DPE: Swati Sharma, Rob Sherry



Summary of Contract Packages	Environmental Representative/s
Demolition and Tunnel and Station Excavation (TSE)	Michael Woolley
Alternate	Jo Robertson / Annabelle Reyes

Key Construction Activities	
Demolition and TSE	<p>Works conducted in February 2018 at the following sites are summarised below:</p> <p>Chatswood Dive Site and Artarmon Substation:</p> <ul style="list-style-type: none"> ➤ Chatswood dive site <ul style="list-style-type: none"> ○ Removal of existing concrete and asphalt slabs involving hammering and disposing of contaminated materials ○ Construction of piling platforms, driveways, and the foundations of various facilities using excavators to remove unsuitable material. New road base material delivered and compacted using heavy rollers. ○ Installation of concrete piles around the dive area to support the ground during excavation involving drilling holes using an auger, installing steel reinforcement and pouring concrete into each hole ○ Installation of a water treatment plant and sheds involving concreting, building retaining walls and setting-up silos and water tanks ○ Utility, heritage and geotechnical investigations ○ Installation of hoarding, drainage and setting up offices and amenities ○ Relocation and commissioning of underground utilities ➤ Nelson Street <ul style="list-style-type: none"> ○ Relocation of underground utility services and temporarily reinstating the works areas ➤ Rail corridor between Brand Street and Mowbray Road <ul style="list-style-type: none"> ○ Set-up works to allow access to the rail corridor via Brand Street including installation of drainage and modifying fencing ○ Removal and mulching of trees and vegetation to allow the corridor to be widened to make room for the new metro tracks ○ Survey, utility and geotechnical investigations ➤ Out-of-hours works <ul style="list-style-type: none"> ○ Chatswood dive site <ul style="list-style-type: none"> ▪ Delivery and unloading of oversized plant and equipment ▪ Accessing the site intermittently to load and unload materials required for out-of-hours works on Mowbray Road, Hampden Road and Pacific Highway ○ Mowbray Road, Hampden Road and Pacific Highway/Nelson Street <ul style="list-style-type: none"> ▪ Identifying, relocating and commissioning underground utilities on Mowbray Road, Hampden Road and the Pacific Highway/Nelson Street intersection involving saw cutting, excavating and backfilling trenches, laying and pulling cables and temporarily reinstating works areas ▪ Building site driveways on Mowbray Road involving removing the existing kerb and footpath, minor earthworks and pouring concrete ▪ Installing temporary traffic and pedestrian management and establishing works areas



	<p>Crows Nest Station:</p> <ul style="list-style-type: none">➤ Within and around the site<ul style="list-style-type: none">○ Installation of hoarding and gates around the site perimeter○ Completion of retention works around the site○ Earthworks to level the site and to construct platforms to hold piling rigs (this work includes the use of a large rollers to compact the soil)○ Relocation of utility services including power, water and telecommunications○ Piling works around the site perimeter involving boring vertical columns and filling them with concrete○ Construction of a capping beam to join the piles○ Continuing surveys and geotechnical investigations around the site○ Upgrading driveways and constructing new site driveways○ Construction of site services such as a water treatment plant and power supply○ Installation and commissioning of a new electricity substation at 14 Clarke Street○ Decommission of the existing substation in Clarke Lane○ Installation of line marking to indicate changes to road alignment○ Preparation for construction of new site entrance in Oxley Street○ Planning for closing Hume Street between Pacific Highway and Clarke Lane for around 6 months, and installing a pedestrian detour along the south side of Hume Street ➤ Out-of-hours works:<ul style="list-style-type: none">○ Around the site<ul style="list-style-type: none">▪ Delivery and removal of oversized equipment such as cranes and piling rigs▪ Utility investigations and relocations○ Pacific Highway/Hume Street<ul style="list-style-type: none">▪ Excavation of a pit and installing Telstra conduits across the Pacific Highway at Hume Street▪ Installation of cables in the footpath▪ Disconnection of a water main▪ Adjusting the traffic signals in preparation for the Hume Street closure▪ Excavation of a trench and installing Telstra and Optus conduits (Hume Street south between Clarke Lane and Pacific Highway)○ Hume Street (west of Pacific Highway), Clarke Street and Clarke Lane (south of Hume Street)<ul style="list-style-type: none">▪ Installing cables and conduits in footpaths and parking lanes around the site○ Oxley Street<ul style="list-style-type: none">▪ Grinding down a tree stump▪ Upgrading kerbs and constructing a driveway for a new site entrance and exit <p>Victoria Cross Station:</p> <ul style="list-style-type: none">➤ Victoria Cross South site<ul style="list-style-type: none">○ Completion of demolition of 181, 187, 189 and 155 Miller Street and loading out demolition materials○ Removal of scaffolding and relocating sections of hoarding○ Relocation of site sheds to allow access to complete demolition○ Continued the surveys of the roads around the site○ Removal of vegetation/trees on Miller Street○ Continued the retention works and installing ground anchors to prepare the site for tunnel excavation
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	<ul style="list-style-type: none">○ Commencement of sub-station relocation works○ Installation of stormwater drainage on Miller Street near the site entry➤ Victoria Cross North site<ul style="list-style-type: none">○ Earthworks to prepare the site for installation of acoustic sheds○ Delivery of fill to the site and using a vibratory roller to compact the fill○ Continuing surveys and soil, heritage and geotechnical investigations○ Removal of vegetation/trees within site boundary○ Removal of hazardous material from the site○ Installation of fencing and hoarding around the site perimeter○ Establishment of site offices and amenities○ Installation of erosion and sediment controls○ Demolition of existing concrete driveways and slabs○ Commencement of piling works➤ Out-of-hours works<ul style="list-style-type: none">○ Around the sites<ul style="list-style-type: none">▪ Mobilisation and delivery/removal of oversized equipment▪ Relocation of site sheds and preparing the site for the start of tunnel excavation works▪ Installation of traffic signage○ Miller Street/Berry Street<ul style="list-style-type: none">▪ Continuing to investigate and relocate utility services▪ Removal or relocation of fencing and hoarding▪ Removal of vegetation/trees▪ Completion of works to car park at 65 Berry Street▪ Installation of stormwater drainage (near site entry)○ Denison Street<ul style="list-style-type: none">▪ Completion of demolition of 155 Miller Street (Tower Square)▪ Completion of substation works including removal of scaffolding○ Miller Street/McLaren Street<ul style="list-style-type: none">▪ Removal of vegetation/trees around overhead power lines <p>Blues Point temporary retrieval site:</p> <ul style="list-style-type: none">➤ No works conducted in February 2018. <p>Barangaroo Station:</p> <ul style="list-style-type: none">➤ Hickson Road (between Dalgety Road and Windmill Street overpasses)<ul style="list-style-type: none">○ Site establishment work on the eastern side of Hickson Road, including temporary traffic changes➤ Hickson Road (between Munn Street overpass and High Steps)<ul style="list-style-type: none">○ Relocation of utilities within the road and footpath○ Installation of a new sewer line on the eastern side of Hickson Road○ Installation of a new electrical substation for tunnelling machines○ Continuing to install bolts to protect and secure the High Street heritage wall○ Earthworks and piling for a temporary bridge (at street level), on the eastern side of Hickson Road➤ Nawi Cove foreshore and lawn area<ul style="list-style-type: none">○ Installation of hoarding and temporary fencing○ Removal of trees, vegetation, pavement, sandstone edging and street furniture○ Delivery of materials and equipment, including out-of-hour deliveries for oversized machines○ Earthworks, excavation and concreting activities, including building temporary hardstand areas
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	<ul style="list-style-type: none">➤ Out-of-hours works<ul style="list-style-type: none">○ Hickson Road (between Munn Street and Windmill Street overpass)<ul style="list-style-type: none">▪ Excavating and trenching in the roadway▪ Installation of fencing around work sites and relocating street lights○ Hickson Road (between Munn Street and High Steps)<ul style="list-style-type: none">▪ Excavation and pipe laying▪ Relocation of street lights○ Corner of Sussex and Erskine streets<ul style="list-style-type: none">▪ Excavation and pipe layingMartin Place Station:<ul style="list-style-type: none">➤ Bligh Street site<ul style="list-style-type: none">○ Delivery of equipment, tunnelling machinery and materials to site○ Removal of excavated material from site○ Storage, management and removal off site of contaminated soils○ Delivery of site amenities and steel○ Installation of hoarding○ Relocation of utilities➤ Martin Place North site<ul style="list-style-type: none">○ Internal strip out of buildings on Hunter, Castlereagh and Elizabeth Streets○ Installation (and removal) of scaffolding and hoarding○ Ongoing structural demolition works and removing materials from site➤ Martin Place South site<ul style="list-style-type: none">○ Preparation of building for demolition○ Reconfiguring pedestrian access near the worksite in Martin Place and the underground shopping circle○ Removal of hazardous materials○ Delivery equipment and materials to site○ Substation decommissioning➤ Hunter, Castlereagh, Elizabeth, Bligh and O'Connell Streets and Martin Place<ul style="list-style-type: none">○ Relocation of utilities➤ Out-of-hours works<ul style="list-style-type: none">○ Hunter, Castlereagh and Elizabeth Streets, Martin Place<ul style="list-style-type: none">▪ Installing hoarding▪ Ausgrid pit inspections, utilities work including potholing and trenching○ Castlereagh, Elizabeth, Bligh and O'Connell Streets<ul style="list-style-type: none">▪ Oversized equipment deliveries and crane mobilisations for lifting equipment into sitesPitt Street Station:<ul style="list-style-type: none">➤ Pitt Street North site<ul style="list-style-type: none">○ Structural demolition near to finishing○ Site establishment works for the piling phase○ TSE contractors notified that piling works around the site are required to stabilise the footpath and that this would limit heritage excavations in some areas immediately on the boundary where piling is to occur. Casey and Lowe provided a memo detailing these changes and changes in approach compared to as detailed in the AMS.➤ Pitt Street South site<ul style="list-style-type: none">○ Site establishment for demolition➤ Out-of-hours works<ul style="list-style-type: none">○ Pitt Street North<ul style="list-style-type: none">▪ Ausgrid works, modification and relocating existing electrical services in Castlereagh Street
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	<ul style="list-style-type: none">▪ Ausgrid works to install a substation kiosk and upgrade services on the corner of Pitt and Park Streets are still ongoing○ Pitt Street South<ul style="list-style-type: none">▪ Demolition of awnings and constructing hoardings. <p>Waterloo Station:</p> <ul style="list-style-type: none">➤ Within the Waterloo Station site<ul style="list-style-type: none">○ Completion of the removal of the buildings on Botany Road, including external walls and roofing and removing rubble from the site○ Installation of hoarding around the site○ Preparation of the site for excavation of the station box, including piling and concrete works○ Continuing heritage investigation works○ Sewer diversion works○ Moving plant and equipment to and from site using large vehicles via the site access on Botany Road.➤ Out-of-hours works<ul style="list-style-type: none">○ Botany Road, Raglan Street, Cope Street<ul style="list-style-type: none">▪ Sewer diversion works○ Botany Road at Raglan Street, Botany Road at Wellington Street, Wellington Street at Cope Street<ul style="list-style-type: none">▪ Installation of new power poles, involving minor trenching and overhead cable works <p>Marrickville dive site:</p> <ul style="list-style-type: none">➤ Marrickville dive site<ul style="list-style-type: none">○ Earthworks to construct the piling rig pads○ Commencement of piling works○ Excavation and concrete works for a temporary storm water diversion○ Installation of hoarding along Edinburgh Road, Railway Parade and the rail corridor○ Truck movements to and from the site, including deliveries of materials and construction equipment, during and outside of standard construction hours○ Creation of the internal road network, involving saw cutting, concrete works, excavation and earthworks○ Concrete breaking and demolition activities➤ Marrickville precast site<ul style="list-style-type: none">○ Delivery of materials and construction equipment during standard and out-of-hours deliveries○ Ongoing construction of the precast facility and support infrastructure➤ Edinburgh Road, Edgeware Road, and Lord and Council Streets<ul style="list-style-type: none">○ Underground utility investigation and installation works for a new high voltage cable power supply for the tunnel boring machines➤ Out-of-hours works<ul style="list-style-type: none">○ May Street and King Street/Princess Highway intersection<ul style="list-style-type: none">▪ Underground investigations and installation works for a new high voltage cable power supply for the Marrickville tunnel boring machines <p>Marrickville Station:</p> <ul style="list-style-type: none">➤ Completion of survey work – Illawarra Road Bridge
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ER Inspections	
Demolition and TSE	<p>Weekly inspections continued under the management of the TSE contractor for the demolition sites.</p> <p>Sites inspected in February 2018 comprised:</p> <ul style="list-style-type: none">➤ Victoria Cross South – 13/02/18, 27/02/18➤ Victoria Cross North – 13/02/18, 27/02/18➤ Chatswood – 13/02/18, 27/02/18➤ Martin Place – 13/02/18, 27/02/18➤ Barangaroo – 6/02/18, 20/02/18➤ Pitt Street – 6/02/18, 20/02/18➤ Crows Nest – 13/02/18, 27/02/18➤ Waterloo – 6/02/18, 20/02/18➤ Marrickville – 6/02/18, 20/02/18➤ Bligh St – 13/02/18, 27/02/18 <p>ER Inspection reports have been prepared and issued to Sydney Metro and the TSE Contractor. Actions identified during the inspections comprised:</p> <ul style="list-style-type: none">➤ Inspection on 06/02/18<ul style="list-style-type: none">○ Waterloo – erosion and sedimentation controls, dust suppression○ Marrickville – erosion and sedimentation controls○ Barangaroo – erosion and sedimentation controls➤ Inspection on 13/02/18<ul style="list-style-type: none">○ No issues identified➤ Inspection on 20/02/18<ul style="list-style-type: none">○ Waterloo – erosion and sediment controls, graffiti removal○ Marrickville- erosion and sediment controls○ Barangaroo – soil and water management➤ Inspection on 27/02/18<ul style="list-style-type: none">○ Crows Nest – erosion and sediment controls○ Chatswood – erosion and sediment controls○ Martin Place – installation of noise barriers <p>Various notes were made in the reports reflecting commitments made by the TSE Contractors.</p>
Endorsed Document/s	
Sydney Metro	<p>The following documents were reviewed and endorsed by the ER with the assistance of alternate ERs:</p> <ul style="list-style-type: none">○ Community Communications Strategy - Early Works Revision 3.0 ER Endorsement○ Sydney Metro, City & Southwest Aboriginal Archaeological Method Statement○ City Southwest Chatswood to Sydenham Staging Report v3○ Construction Environment Management Framework requirements



TSE	<p>The following TSE documents were reviewed, comments provided to the TSE Contractor and Sydney Metro where relevant, and endorsed by the ER with the assistance of alternate ERs:</p> <ul style="list-style-type: none"> ➤ Construction Traffic Management Plans <ul style="list-style-type: none"> ○ CTMP Chatswood Pre-Tunnelling Works ○ CTMP Crows Nest Utilities - Amendment ➤ CNVIS <ul style="list-style-type: none"> ○ Marrickville LAUWs CNVIS Rev 2 ○ Crows Nest Utilities CNVIS - Amendment ○ Crows Nest Station Excavation CNVIS ➤ Out of hours works (OOHW) approvals <ul style="list-style-type: none"> ○ Extension of Dates for OOHWs for CH019 Rev 2 ➤ Consistency Assessment <ul style="list-style-type: none"> ○ Crows Nest Utilities Consistency Assessment Rev 3 - additional trench across Hume Street ○ Barangaroo Temporary Northern Shaft - Consistency Assessment – DRAFT ➤ Others <ul style="list-style-type: none"> ○ Internal Audit Report - Construction Soil and Water MP ○ Sydney Metro, City & Southwest Aboriginal Archaeological Method Statement: Barangaroo, Martin Place, Pitt Street & Waterloo ○ Ancillary and Facility Management Plan for White Bay Truck Marshalling Yard (Revised) ➤ Acknowledgement of post CEMP Site Establishment Plans (SEPs) <ul style="list-style-type: none"> ○ Chatswood SEP Post CEMP Rev 00 ○ Waterloo SEP Rev 00 Post CEMP Approval ○ Barangaroo SEP Rev 10 ○ Crows Nest Rev 02 ○ VC North Rev 01 ○ VC South Rev 01 ○ Pitt Street North and Pitt Street South SEP Rev 2
Demolition	<ul style="list-style-type: none"> ➤ Out of hours work approvals: <ul style="list-style-type: none"> ○ Delta – Victoria Cross VC016 Concrete Pour

Non-compliance/ Incidents / Complaints	
TSE and demolition	<p>It is understood that Sydney Metro has been providing summaries of complaints to DPE daily (changed from fortnightly to daily during January 2018). Responses to each complaint have been noted in each complaint report, with follow up actions often defined in revised reports.</p> <p>Some safety works were required at the northern end of the Barangaroo site to stabilise the sandstone cliff wall along Hickson Road which is in a State Heritage area. A number of bolts were installed into the sandstone to support the wall and make safe the work area. It is understood that Sydney Metro informed DPE of this activity.</p> <p>There were no incidents related to TSE works, as defined by the project approval definition for incidents, reported or observed by the ER during the period or reported to DPE under condition A41.</p>
Sydney Metro	<p>There were no complaints received in relation to works undertaken directly by Sydney Metro.</p> <p>There were no incidents related to Sydney Metro conducted works as defined by the project approval definition for incidents reported or observed by the ER during the period or reported to DPE under condition A41.</p>



Audits	
TSE	Nil
Demolition	Nil
Sydney Metro	Nil

Looking Forward	
Demolition and TSE	<p>Core Focus Areas for the month of March 2018 are:</p> <ul style="list-style-type: none">➤ Finalisation of residual Construction Environmental Management Framework documentation including the Visual Amenity Management Plan and the Spoil Management Plan.➤ Historic Heritage Investigations at Waterloo, Pitt Street, and Barangaroo.➤ Contaminated soil management at Bligh Street; Marrickville; Waterloo; Crows Nest and Chatswood.➤ Noise and vibration management for works at Crows Nest, Pitt Street, Martin Place and Victoria Cross TSE and demolition sites.➤ Dust management during demolition works at Pitt Street, Martin Place and Victoria Cross demolition sites; and➤ Set up of mitigation controls as part of site establishment across all sites.