Suite 2.06, Level 2 29-31 Solent Circuit Baulkham Hills NSW, 2153 Australia

Tel: 61 (02) 9659-5433 E-mail: <u>hbi@hbi.com.au</u> Web: <u>www.hbi.com.au</u>

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

15 January 2018 Ref: 170108-ER-DPE-TSE-Dec17

Dear Stacy

RE: Sydney Metro City & South West Chatswood to Sydenham CSSI 15_7400 – ER Monthly Report for December 2017 – 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 MOD1 (18 October 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 **December 2017**.

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

Works conducted in December 2017 at the following sites are summarised below:

Chatswood:

- Chatswood dive site
 - Utility, heritage and geotechnical investigations
 - Installation of hoarding and setting up offices and amenities
 - Relocation of underground utility services
 - Removal of existing concrete and asphalt slabs involving hammering and safely disposing of contaminated materials
 - Construction of internal roads, driveways, piling platforms and the foundations for sheds and other facilities involving excavating unsuitable material and importing and compacting road base material
 - Installation of sheds involving concreting, building retaining walls and settingup silos and water tanks
- Nelson Street
 - Relocating underground utility services and temporarily reinstating the works areas
- Frank Channon Walk between Nelson Street and Gordon Avenue
 - Frank Channon Walk was temporarily closed between Gordon Avenue and Nelson Street from 27 November 2017 until mid-December 2017 to facilitate work by Telstra to relocate a telecommunication cables.
- Out-of-hours works
 - Chatswood dive site
 - Delivery and unloading of oversized plant and equipment
 - Mowbray Road, Hampden Road and Pacific Highway
 - Identifying existing underground utility services on the footpath and within the road on Mowbray Road, Hampden Road and Pacific Highway involving saw cutting and excavating with a vacuum truck
 - Relocating underground utility services on Mowbray Road, Hampden Road and the Pacific Highway/Nelson Street intersection involving saw cutting, excavating and backfilling trenches, laying cables and temporarily reinstating works areas
 - Installing safety markers on the overhead telecommunication lines along Pacific Highway
 - Installing temporary traffic and pedestrian management and establishing works areas
 - Equipment used during these works included but was not limited to hand tools, truck mounted cranes, excavators, concrete saws, drills, vacuum excavation trucks, elevated work platforms, rock hammers, trucks, light vehicles, lighting towers, generators and traffic control.

Works at and around Chatswood dive site were shut down over the Christmas period from Saturday 23 December 2017 until Monday 8 January 2018.

Artarmon:

Out of hours works continued in December 2017- Road condition inspections and testing carried out on Reserve Road, Whiting Street, Dickson Avenue and Clarendon Street before major construction works start at the Artarmon substation site

Crows Nest:

- > Within and around the site
 - o Installing hoarding around the site perimeter
 - Completing demolition of remaining sections of buildings at 473 and 521
 Pacific Highway and 14 Clarke Street
 - Completing retention works (structural works i.e. anchoring works around the nearby properties) around the site
 - Continuing to identify and relocate utility services such as power, gas, sewer and telecommunication lines around the perimeter of the Crows Nest Station site, along Pacific Highway, Hume Street, Oxley Street and Willoughby Road
 - Continuing earthworks to level the site and constructing platforms to hold piling rigs
 - Completing vegetation and tree removal around the site perimeter on Oxley Street, Pacific Highway and Hume Street
 - Continuing surveys, soil, heritage and geotechnical investigations around the site and removing hazardous material
 - Constructing two new power kiosk substations on the corner of Clarke Street and Hume Street
 - Upgrading driveways and constructing new site driveways
 - Commencing the widening of Clarke Lane from the back of 22 Clarke Lane to Oxley Street
 - Continuing preparations for the Hume Street bridge closure, which is scheduled for six months from February 2018
- > Out-of-hours works other than for the delivery and removal of oversized equipment, the following works were conducted during out of hours:
 - Albany, Oxley, Hume and Clarke Streets, Hume Lane and Clarke Lane -Conducting road condition surveys
 - Hume Street -Hume Street (between Clarke Lane and Pacific Highway) closed between 27-30 December 2017 to complete utility (sewer) relocation works, in preparation for the 6-month closure of the Hume Street bridge from February 2018
 - Pacific Highway at Willoughby Road continuing utility relocation, involving saw cutting, trenching, installing cables and reinstating the work areas
 - Pacific Highway, Hume, Oxley and Clarke Streets and Willoughby Road continuing utility relocation including potholing and trenching and removing vegetation and trees
 - Clarke Street completing bundling and commissioning of aerial cables between Pole Lane and Hume Street

Works at and around the Crows Nest Station site were shut down between Friday 22 December and Tuesday 26 December and on Sunday 31 December and Monday 1 January, other than works in Hume Street as described.

Victoria Cross:

- Victoria Cross South site
 - Completing demolition of 181, 187, 189 and 155 Miller Street and loading out demolition materials
 - Removing scaffolding from demolished buildings
 - Continuing investigating and relocating services such as power, gas and sewer lines, involving potholing, saw cutting, trenching, installing cables and reinstating the works areas
 - Decommissioning a substation on Denison Street and Miller Street
 - o Continuing surveys and geotechnical drilling in the roads around the site

- Removing vegetation/trees on Miller Street
- o Replacing sections of hoarding in preparation for station excavation works
- Continuing retention works and installing ground anchors to prepare the site for tunnel excavation
- o Installing new stormwater drainage on Miller St (outside 155 Miller St)
- Victoria Cross North site
 - o Continuing surveys and soil, heritage and geotechnical investigations
 - o Removing hazardous material from the site
 - Installing fencing and hoarding around the site perimeter
 - Establishing site offices and amenities
 - o Installing erosion and sediment controls
 - Demolishing existing concrete driveways and slabs
 - o Commencing excavation of the site and piling for retention walls
 - Investigating and relocating utilities including temporary lane and footpath closures
- Out-of-hours works –Other than for the delivery and removal of oversized equipment, the details of the following works were conducted during out of hours:
 - Miller, McLaren, Walker, Denison, Spring and Little Spring Streets, Blues Point Road and Henry Lawson Avenue - Conducting road condition surveys
 - o Miller Street
 - Investigating and relocating utility services
 - Removing vegetation, trees and hoarding
 - Commissioning a substation
 - Continuing installation of a block wall in the 65 Berry Street car park
 - Installing stormwater drainage (outside 155 Miller Street)
 - Denison Street demolishing 155 Miller Street (Tower Square) during standard construction hours and on Saturdays between 8am and 5pm and decommissioning a substation
 - Berry Street/Denison Street continuing to investigate and relocate services and utilities

Works at and around the Victoria Cross Station sites were shut down from Saturday 23 December 2017 and restarted on Tuesday 2 January.

Blues Point

- ➤ Road condition inspections and testing were carried out on Miller Street, Blues Point Road and Henry Lawson Avenue before major construction works start at the Blues Point site. The testing involves a vehicle towing a specialised testing trailer travelling along the road at slow speed and placing a weight onto the road pavement. This test measures the existing condition of the road approximately every 100 metres. The testing needs to occur outside of standard construction hours due to the requirement for uninterrupted traffic flow while it is completed.
- Out-of-hours road condition testing started on Friday 1 December 2017.

Barangaroo:

- Hickson Road (between Munn Street overpass and High Steps)
 - o Utility and geotechnical investigations carried out in the footpath and the road
 - o Installation of utilities outside of the Heritage Area
 - Installation bolts to protect and secure the High Street heritage wall before the start of station excavation works
- Nawi Cove foreshore and lawn area
 - Installation of hoarding and temporary fencing
 - Closing public access to the lawn area and the southern side of Nawi Cove to start site establishment from 8 January 2018. Pedestrian access to Dukes Pier

- and the pontoon will be maintained.
- Removing trees, vegetation, pavement, sandstone edging and street furniture within the new worksite
- Delivering materials and equipment, including out-of-hour large vehicle deliveries
- Earthworks, excavation and concreting activities, including building temporary hardstand areas
- Site investigation works, involving trenching and drilling activities.
- Out-of-hours works
 - Hickson Road (between Munn Street overpass and High Steps)
 - Utility and geotechnical investigations and relocation of underground services
 - Installing high voltage power for tunnelling machines

The site was shutdown from Friday 22 December and reopened on Monday 8 January 2018.

Martin Place:

- Bligh Street site
 - Excavating acoustic shed foundations using rock hammers and excavators
 - o Removing excavated material from site
 - o Constructing site driveways on O'Connell Street
 - o Delivering site huts, equipment, tunnelling machinery and materials to site
 - Concrete works for foundations of the acoustic shed
- Martin Place North site
 - o Internal strip out of buildings on Hunter, Castlereagh and Elizabeth Streets
 - o Installing (and removing) scaffolding and hoarding
 - o Ongoing structural demolition works and removing materials from site
- Martin Place South site
 - Preparing building for demolition
 - Substation decommissioning
- > Hunter, Castlereagh, Elizabeth, Bligh and O'Connell Streets and Martin Place
 - Identifying existing utility services using a hand-held scanner and vacuum truck and accessing service pits on footpaths and within the road
 - Trenching and potholing
- Out-of-hours works
 - Ausgrid works to remove, modify and relocate existing services were undertaken around the Martin Place Station and Bligh Street sites from Wednesday 20 December 2017.
 - Works occurred on Castlereagh and Elizabeth Streets (between Hunter and King Streets), Martin Place (between Elizabeth and Castlereagh Streets) and at the intersection of Hunter and Bligh Streets.
 - Works between Wednesday 27 December and Monday 15 January were potentially to be undertaken 24 hours a day, in order to complete as much of the works as possible when traffic and pedestrian volumes are lowest.

There were no works on Christmas Day (25 December), Boxing Day (26 December), New Year's Eve (31 December) and New Year's Day (1 January).

Pitt Street:

- Pitt Street North site
 - Ongoing structural demolition work and removal of material from site
 - Removing scaffolding and waterproofing of adjoining exposed walls

- Contamination investigations
- Site establishment works
- Pitt Street South site
 - o Site establishment and enabling works for demolition
 - Scaffolding within the site boundaries
- Out-of-hours works
 - o Pitt, Park and Castlereagh Streets
 - Removing and replacing existing hoarding around the site
 - Delivering and removing plant and equipment including oversized loads to and from site
 - Ausgrid works including trenching and installing new ductwork and cabling in footpaths and roads
 - Installing a kiosk substation behind hoarding
 - Pitt and Bathurst Streets
 - Preparation for demolition

The Pitt Street Station sites were shut down for the Christmas and New Year period from close of business Friday 22 December 2017, resuming Wednesday 3 January 2018.

Waterloo:

- Within and around the Waterloo Station site
 - Continuing to remove internal walls and demolish external walls and roofing
 - o Installing hoarding and scaffolding around the site, involving tree trimming
 - Moving plant and materials to and from the site
 - Overhead cable tagging activities
 - Preparing the site for excavation of the station box, including hammering, piling and concrete works.
- Out-of-hours works
 - Within and around the Waterloo Station site
 - Moving plant and equipment to and from site using large vehicles which will access the site via Botany Road
 - Installing hoarding and scaffolding around the site for approximately
 15 nights during the two- month period.
 - Botany Road, Raglan Street and Cope Street
 - Installing new power poles, bundling overhead cables and testing new cables at Raglan Street and Botany Road for approximately 10 nights over a four-week period in December 2017 and early January 2018.
 - Sewer relocation investigations on Botany Road
 - Testing new power cables in Raglan, Cope and Wellington streets in December, and Botany Road, Buckland and Wellington streets in January.
 - Power supply may have been affected while new cables were being tested. Residents and business were to be notified by Ausgrid in advance if power to their property will be affected.

Marrickville:

- Marrickville dive site (including external property boundary activities)
 - Delivering materials and construction equipment
 - Setting up the precast acoustic shed structure
 - Constructing the precast facility, including the concrete plant and silo structures
 - Preparing for piling and steel works, including building footings for future gantry cranes
 - Creating the internal road network, involving saw cutting, concrete works, excavation and earthworks

- o Minor tree removal works within the site and along the footpath
- Concrete breaking activities across the dive site
- o Installing site hoarding and perimeter fencing
- > Edinburgh Road and Railway Parade
 - o Underground utility investigations, involving slit trenching
 - o Installing noise barriers, site hoarding and perimeter fencing
- Edgeware Road, Lord, Council and May streets
 - o Underground utility investigations
- Out-of-hours works
 - Edinburgh and Bedwin roads underground utility investigations, involving slit trenching

The site was shut down for the holiday period on Friday 22 December and was to reopen on Monday 8 January 2018.

ER Inspections

Demolition and TSE

Weekly inspections continued under the management of the TSE contractor for the demolition sites. It is anticipated that generally each site will be inspected every second week at this stage of the project.

Sites inspected in December 2017 comprised:

- Victoria Cross South 5/12/17, 19/12/17
- Chatswood 5/12/17, 19/12/17
- Martin Place 5/12/17, 12/12/17, 19/12/17
- Barangaroo 5/12/17, 19/12/17
- Pitt Street 5/12/17, 12/12/17
- Crows Nest 19/12/17
- ➤ Waterloo 12/12/17
- ➤ Marrickville –12/12/17

Additional Inspections:

- ➤ Non-Scheduled Site Inspection at Crows Nest and Victoria Cross was conducted on 7/12/17
- Impromptu site inspection from outside site boundary at Crows Nest, Victoria Cross and Pitt St North on 11/12/17

ER Inspection reports have been prepared and issued to Sydney Metro and TSE Contractor. Three (3) actions were identified during the inspection on 19-12-17.

Endorsed Document/s

TSE 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 during December 2017:

- Management Plans
 - Waste and Recycling Management Plan Rev 6
 - Stormwater and Flooding Plan
 - o DELTA CEMP Rev 8 to address DPE Approval
 - o CSWMP Revised ER Endorsement
 - Business Management Plan Rev 02
- Construction Traffic Management Plans
 - o Crows Nest Site Establishment CTMP
 - Bligh Street Site Est CTMP
 - o VC North Site Est CTMP
 - Crows Nest Utilities CTMP
 - Waterloo Site Establishment CTMP
 - o Chatswood CTMP for Site Establishment
 - Crows Nest Sewer Works CTMP
 - o Bligh St Stage 2 CTMP
 - CBD Utilities CTMP
- ➤ CNVISs
 - CNVIS Martin Place North Local Area & Utility Works (LAUWs)
 - CNVIS MP South LAUWs
 - CNVIS Pitt St North and South LAUWs
 - o CNVIS LAUWs Bligh Street
 - Crows Nest CNVIS for LAUWs (works in Christmas period) Rev 8
- Archaeological Method Statements (Final)
 - o Waterloo AMS
 - Barangaroo AMS
 - Pitt Street North AMS
- Site Establishment Plans (SEPs)
 - o Barangaroo Rev 6 covering Hickson Road Wall protection works
 - Marrickville Rev 04 covering silo installation and minor clearing
 - Pitt Street South Rev 03 Hoarding and Preparation for Demolition
 - Martin Place Tilt meter installation (070021 Rev 01)
 - o Barangaroo SEP Utilities Rev 06
 - Waterloo SEP slab removal (070023 Rev03)
 - o Boreholes BH1122 and BH1112 (043024 Rev 00)
 - o Pitt St South SEP Rev 04 Site Establishment
 - VC North SEP (070018 Rev 02)
 - o Crows Nest SEP Rev 03 and Rev 04 (070017)
 - o Marrickville SEP (070024 Rev 05)
 - Sydney Park Boreholes SEP
 - Chatswood SEP (070015 Rev 05)
 - Crows Nest Utilities during Christmas break (070017 Rev 05)
 - Martin Place Utilities during Christmas break (070021 Rev 02)
 - Pitt Street SEP (070022 Rev 04)
- Out of hours works (OOHW) approvals
 - OOHWs Application 329 Pitt Street Investigations
 - VC 010 Victoria Cross Hoarding removal
 - Martin Place Train Tunnels Design Investigation works
 - Pitt Street 007 Boom Lift
 - o Tilt Meters Macquarie Bank

- Extension of OOHWs 003 and 006 and MP001
- > Tree Report
 - o Tree Report Rev P
- Sydney Metro
 - o Consistency Assessment Barangaroo Utilities
 - Consistency Assessment for the Martin Place, Pitt Street and Bligh Street Utility works
 - o Consistency Assessment Chatswood dive services facility (post TSE works)
 - o Pre Construction Compliance Report (PCCR) TSE Works
 - Construction Complaints Management System final review and endorsement Rev
 6.3

Non-comp	Non-compliance/ Incidents / Complaints				
TSE	The following compla	The following complaints were received:			
	Site	No of Complaints	Complaint Category	Date/s of Complaint/s raised	
	Barangaroo	1	Noise	4/12/17	
		1	Noise but Not TSE work	11/12/17	
	Chatswood	5	Noise	3/12/17, 6/12/17, 12/12/17, 15/12/17	
		1	Property condition survey not done	6/12/17	
		1 1	Visual amenity Other (OOHW permit)	12/12/17 20/12/17	
	Crows Nest	1 7	Traffic Noise	5/12/17 5/12/17, 6/12/17 (2 complaints) , 7/12/17 (3 complaints), 12/12/17	
		3	Vibration	11/12/17 (2 complaints), 12/12/17	
		2	Trucks park idling on road and set down area*	15/12/17 (2 complaints)	
		2	Not related to TSE	27/12/17, 31/12/17	
		1	Property impact	27/12/17	
	Martin Place	7	Noise	14/12/17, 19/12/17 (5 complaints), 21/12/17	
		1	Traffic	28/12/17	
	Pitt Street	1	Vibration	6/12/17	
		1	noise	7/12/17	
	Waterloo	1	noise	19/12/17	
	Total Complaints'	37	Majority of the noise of	complaints came from the tree	

	this month		removal and utilities relocation works.	
	* Two complaints at Crows Nest on 15 December related to parking of trucks on Clarke Street. The parking and truck movement in this location was identified as not compliant with the Construction Traffic Management Plan (CTMP) for the Crows Nest site. The CTMP is required under Condition E82 of the Infrastructure Approval.			
		ponses to each co	een providing summaries of non-EPL complaints to DPE on implaint have been noted in each complaint report, with direports.	
	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.			
Demolition	The following complaints were received at the following sites:			
			oise and vibration 13/12/17, 14/12/17 perty damage, 7/12/17 noise	
	I -	onses to each con	een providing summaries of complaints to DPE on a applaint have been noted in each complaint report, with dreports.	
			elition works as defined by the project approval definition e ER during the period or reported to DPE under condition	
Sydney Metro	There were no complai	nts received in re	ation to works undertaken directly by Sydney Metro.	
Metro		incidents reporte	ey Metro conducted works as defined by the project d or observed by the ER during the period or reported to	

Audits	
TSE	Nil
Demolition	Nil
Sydney Metro	Nil
Metro	

Looking Forward				
Demolition	Core Focus Areas for the month of January 2018 are:			
and TSE	Noise and vibration management for works at Crows Nest, Pitt Street, Martin Place and Victoria Cross demolition sites;			
	Noise management for out of hours utility works at Chatswood, Crows Nest, and Victoria Cross TSE sites;			
	Dust management during demolition works at Pitt Street, Martin Place and Victoria Cross demolition sites; and			
	Contamination and Heritage Investigations at Waterloo, Pitt Street, Barangaroo, Chatswood, Crows Nest and Marrickville as well as other sites as they are handed over to the TSE Contractors.			