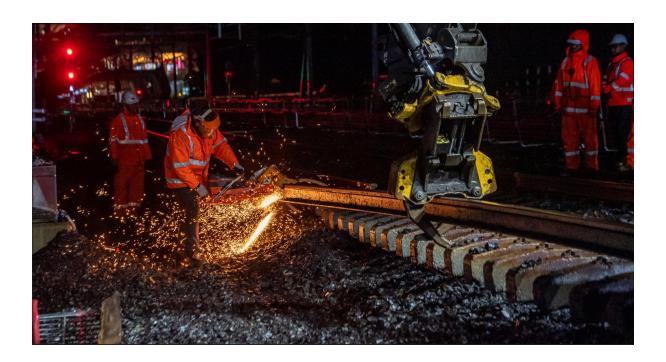




# Sydney Metro City & Southwest

Construction Compliance Report #8 (1 October 2020 to 31 March 2021)



Project:	City & Southwest	Date:	September 2021
Group:	Operations, Customer & Place-Making	Status:	Final
Author:	City & Southwest Environmental Coordinator	Revision:	1.0
Company:	Sydney Metro	File number:	SM-21-00122385
File name:	Construction Compliance Report 08 (Oct 2020 - Mar 2021)		



# 1. Executive Summary

This City & Southwest Construction Compliance Report #8 documents Sydney Metro compliance with the project's planning approvals granted by the Secretary of the NSW Department of Planning & Environment (the Secretary). This report covers the period from 1 October 2020 to 31 March 2020.

Construction continued across all three planning approvals, with an increase from 3573 to 4090 ongoing requirements being tracked by Sydney Metro and its contractors, and only 18 non-compliances raised during the reporting period. No incidents (as defined by the applicable SSI planning approval) were raised and a total of five environmental audits were undertaken.

A total of 284 complaints associated with the C&SW project CSSI planning approvals were received during the reporting period. Of these, 225 complaints were determined to be attributable to project works following investigation. The Central Station Mainworks Stage was attributable for the majority of complaints, followed by TSE (25% and 17%, respectively, of all complaints attributable to project works).

Complaints during the reporting period were heavily dominated by Noise & Vibration, representing 142, or 63%, of all complaints attributable to project works. This was followed by 30 relating to Traffic, Transport and Access and 21 relating to Property and business (representing 13% and 9% respectively of all complaints attributable to the project).

Works at the Central Station, Victoria Cross, Crows Nest and Pitt Street sites generated the most number of complaints during the reporting period (56, 40, 34 and 29 respectively; representing 71% of all complaints attributable to the project).



Stage	Ongoing Requirements (at end of Reporting Period) (non-compliances raised)	Incidents (as defined by the applicable CSSI planning approval)	Environmental Audit Reports (findings)	Complaints Attributable to Project Works (total complaints received)
SYAB	<b>0</b> (0)	0	0	0
NCW	<b>0</b> (0)	0	0	0
TSE	<b>252</b> * (0)	0	<b>2</b> (3)	39
CN ISD	<b>212</b> (0)	0	0	26
VC ISD	<b>242</b> (1)	0	0	27
BS	Design requirements captured under 'SM'.	0	0	0
MP Demo		Combined with	the MP ISD Stage.	
MP ISD	<b>251</b> (1)	0	0	2
PS ISD	<b>235</b> (4)	0	0	20
CSM	<b>261</b> (6)	0	1 (2)	56
W ISD	<b>226</b> (0)	0	<b>3</b> (21)	13
SSJ	<b>239</b> (0)	0		5
<b>SMEW</b> (formerly SSC)	<b>207</b> (0)	0	<b>1</b> (19)	0
LW (SMTF)	<b>176</b> (0)	0		0
LW (C2S)	<b>240</b> (0)	0	1 (6)	30
LW (S2B)	<b>230</b> (0)	0	· (0)	0
TSOM	<b>591</b> (0)	0	0	0
Southwest Package 4 MCL	<b>250</b> (1)	0	0	4
Southwest Packages 5 & 6 DCP HBW	<b>250</b> (3)	0	0	3
Southwest Metro Corridor	<b>0</b> (0)	0	0	0
Sydney Metro (including non- staged works)	<b>210</b> (2)	0	0	0
Total	<b>4,072</b> (18)	0	<b>8</b> (51)	<b>225</b> (284)
Total from Previous Report	3,525 (11)	0	5 (11)	<b>210</b> (277)

<sup>\*</sup> Excluding non-CSSI planning approval requirements.



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# **Definitions and Abbreviations**

	Definitions
BS	Barangaroo Station
C&SW	City & Southwest
C2S	Chatswood to Sydenham
CCR	Construction Compliance Report
CEMP	Construction Environmental Management Plan
CMTRP	Compliance Monitoring / Tracking and Reporting Program
CN	Crows Nest
CSM	Central Station Main
CSSI	Critical State Significant Infrastructure
DCP HBW	Dulwich Hill, Campsie, Punchbowl, Hurlstone Park, Belmore and Wiley Park stations (Packages 5 & 6)
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EPL	Environment Protection Licence
ER	(Independent) Environmental Representative
ISD	Integrated Station Development
LW	Line-Wide
MCL	Marrickville, Canterbury and Lakemba stations (Package 4)
MP	Martin Place
NCW	Northern Corridor Works
PIR	Preferred Infrastructure Report
PS	Pitt Street
S2B	Sydenham to Bankstown
Secretary	The Secretary of the NSW Department of Planning, Industry and Environment
SM	Sydney Metro
SMEW	Southwest Metro Early Works
SMTF	Sydney Metro Trains Facility
SSC	Southwest Stations and Corridor
SSD	State Significant Development
SSJ	Sydenham Station Junction
SWM	Southwest Metro (Sydenham to Bankstown)
SYAB	Sydney Yard Access Bridge
TBM	Tunnel Boring Machine
TSE	Tunnels and Station Excavation
TSOM	Trains, Systems, Operations and Maintenance
VC	Victoria Cross
W	Waterloo



# 2. Introduction

# 2.1. Purpose of this Report

The purpose of this Construction Compliance Report (CCR) is to document Sydney Metro's compliance with the requirements of the City & Southwest (C&SW) Critical State Significant Infrastructure (CSSI) planning approvals (refer to Section 2.3.1 for details on the project's planning approvals). Sydney Metro CCRs are available on the Sydney Metro website (<a href="https://www.sydneymetro.info/">https://www.sydneymetro.info/</a>).

This report will be submitted to the Secretary of the NSW Department of Planning, Industry and Environment (the Secretary) for information every six (6) months. The scope of the reports will cover all activities that were subject to the C&SW CSSI planning approvals during each reporting period.

This report covers the reporting period for all C&SW works subject to the CSSI planning approvals from 1 April 2020 to 30 September 2020. Table 1 cross-references sections in this report that address each applicable planning approval requirement relating to CCRs.

**Table 1: CCR Planning Approval Conditions Cross-References** 

Planning Approval Condition	Condition Requirement(s)	CCR Section
C2S A34	Construction Compliance Reports must be prepared and submitted to the Secretary for information every six (6) months from the date of the commencement of construction or within another timeframe agreed with the Secretary, for the duration of construction. The Construction Compliance Reports must include:	This report.
C2S A34(a)	A results summary and analysis of environmental monitoring;	Section 4.5
C2S A34(b)	The number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints;	Section 4.7 and Appendix 1
C2S A34(c)	Details of any review of, and minor amendments made to, the CEMP [Construction Environmental Management Plan] as a result of construction carried out during the reporting period;	Section 2.5
C2S A34(d)	A register of any consistency assessments undertaken and their status;	Section 2.3.3
C2S A34(e)	Results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit;	Section 4.4
C2S A34(f)	A summary of all incidents notified in accordance with Condition A41 and Condition A44 of this approval; and	Section 4.3
C2S A34(g)	Any other matter relating to compliance with the terms of this approval or as requested by the Secretary.	As of the date of this report, the Secretary has not requested that any other compliance matter be included in the CCRs.
C2S E64(f)	The [Business Management Plan] must be prepared before construction and must include but not necessarily be limited to provision for reporting of monitoring results to the Secretary, as part of the Compliance Tracking Program required in Condition A28.	Section 4.6



Planning Approval Condition	Condition Requirement(s)	CCR Section
S2B A30	Compliance reports of the CSSI must be carried out for the duration of Construction and for a minimum of one (1) year following commencement of Operation	This report.
S2B A31	The Construction Compliance Report must provide details of any review of, and minor amendments made to, the CEMP (which must be approved by the ER), resulting from Construction carried out during the reporting period.	Section 2.5
S2B E37(f)	The [Business Management Plan] must be prepared before construction and must include but not necessarily be limited to provision for reporting of monitoring results to the Planning Secretary, in accordance with the Compliance Tracking Program required in Condition A29.	Section 4.6
SMTF D3	Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, shall be maintained in a complaints register and included in the construction compliance reports required by this approval	Section 4.7 and Appendix 1

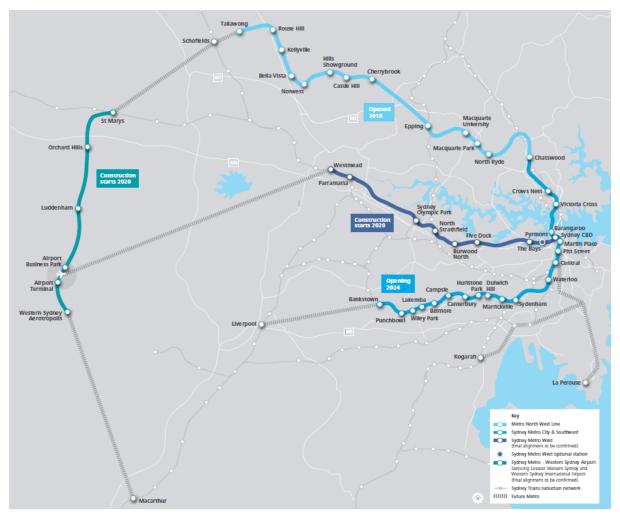
# 2.2. City & Southwest Project Overview

Sydney Metro currently comprises of four rail projects:

- **Northwest** (formerly North West Rail Link) a 36 kilometre project that commenced operations in May 2019 with a metro train every four minutes in the peak.
- City & Southwest a 30 kilometre metro line extending metro rail from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through new Central Business District (CBD) stations and south west to Bankstown. The project is due to open in 2024 with ultimate capacity to run a metro train every two minutes in the peak.
- West the next significant railway infrastructure investment proposed to be delivered by the second half of the 2020s. This new underground railway will connect Greater Parramatta and the Sydney CBD. The locations of seven proposed metro stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays.
- **Greater West -** New metro rail will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport and the growing region. The railway is to be operational in 2026 to coincide with commencement of operations of the Western Sydney Airport. The railway will include a station at St Marys to allow customers to interchange with the rest of Sydney's rail network.

Figure 1 provides a map of the four Sydney Metro project alignments.





**Figure 1: Sydney Metro Project Alignments** 

# 2.3. Project Planning Approvals

The C&SW project has generally been declared as a Critical State Significant Infrastructure (CSSI) project by the NSW Minister for Planning. Works within this declaration require planning approval as a CSSI project under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). Works outside the declaration require separate planning approval under the EP&A Act.

#### 2.3.1. CSSI Planning Approvals

The C&SW project comprises three CSSI planning approvals:

- Chatswood to Sydenham (refer to Section 2.3.1.1),
- Sydenham to Bankstown (refer to Section 2.3.1.2), and
- Sydney Metro Trains Facility (refer to Section 2.3.1.3).

This CCR covers the full scope of the C&SW works that are subject to CSSI planning approvals and does not cover any C&SW works that are subject to:



- State Significant Development planning approvals, and
- Self-determinations and exempt development.

#### 2.3.1.1. Chatswood to Sydenham

The Chatswood to Sydenham (C2S) component covers the construction and operation of the Sydney Metro railway between Chatswood and Marrickville. This includes the delivery of seven new metro stations and 15.5 kilometres of twin railway tunnels from Chatswood, beneath Sydney Harbour and the Sydney CBD, to Marrickville.

The C2S planning approval, including the *Chatswood to Sydenham Environmental Impact Statement* (EIS) and *Chatswood to Sydenham Preferred Infrastructure Report* (PIR), was granted planning approval by the NSW Minister for Planning on 9 January 2017. Since then, eight modifications (MODs) have been submitted by Sydney Metro and approved:

- The Victoria Cross Station & Artarmon Substation Modification (MOD1) covers the relocation of the Victoria Cross Services Building (including a new station entrance) and for construction and operation of Artarmon Substation. MOD1 was approved on 18 October 2017.
- The Central Walk Modification (MOD2) covers a new east concourse connecting the
  future metro platforms at Central Station with a new eastern entry on Chalmers
  Street, Surry Hills, as well as connections to the aboveground suburban platforms
  and associated platform works. MOD2 was approved on 21 December 2017.
- The Martin Place Metro Station Modification (MOD3) covers the reconfiguration of the Martin Place station, including additional land at 9-19 Elizabeth Street, alterations to the station entries, an unpaid concourse and retention of the existing MLC pedestrian link. MOD3 was approved on 22 March 2018.
- The **Sydenham Station & Metro Facility South** Modification (MOD4) covers the delivery of the Sydenham Metro Upgrade and precinct works, the Sydney Metro Trains Facility South, track and rail systems facilities, adjustments to the Sydenham Pit and Drainage Pumping Station, and ancillary infrastructure and works. MOD4 was approved on 13 December 2017.
- The Blues Point Acoustic Shed Modification (MOD5) covers the construction of a temporary acoustic shed at the Blues Point Site and retrieval of all components of Tunnel Boring Machines arriving at the Blues Point Site. MOD5 was approved on 2 November 2018.
- The **Administrative Changes** Modification (MOD6) provides greater alignment between the wording of the C2S Conditions of Approval (CoA) with the wording of the Sydenham to Bankstown (S2B) CoAs, which was approved on 12 December 2018 (refer to Section 2.3.1.2). MOD6 was approved on 21 February 2019.
- The Administrative Changes Modification (MOD7) provides clearer explanations of two CoAs regarding OOHW and Design Review Panel. MOD7 was approved 29 June 2020.
- The Blues Point Access Site Modification (MOD8) covers the extension of use of the Blues Point acoustic shed to provide access to complete tunnel fit out. MOD8 was approved 25 November 2020.



#### 2.3.1.2. Sydenham to Bankstown

The Sydenham to Bankstown (S2B) component covers the construction and operation of the Sydney Metro railway between Marrickville and Bankstown stations. This includes the upgrading of 13.5 kilometres of the Sydney Trains T3 Bankstown Line between the Marrickville and Bankstown stations.

The S2B planning approval, including the *Sydenham to Bankstown Upgrade EIS*, the *Sydenham to Bankstown Submissions and PIR* and the *Sydenham to Bankstown Submission Report*, was granted planning approval by the NSW Minister for Planning on 12 December 2018.

One modification (MOD) has been submitted by Sydney Metro and approved:

• The **Bankstown Station** Modification (MOD1) allows for a revised station design for Bankstown Station including provision of a new north-south connection across the rail corridor between Appian Way and Restwell Street. Administrative corrections and changes including updates to definitions and agency names to reflect name and title changes. MOD1 was approved on 22 October 2020.

#### 2.3.1.3. Sydney Metro Trains Facility

The Sydney Metro Trains Facility, formerly known as the Rapid Transit Rail Facility (RTRF), in Rouse Hill was constructed and commenced operations as part of the Northwest project in May 2019.

As part of the C&SW project, the Sydney Metro Trains Facility (SMTF) is being expanded to allow for Sydney Metro rolling stock to operate from Chatswood to Bankstown. The scope of this expansion is subject to the SMTF planning approval. This approval, including the *RTRF EIS* and *RTRF Response to Submissions Report*, was granted planning approval by the Minister for Planning and Infrastructure on 15 January 2014.

One modification (MOD) has been submitted by Sydney Metro and approved:

 The Administrative Changes Modification (MOD1) allows for high noise impacts to be generated in certain circumstances. MOD1 was approved on 20 September 2019.

#### 2.3.2. Planning Approval Register

Table 2 provides a register of CSSI planning approvals that the C&SW project is subject to (in order of approval date).

**Table 2: Planning Approval Register** 

Planning Approval	Approval Date
SMTF (SSI_5931)	15 Jan 2014
MOD1 – Administrative Changes	20 Sep 2019
C2S (SSI_7400)	9 Jan 2017
MOD1 – Victoria Cross Station & Artarmon Substation	18 Oct 2017
MOD4 – Sydenham Station & Metro Facility South	13 Dec 2017
MOD2 – Central Walk	21 Dec 2017
MOD3 – Martin Place Metro Station	22 Mar 2018

# **Unclassified**

# **Sydney Metro**



Planning Approval	Approval Date
MOD5 – Blues Point Acoustic Shed	2 Nov 2018
MOD6 – Administrative Changes	21 Feb 2019
MOD7 - Administrative Changes	29 June 2020
MOD8 – Blues Point Access	25 Nov 2020
S2B (SSI_8256)	12 Dec 2018
MOD1 – Bankstown Station	22 Oct 2020



# 2.3.3. Consistency Assessments

A total of 81 Consistency Assessments have been endorsed by either Transport for New South Wales or Sydney Metro under the CSSI project planning approvals as of the end of March 2021. Eleven of these were endorsed by Sydney Metro during the reporting period.

A register of Consistency Assessments endorsed during the reporting period is provided in Table 3.

**Table 3: Consistency Assessments Register for the Reporting Period** 

Consistency Assessment	Planning Approval	Approval Date
Installation of a new radio mast at Sydenham	C2S EIS	25/01/2021
Installation of eight new radio masts along the S2B rail corridor between Marrickville and Bankstown	S2B EIS	25/01/2021
Design changes to the Martin Place ISD unpaid concourse and pedestrian link, transfer slab and station services.	C2S EIS	16/10/2020
Re-railing works to be completed by the Sydney Metro Contractor between Brand Street and to the City side of Artarmon Station.	C2S EIS	15/10/2020
Assessment of demolition of building at Canterbury Bowls Club	S2B EIS	23/10/2020
Assessment of cooling water supply to Barangaroo Station - construction of trenching to lay pipework to existing seawater cooling system & operation of discharge of water into Sydney Harbour.	C2S EIS	25/01/2021
Trimming of trees in EEC area to avoid damage to trees whilst construction CSR along the rail corridor	S2B EIS	4/12/2020
Temporary Transport Plan July 2021 for two week closure of Bankstown line	S2B EIS	26/02/2021
Relocation of Services buildings within construction footprint along Bankstown Line	S2B EIS	9/03/2021
Alternations to heritage stations for conversation to Metro stations along Bankstown Line	S2B EIS	19/03/2021
Relocation of the gate at Edgeware Road	C2S EIS	26/03/2021



#### **Project Stages**

Information on each project stage is provided in the C&SW Staging Reports.

# 2.4. Current Status of Stages

Table 4 lists the status of each C&SW stage as of the end of March 2021.

**Table 4: Status of Project Stages** 

Stage	Construction* Commencement Date	Status
SYAB	17 Jun 2017	Physical works completed June 2018.
NCW	7 May 2018	Physical works completed May 2020
Demolition A	24 Jun 2017	Physical works completed September 2018.
Demolition B	14 Jul 2017	Physical works completed July 2018.
TSE	22 Dec 2017	Construction phase.
CN ISD	26 February 2021	Construction phase.
VC ISD	11th January 2021.	Construction phase.
BS	-	Pre-construction phase.
MP ISD Demo	19 Dec 2018	Physical works completed April 2019.
MP ISD	10 May 2019	Construction phase.
PS ISD	6 January 2021	Construction phase.
CSM	4 Aug 2018	Construction phase.
W ISD	1 October 2020	Construction phase.
SSJ	28 Aug 2018	Construction phase.
LW (SMTF)	16 Aug 2019	Construction phase.
LW (C2S)	4 March 2020	Construction phase.
LW (S2B)	4 March 2020	Construction phase.
TSOM	N/A	Not Principal Contractor
<b>SMEW</b> (formerly SSC)	1 Aug 2019	Construction phase.
SWM Station Upgrades Package 4 MCL	15 March 2021	Construction phase.
SWM Station Upgrades Packages 5&6 DCP HBW	19 April 2021	Pre-construction phase – Minor Works
Southwest Metro Corridor	19 March 2021	Construction phase.

<sup>\*</sup> Refer to the definition of 'Construction' in accordance with the relevant planning approval.



# 2.5. Construction Environmental Management Plan Reviews / Amendments

Table 5 provides details of any Construction Environment Management Plan (CEMP) reviews and amendments as a result of construction carried out during the reporting period.

Table 5: CEMP Reviews and Amendments as a result of Construction during the Reporting Period

Stage	Secretary CEMP Approval Date	Review / Amendment Comments
SYAB	9 June 2017	All physical works completed. The CEMP was made redundant prior to the reporting period commencing.
NCW	7 May 2018	All physical works completed. The CEMP was made redundant prior to the reporting period commencing.
Demolition A	5 June 2017 (excl. Victoria Cross Site) 24 June 2017 (incl. Victoria Cross Site)	All physical works completed. The CEMP was made redundant prior to the reporting period commencing.
Demolition B	12 July 2017	All physical works completed. The CEMP was made redundant prior to the reporting period commencing.
TSE	22 December 2017	The CEMP was not amended as a result of any reviews.
CN ISD	24 February 2021	CEMP approved by DPIE in the reporting period.
VC ISD	11 August 2020	The CEMP was not amended as a result of any reviews.
BS	-	Pre-construction phase (i.e. CEMP yet to be approved by DPIE).
MP ISD Demo	19 December 2018	All physical works completed. The CEMP was made redundant prior to the reporting period commencing.
MP ISD	3 July 2020	The CEMP was updated with amendments and was endorsed by the ER 10 March 2021.
PS ISD	24 December 2020	CEMP approved by DPIE in the reporting period.
CSM	4 August 2018	Minor amendments following audit and 6 monthly review and comments closed out.
W ISD	31 July 2020	The CEMP was not amended as a result of any reviews.
SSJ	28 August 2018	The CEMP was amended 7 April 2021 as a result of periodic review.
LW (SMTF)	16 August 2019	The CEMP was updated with amendments and was endorsed by the ER 28 April 2021.
LW (C2S)	4 March 2020	The CEMP was updated with amendments and was endorsed by the ER 24 November 2020.
LW (S2B)	4 March 2020	The CEMP was updated with amendments and was endorsed by the ER 24 November 2020.
TSOM	N/A	Not Principal Contractor.
SMEW	30 July 2019	The CEMP was updated 23 February 2021 as a results of periodic review and related comments.
SWM Package 4 MCL	15 January 2021	CEMP approved by DPIE in the reporting period.
SWM Packages 5&6 DCP HBW	4 March 2021	CEMP approved by DPIE in the reporting period.
Southwest Metro Corridor	26 February 2021	CEMP approved by DPIE in the reporting period.



# 2.6. Relationships between Planning Approvals and Stages

Table 6 outlines the relationships between the planning approvals and C&SW stages.

Table 6: Allocation of Planning Approvals to C&SW Stages

Planning Approval	SYAB	NCW	Demolition A	Demolition B	TSE	ISDs (inc. MP ISD Demo)	BS	CSM	SSJ	LW	TSOM	SMEW	SWM Package 4 MCL	SWM Package 5&6 DCP	SWM Corridor
SMTF (SSI_5931)										✓	✓				
SMTF MOD1 – Administrative Changes										✓	✓				
C2S (SSI_7400)	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
C2S MOD1 – Victoria Cross Station and Artarmon Substation (Scope Changes)					✓	✓				✓	✓				
C2S MOD1 – Victoria Cross Station and Artarmon Substation (Administrative Modification)	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				
C2S MOD2 – Central Walk										✓	✓				
C2S MOD3 – Martin Place Metro Station (Scope Changes)					✓	✓				✓	✓				
C2S MOD3 – Martin Place Metro Station (Administrative Modification)					✓	✓			✓	✓	✓				
C2S MOD4 – Sydenham Station and Metro Facility South					✓				✓	✓	✓				
C2S MOD5 – Blues Point Acoustic Shed					✓					✓	✓				
C2S MOD6 – Administrative Changes		✓			✓	✓	✓		✓	✓	✓				
C2S MOD7 – Administrative Changes										✓	✓				
C2S MOD8 – Blues Point Access										✓					
S2B (SSI_8256)										✓	✓	✓	✓	✓	✓
C2S MOD1 – Bankstown Station										✓	✓	✓	✓	✓	✓



# 2.7. Environment Protection Licences

In accordance with the NSW *Protection of the Environment Operations Act 1997*, Environment Protection Licences (EPL) are required in order to undertake work activities during certain stages of the project. Table 7 lists the status of EPLs for each C&SW stage.

**Table 7: Status of C&SW Environment Protection Licences** 

Stage	Licence	Activity Type	EPL#	Status					
SYAB	EPL not requ	ired (all works completed pri	or to the re	porting period).					
NCW	EPL not required (all works completed prior to the reporting period).								
Demolition A	EPL not required (all works completed prior to the reporting period).								
Demolition B	EPL not requ	ired (all works completed pri	or to the re	porting period).					
TSE	John Holland Pty Ltd	Concrete works, railway systems activities	20971	Issued 28 September 2017 and currently active.					
CN ISD		EPL not required	l.						
VC ISD		EPL not required	l.						
BS	Pre-construction	n phase (i.e. no EPL required	I during the	reporting period).					
MP ISD Demo	EPL not requ	ired (all works completed pri	or to the re	porting period).					
MP ISD		EPL not required	l.						
PS ISD		EPL not required	l.						
CSM	Laing O'Rourke Australia Construction Pty Ltd	Railway activities – railway infrastructure construction	21148	Issued 28 November 2018 and currently active.					
W ISD	EPL not required.								
SSJ	Laing O'Rourke Australia Construction Pty Ltd	Railway systems activities	21147	Issued 17 January 2019 and currently active.					
LW (SMTF)		EPL not required	l.						
LW	Sydney Trains	Railway activities – rolling stock operations Railway activities – railway infrastructure operations	12208	Sydney Trains Collaboration Agreement*					
LW	CPB Contactors PTY LIMITED	Railway activities – railway infrastructure construction	21423	Issued 31 July 2020 Latest variation 23 April 21					
TSOM	N/A for Construction – Ne	ver going to be Principal Cor	ntractor (wi	Il require EPL for Operation)					
<b>SMEW</b> (prior to 24 Sep 2019)	Sydney Trains	Railway systems activities	12208	Sydney Trains Collaboration Agreement*					
<b>SMEW</b> (post 24 Sep 2019)	Laing O'Rourke Australia Construction Pty Ltd	Railway systems activities	21147	On 24 September 2019, SMEW scope became subject to EPL #21147.					
SWM Package 4 MCL		EPL not required	l.						
SWM Packages 5&6 DCP HBW		EPL not required	I.						
Southwest Metro Corridor	Laing O'Rourke Australia Construction Pty Ltd	Railway systems activities	21147	Issued 17 January 2019 and currently active.					

#### **Unclassified**

#### **Sydney Metro**

(Uncontrolled when printed)



\* Sydney Metro and Sydney Trains have entered into a Collaboration Agreement to define compliance responsibilities for all Sydney Metro works undertaken in the Sydney Trains rail corridor.

This CCR does not document compliance against EPLs. This is being undertaken by the relevant licensees.



# 3. Environment and Compliance Management

# 3.1. Compliance Management

Sydney Metro is accountable for ensuring compliance with all of the C&SW project's requirements relating to environmental and compliance management. Sydney Metro manages and tracks compliance under its CSSI planning approvals through the implementation of compliance tracking/monitoring program(s) in accordance with the relevant planning approval conditions.

#### 3.1.1. Tracking

Once a planning approval requirement has been generated, it is assigned an **Active** status.

The responsibility to comply with these Active requirements may be wholly or partially allocated by Sydney Metro to one or more of its contractors through contractual mechanisms. As a result of this and the staged nature of the project's delivery, these requirements will be complied with by different parties at different points along the project's construction and operational phases.

Once these requirements have been allocated to a contractor, the requirement is referred to as an **Environmental Requirement**. Within each contract, Environmental Requirements progress through two phases:

- Ongoing whereby further action is required to maintain compliance, and
- Complete whereby no further evidence or activity is required to maintain compliance. This is verified in an adequacy review conducted by the Environmental Representative and Sydney Metro prior to the Environmental Requirement being completed.

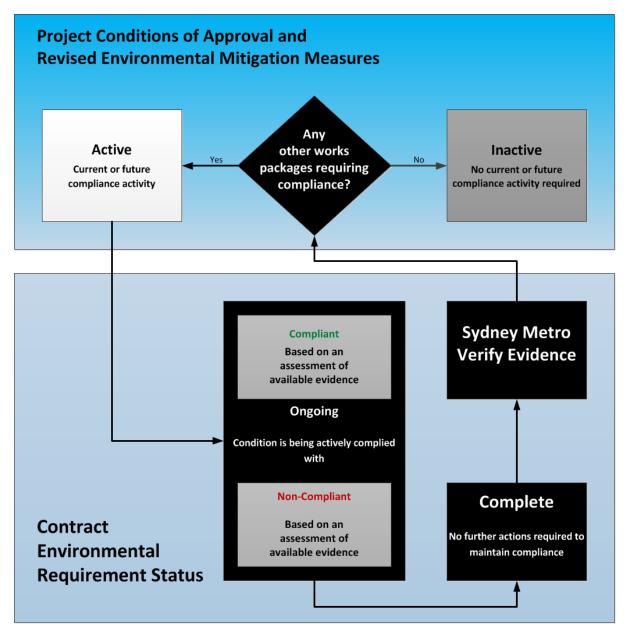
During the period of time an Environmental Requirement is Ongoing, it is subject to regular assessment through compliance monitoring and review activities. These assessments determine whether the Environmental Requirement is:

- **Compliant** (i.e. sufficient evidence is available to demonstrate that the Environmental Requirement is being complied with), or
- Non-Compliant (i.e. there is a lack of evidence to demonstrate that the Environmental Requirement is being complied with or there is a clear breach of the Environmental Requirement).

Once the same Environmental Requirement is Complete across each of its contract allocations, the planning approval requirement is assigned an **Inactive** status.

Figure 2 provides a schematic diagram of how requirements are tracked on the project.





**Figure 2: Tracking of Environmental Requirements** 



# 4. Environmental and Compliance Performance

The total number of C&SW CSSI ongoing compliance requirements at the end of the reporting period was 3,573. There were a total of 11 non-compliances against these requirements that were raised during the reporting period. These are detailed in Table 10. There were no environmental incidents as defined under the applicable planning approvals during the reporting period.

#### 4.1. Overview

A summary of the results of the C&SW compliance monitoring activities during the reporting period are provided in Table 8.

**Table 8: Compliance Summary for the Reporting Period** 

Stage	Ongoing Requirements (at end of Reporting Period) (non-compliances raised)	Incidents (as defined by the applicable CSSI planning approval)	Environmental Audit Reports (findings)	Complaints Attributable to Project Works (total complaints received)
SYAB	<b>0</b> (0)	0	0	0
NCW	<b>0</b> (0)	0	0	0
TSE	<b>252</b> * (0)	0	<b>2</b> (3)	39
CN ISD	<b>212</b> (0)	0	0	26
VC ISD	<b>242</b> (1)	0	0	27
BS	<b>0</b> – Design requirements captured under 'SM'.	0	0	0
MP Demo		Combined with	the MP ISD Stage.	
MP ISD	<b>251</b> (1)	0	0	2
PS ISD	<b>235</b> (4)	0	0	20
CSM	<b>261</b> (6)	0	1 (2)	56
W ISD	<b>226</b> (0)	0	<b>3</b> (21)	13
SSJ	<b>239</b> (0)	0		5
<b>SMEW</b> (formerly SSC)	<b>207</b> (0)	0	<b>1</b> (19)	0
LW (SMTF)	<b>176</b> (0)	0		0
LW (C2S)	<b>240</b> (0)	0	1 (6)	30
LW (S2B)	<b>230</b> (0)	0	1 (0)	0
TSOM	<b>591</b> (0)	0	0	0
Southwest Package 4 MCL	<b>250</b> (1)	0	0	4
Southwest Packages 5 & 6 DCP HBW	<b>250</b> (3)	0	0	3
Southwest Metro Corridor	<b>0</b> (0)	0	0	0



Stage	Ongoing Requirements (at end of Reporting Period) (non-compliances raised)	Incidents (as defined by the applicable CSSI planning approval)	Environmental Audit Reports (findings)	Complaints Attributable to Project Works (total complaints received)
Sydney Metro (including non- staged works)	ding non- <b>210</b> (2)		0	0
Total	<b>4,072</b> (18)	0	<b>8</b> (51)	<b>225</b> (284)
Total from Previous Report	<b>3,525</b> (11)	0	5 (11)	<b>210</b> (277)

<sup>\*</sup> Excluding non-CSSI planning approval requirements.

# 4.2. Non-Compliances

There were 18 non-compliances raised during the reporting period, with only one still open.

Table 9 provides a breakdown of the following non-compliance information for each stage:

- Non-Compliances raised during Reporting Period indicating the number of events that generated a non-compliance to be reported during the reporting period.
- Currently Open Non-Compliances indicating the number of Non-Compliances that were raised during the reporting period and are in the process of implementing resultant corrective and/or preventative actions.
- Compliance Load at the end of the Reporting Period indicating the number of environmental requirement allocations (refer to Section 3.1.1).

Table 9: Non-Compliances and Compliance Loads during the Reporting Period

Stage	Non-Compliances raised during Reporting Period	Currently Open Non-Compliances		
SYAB	0	0		
NCW	0	0		
TSE	0	0		
CN ISD	0	0		
VC ISD	1	0		
BS	Captured under Sydney Metro requirements.			
MP Demolition	0	0		
MP ISD	1	0		
PS ISD	4	0		
CSM	6	1		
WISD	0	0		
SSJ	0	0		
LW (SMTF)	0	0		
LW (C2S)	0	0		



Stage	Non-Compliances raised during Reporting Period	Currently Open Non-Compliances
LW (S2B)	0	0
TSOM	0	0
SMEW	0	0
SWMSU MCL	1	1
SWMSU DCP HBW	3	0
Southwest Metro Corridor	0	0
Sydney Metro (including non-staged works)	2	1
Totals	18	3

Table 10 provides details on the non-compliances that were raised during the reporting period.

Table 10: Non-Compliances raised during the Reporting Period

Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
17 Nov 2020	Pitt Street ISD	SSI15_7 400 - MCoA - E90	Managem ent Systems	Site establishment works involving services location, installation and hoarding erection commenced on 17/11/2020 including the use of heavy vehicles on Park Street, Pitt Street and Castlereagh Street at the North site and Pitt Street and Bathurst Street at the South site. This was in breach of the requirement to provide the Road Dilapidation Reports to Council no later than 1 month before use of the roads. City of Sydney Council received the Road Dilapidation Report on 16/11/2020 for the South site and 18/11/2020 for the North site.	Closed -  1) On identification that a non-compliance had occurred in a meeting with Sydney Metro and the Environmental Representative on 7/12/2020, CPB suspended all heavy vehicles to the project until 16 December 2020 which would represent 1 month following the submission of the dilapidation reports to Council and therefore compliance with CoA E90.
08 Dec 2020	Sydney Metro	SSI15_7 400 - MCoA - A40	Managem ent Systems	Independent Audit Report submitted to DPIE after the required 6 week period. Report sent through to DPIE on the 24 June 2020 which was 5 days after the 6 weeks after completion requirement.	Closed - 1)

# **Sydney Metro**



Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
10 Dec 2020	Central Station Main Works	SSI15_7 400 - MCoA - E85	Traffic, Transport and Access	Spoil trucks were observed using O'Connor street to navigate to site – a local road that is not approved within the Construction Traffic Management Plan (CTMP) for use by heavy vehicles. The event was reported by a resident, as they were concerned about the issue previously resolved in April.	Closed -  1) Manager issued an instruction to all their drivers that failure to adhere to CSM's CTMP specific haulage routes would result in "a review of individuals/truck drivers being allowed to continue work on the Sydney Metro Project".  2) LORAC's Community Place Manager informed the affected residents that they would check in periodically to determine whether the trucks have ceased use of the unapproved route.
01 Feb 2021	Central Station Main Works	SSI15_7 400 - MCoA - A40	Soil and Water	Treated water outside of EPL criteria was discharged intermittently for 49.5 minutes intermittently over a 26 hour period. During the 49.5 minutes, the average pH was 8.81 and the total volume of noncompliant discharge was 16,566 Litres. The discharge was applied to land at EPL2. Upon identification of the event, the WTP operators (EPS) were requested to cease discharging from the WTP at 09:26 on 02/02/21. The PLC system was tested on 02/02/2021 and found to be functioning as designed with the pH sensor triggering a closure of the shut off valve. An inspection was undertaken of the location and no environmental harm was observed.	Closed -  1) A review of rainfall during and after the event and results of samples taken indicated there was a very good dilution and buffering.  2) Phone message left for EPA Senior Operations Officer  3) Report provided a to the EPA Pollution Line  4) pH sensor wired directly to cut off valve as well as existing connection via the PLC. Additional independent sensors / cut-off valve installed
05 Feb 2021	Central Station Main Works	SSI8256 - MCoA - C7	Air Quality	The building manager from 54 Regent Street called to complain about silica dust migrating from the CSM site onto his property and trucks leaving site with tarps open.	Closed -  1) Additional sweeper truck movements were requested on SYAB  2) Labourers called to clean and tidy area.  3) Additional sweeper truck movements scheduled to occur on SYAB  4) Sediment traps emptied
15 Feb 2021	Pitt Street ISD	SSI8256 - MCoA – A27(d)	Managem ent Systems	Excavation works were performed outside locations considered to be associated with any tower crane bases approved in the "Early Works" CNVIS. CPB developed a CNVIS to cover all "Main Works" scenarios to be performed as a part of the project and transmitted to the Acoustics Advisor on 27 Jan 2021. The Acoustics Advisor was yet to provide endorsement for the Main Works CNVIS at this time, so any works performed outside the scenarios modelled in the Early Works CNVIS are considered to be non-compliant.	Closed –  1) CPB will ensure that any construction activities being performed on the project are to be in accordance with mitigation measures and noise limits set out in the endorsed Early Works CNVIS.  2) Acoustics Advisor to provide a Conditional Approval letter specifying specific practices to be adopted by the Project.

# **Sydney Metro**



Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
15 Feb 2021	Victoria Cross ISD	SSI8256 - MCoA - A1	Managem ent Systems	Delta were found to be dewatering TC5 work area in the North compound into the nearby garden bed on the South of the compound (council land). Delta was not operating as per their processes to dewater to sedimentation tanks, see attached relevant SWMS (page 11) and civil works plan (page 17).	Closed –  1) Delta to toolbox workforce (provide copy to Lendlease following) on dewatering procedures and ensure sedimentation tank is available to all work areas required.
10 Mar 2021	Pitt Street ISD	SSI8256 - MCoA - A1	Managem ent Systems	Out of Hours Works were conducted on Monday 8 March 2021 at the Pitt Street South site and on Tuesday 9 March 2021 at the Pitt Street North site that were not approved in accordance with the Out Of Hours Works Protocol.	Closed –  1) An internal review of the Out of Hours Protocol is required to address change management including communication of the revised "Out Of Hours Work Procedure" to the Project Team. Toolbox to CPB personnel, including engineering, management and supervisory teams. Action completed by CPB.
15 Mar 2021	Central Station Main Works	SSI15_7 400 - MCoA - A8	Noise and Vibration	During high noise works at Eastern Entrance on the 15th of March, a respite period of one hour was not observed after 3 hours of noisy works as required under Environment Protection Licence (3:1). Only a 30 minute respite was undertaken.	Closed -  1) Project requirements were reiterated to Eastern Entrance Team. Although the Condition of the EPL was breached, the impact would have been negligible. Saw cutting was the activity occurring throughout the day, hence only airborne noise impact would have been applicable. Due to the noise attenuating properties of the surrounding buildings and the conservative location of the noise logger, the internal noise levels and allowable durations for high noise activity would have been adhered to.
17 Mar 2021	Pitt Street ISD	SSI15_7 400 - MCoA - E47	Managem ent Systems	An out-of-hours works (OOHW) application was approved for site shed installation at Pitt St South site for 17 March 2021. The application included a standard mitigation measure "No tonal movement alarms on crane or knuckle booms". During an inspection by the Acoustic Advisor, a knuckle boom was observed to be operating with a tonal alarm.	Closed –  1) The works were notified 12 hours after the site visit therefore all works had stopped.
18 Mar 2021	Martin Place ISD	SSI15_7 400 - REMM - AQ6	Noise and Vibration	During night works EWPs (boom lifts and scissor lifts) on site were found to be emitting noise through tonal-alarms. As per the approved Out of Hour Application, non-tonal alarms are a standard mitigation measure and condition for undertaking OOH works. It was discovered that there had been no communication of these conditions to the new Lendlease night foreman.	Closed -  1) MPISD has now communicated the conditions to the Lendlease night foreman and other Lendlease night personnel. The subcontractor in question has been reminded of the requirements for non-tonal alarms on EWPs.

# **Unclassified**

# **Sydney Metro**



Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
19 Mar 2021	SWM Package 5 and 6 DCP HBW	SSI8256 - MCoA - E19	Managem ent Systems	Despite an induction and other communications to subcontractors detailing standard work hours including for deliveries, the communication specific time frames for delivery (not prior to 07:00am weekdays) failed to be communicated to the subcontractor delivery driver, resulting in a delivery outside approved hours, at 05:30am. The delivery outside of Standard Hours resulted in a complaint being received to the Project by a nearby resident.	Closed -  1) Full Project teams (Management, subcontractors) across all Downer Projects re-briefed on the Project working hours with specific focus on deliveries and the need for total compliance. The facts of the case were presented and stressed that non- compliances would not be tolerated. Pre-start briefing recorded and sign on sheets obtained.
20 Mar 2021	SWM Package 5 and 6 DCP HBW	SSI8256 - SWM MCoA - A1	Managem ent Systems	Works to be conducted during planned WE38 Sydney Trains Possession were documented, planned and approved within a Minor Works Approval (MWA) that included the installation of a footing and required auguring at Dulwich Hill for the yet to be installed overhead wiring structures.  The specific scope of enabling works including rock cutting (to allow clearance for the footing construction and mobility around the footing for future maintenance access) was not included within the MWA and deemed an omission.	Closed -  1) Full Project teams across all Downer Projects briefed on the Project specific scopes detailed in the MWA. The facts of the case were presented and stressed that no scopes outside of MWA were permitted. Pre-start briefing recorded and sign on sheets obtained.
20 Mar 2021	SMDS	SSI8256 - MCoA - E38	Soil and Water	Minor works approval for intrusive geotechnical investigation at Bankstown Station. A site vehicle exited the access point without implementation of adequate erosion and sediment controls. Material was tracked by the exiting vehicle and from the disturbed access gate. Due to the heaving rainfall, water flowed over the tracked material with the potential for it entering a stormwater pit.	Closed –  1) Tracked material was cleaned with a vacuum truck, sand bags were acquired and placed along the fence entry.  2) A toolbox held highlighting importance and availability of on-site erosion and sedimentation controls.

# **Sydney Metro**



Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
21 Mar 2021	Central Station Main Works	SSI15_74 00 - MCoA - E107	Soil and Water	Additional discharge to by-pass Water Treatment Plant (WTP) was undertaken. As a result of significant rainfall the risk was identified that the site's holding capacity was to be exceeded resulting in the flooding of the metro tunnels to the north. Water Treatment Plant (WTP) was operating at full capacity for the duration of the rain event, however maintenance activities were required throughout, intermittently. Pollutant: Water with high pH. Quantity or volume: <13,500L (~5L/s X 45minutes minus charging line and loss of head) Concentration: pH 10.6 Geofabric was placed at the discharge point as an additional contingency measure even though the Total Suspended Solids (TSS) were visually low. The pH of the water on site was approximately 10.6. No sediment on the geofabric was observed.	Open -  1) Notify ER and EPA. 2) Prepare an over flow strategy.
21 Mar 2021	SWM Package 4 MCL		Heritage	It was noted that a jackhammer was being used to remove top coast asphalt from the platform adjacent to the station building without the required monitoring in accordance with the Heritage Management Plan and Project Conditions of Approval.  Temporary and labour hire were not adequately informed of requirements of tasks associated with heritage.	Open –  1) Notify site management personnel of appropriate heritage requirements.  2) The works were ceased immediately and the operator informed of the breach.  3) Engage heritage specialist for site review of impacts  4) Obtain report from heritage specialist for mitigations and assessment  5) Undertake site awareness training and education on heritage requirements  6) Implement heritage assessment actions and recommendations
21 Mar 2021	SWM Package 5 and 6 DCP HBW		Managem ent Systems	Downer were operating planned construction activities at Punchbowl Station under approved Out of Hours Works during the WE38 Possession. The OOHWA stated prestart and mobilisation of works between 0600-0800 on Sunday 21 March 2021. At 0710 a works crew started up a vac truck to commence non-destructive digging. A Sydney Metro representative identified the works being conducted prior to 0800, Station Manager confirmed they were not permitted and instructed works to cease until 0800. No complaints were received. As the works were not considered and or approved to commence prior to 0800 this is a non-conformance to the approved working hours within the OOHWA WE38.	Closed -  1) Notify ER and EPA.  2) Prepare an over flow strategy.  3) Full Project teams (Management, subcontractors including Martinus Rail) across all Downer Projects rebriefed on the Project working hours specific to OOHWA and the facts of the case. Pre-start briefing recorded and sign on sheets obtained.



Date Raised	Stage	CoA	Туре	Description	Status and Actions taken or to be taken
29 Mar 2021	Central Station Main Works	SSI15_74 00 - REMM - WM1	Waste and Spoil	Spoil removal contractor transported 183t of material to the Eco Cycle Materials waste facility at Wetherill Park as a result of material being assigned to the wrong Waste Classification Report. On 1/04/21 it was determined that the material met the GSW criteria outlined in the Waste Classification Guidelines, but consisted of sampled material that exceeds the chemical criteria for the tip site so did not meet the additional criteria in the Eco Cycle Materials EPL.  Based on the volume, representative concentration exceedance, material harm to the environment is unlikely.	Closed -  1) Meeting with site supervisor and project engineers was held on 09/04/2021 to discuss the failure in the site waste tracking system with the objective of achieving best waste management practice. Present the site auditor with the NCR during the next waste review.

#### 4.3. Incidents

There were no environmental incidents as defined by the CSSI planning approval definitions during the reporting period.

# 4.4. Environmental Audit Findings

# 4.4.1. Open from Previous Reporting Period

Two environmental audit findings from the TSE EMS Demob & Handover Audit that were reported as 'open' in the previous reporting period. One was closed 8 October, the other closed 21 December.

#### 4.4.2. This Reporting Period

A total of five environmental audits were undertaken during the reporting period:

- Seven were undertaken internally by Sydney Metro contractors or their associates, and
- One was undertaken by the Independent Environmental Auditor.

The eight audits resulted in a total of 45 findings ('findings' include any items raised through an audit that are categorised as 'Low' or higher and do not include 'opportunities for improvement' or 'observations'). Several 'opportunities for improvement' and 'observations' were identified through these audits, which Sydney Metro and its contractors have actively addressed to close out (or are in the process of actively addressing to close out).

Table 11 summarises the environmental audits undertaken during the reporting period.



Table 11: Environmental Audits undertaken during the Reporting Period

Stage	Audit Title	Audit Type	Audit Report Date	Total Findings	Closed Findings	Open Findings
TSE	Environmental Close Out Audit	Internal Contrac tor Audit	30 Sept 2020	2	2	0
Waterloo ISD	CEMP Compliance Workbook – Groundwater Management Sub Plan Audit	Internal Audit	28 Oct 2020	6	6	0
Waterloo ISD	CEMP Compliance Workbook – Construction Noise & Vibration Management Sub Plan Audit	Internal Audit	15 Dec 2020	10	10	0
Linewide	Noise, Vibration and Traffic Management - BPS works	Indepe ndent Audit	12 Deb 2021	2 Observations 1 Improvement 3 minor NC	6	0
SSJ	EMS Audit	Internal Audit	24 Feb 2021	18 observations 1 minor NC	19	0
Waterloo ISD	EMS Audit – Waterloo ISD	Internal Audit	17–18 Mar 2020	5	5	0
CSM	Sci Qual International Audit Report- Laing O'Rourke Australia, 19-26 March 2021	Internal Audit	26 March 2021	2	2	0
TSE	Visual Amenity Management Plan	Internal Contrac tor Audit	31 Mar 2021	1	1	0
			Totals	51	51	0

# 4.5. Environmental Monitoring

In accordance with C2S C9, environmental construction monitoring programs must be prepared and implemented to monitor the following types of impacts caused by the project:

- Noise and vibration CoA C9(a),
- Blasting CoA C9(b),
- (Surface) Water quality CoA C9(c), and
- Groundwater (quality) CoA C9(d).

Table 12 indicates the applicability of the construction monitoring programs associated with each of the above to each Chatswood to Sydenham Stage of the project in accordance with the Sydney Metro *C&SW Chatswood to Sydenham Staging Report* (document available on the Sydney Metro website - <a href="https://www.sydneymetro.info/documents">https://www.sydneymetro.info/documents</a>). Grey cells indicate monitoring programs that have either been completed, are not applicable during the reporting period or are yet to commence 'construction' as defined under the applicable planning approval (and therefore not subject to construction monitoring activities).



A summary and analysis of the results of the environmental monitoring programs that were applicable during the reporting period is provided in Sections 0 to 4.5.4.

Table 12: Environmental Monitoring Program Applicability to each Project Stage

Chatswood to Sydenham Stage	Noise and Vibration – CoA C9(a)	Blasting – CoA C9(b)	Surface Water Quality – CoA C9(c)	Groundwater Quality – CoA C9(d)		
SYAB	All works o	completed prior to the	reporting period o	commencing.		
NCW	All works o	completed prior to the	reporting period of	commencing.		
TSE	Applicable	Applicable – However no blasting undertaken during the reporting period.	Applicable	Applicable		
CN ISD	Applicable	N/A	N/A	Applicable		
VC ISD	Applicable	N/A	N/A	Applicable		
BS – Yet to commence construction	Applicable	N/A	N/A	N/A		
MP ISD Demo	All works completed prior to the reporting period commencing.					
MP ISD	Applicable	N/A	N/A	Applicable		
PS ISD	Applicable	N/A	N/A	Applicable		
CSM	Applicable	Applicable – However no blasting undertaken during the reporting period.	Applicable	Applicable		
W ISD	Applicable	N/A	N/A	N/A		
SSJ	Applicable	N/A	Applicable	N/A		
LW	Applicable	N/A	Applicable	N/A		
<b>TSOM</b> – never going to be Principal Contractor	Applicable	N/A	N/A	N/A		

Sydenham to Bankstown Stage	Noise and Vibration – CoA C8(a)	Surface Water Quality – CoA C8(b)
LW	Applicable	Applicable
SMEW	Applicable	Applicable
Southwest Package 4 MCL	Applicable	Applicable
Southwest Packages 5 & 6 DCP HBW	Applicable	Applicable
Southwest Metro Corridor	Applicable	Applicable

#### 4.5.1. Noise and Vibration

During the reporting period, noise and vibration monitoring programs were applicable on the TSE, CN, VC ISD, MP ISD, PS ISD, CSM, W ISD, SSJ, SMEW and Linewide Stages. Southwest Metro packages 4, 5, 6 and Corridor will be included in the next report. A noise and vibration summary and analysis at each C&SW site for construction activities undertaken



during the reporting period is provided in Table 13 and\* Note LW and SSJ reporting is one month in front, so this report includes September 2020 – February 2021 results, March results will be provided in the next report.

\*\* Note SMEW reporting is two months in front, so this report includes August 2020 – January 2021 results, February and March results will be provided in the next report.

Table 14.

**Table 13: Noise Monitoring Results Summary and Analysis** 

Site (north to south)	Management Level Exceedances	Comments
TSE - Chatswood Dive	0	No monitoring conducted during the reporting period. Site handed over to follow on contractor on 30 Oct 2020.
TSE - Victoria Cross Station	7	Exceedances recorded during attended monitoring were attributed to non-TSE activities, traffic noise dominant.  Real-time monitoring removed on 11 Dec 2020.  Site handed over to follow on contractor on 18 Dec 2020.
TSE - Blues Point	0	No monitoring conducted during the reporting period. Site handed over to follow on contractor on 18 Dec 2020.
TSE - Barangaroo Station	0	
TSE - Martin Place Station	0	Real-time monitoring removed on 09 Oct 2020. Site handed over to follow on contractor on 11 Dec 2020.
TSE - Pitt Street Station	3	Real-time monitoring removed on 09 Oct 2020.  Exceedances recorded during attended monitoring were attributed to non-TSE activities, traffic noise dominant.  Site handed over to follow on contractor on 04 Dec 2020.
TSE - Marrickville Dive & Stabling Yard	9	All exceedances were attributed to non-TSE activities (surrounding traffic being the dominant source).  Dive site handed over to follow on contractor on 25 Sep 2020.
CN ISD	0	There were no exceedances of predicted levels or CSSI criteria recorded as a result of CISD works. No non-conformances raised.
VC ISD	0	No exceedances of predicted levels or CSSI criteria recorded. No non-conformances raised.
MP ISD	0	Attended and continuous monitoring undertaken. No exceedances of predicted levels or CSSI criteria recorded from construction activities.
PS ISD	0	There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.



Site (north to south)	Management Level Exceedances	Comments
CSM	0	No exceedances of predicted levels or CSSI criteria recorded. One non-conformance. During high noise works at Eastern Entrance on the 15th of March, a respite period of one hour was not observed after 3 hours of noisy works. Only a half hour respite was undertaken (between 11 and 11:30). No complaints received as a result of the Nonconformance. Toolbox provided to ensure best achievable noise performance objectives are met as identified in the CNVIS and that all required additional mitigation measures continue to be in place. An investigation into construction methodology was undertaken to reduce risk of exceedances for future works.
W ISD	0	The exceedances were attributed to non-WISD activities, local traffic along Botany Road, Cope Street & Wellington Street dominant noise source.
SSJ*	4	To date there have been no exceedances of predicted construction related noise levels assessed as relating to ongoing construction activities on the project. All elevated noise levels above predicted levels recorded by attended monitoring have been attributed to extraneous noise rather than construction activity, specifically due to traffic noise during works with lower predicted exceedance on 10/10/20, 30/10/20 and 08/02/2021.
SMEW – Marrickville NCA01**	0	Works during the period occurred predominately in the following noise catchment areas;  • NCA3 – Combined Service Route (CSR) works
SMEW – Dulwich Hill NCA02**	0	<ul> <li>NCA4 – CSR works and embankment stabilisation works</li> <li>NCA5 – embankment stabilisation works</li> <li>Noise monitoring results from the reporting period indicated that works</li> </ul>
SMEW – Hurlstone Park NCA03**	0	occurred at noise levels at or below predicted levels. It is noted that wind speeds exceeded the recommended maximum level for noise monitoring as described within "AS1055-2018 Description and measurement of environmental noise" on a number of occasions, leading to exceedances. Monitoring was undertaken during these
SMEW – Canterbury NCA04-5**	0	periods to provide indicative noise monitoring results only.  As part of attended noise monitoring, significant extraneous noise has been recorded as impacting receivers and monitoring results, including throughout the night-time period, well above the given RBLs. Monitoring leastings and timing has been adjusted where personny to truto isolate.
SMEW – Campsie NCA06**	0	locations and timing has been adjusted where necessary to try to isolate construction impact, however this is often not feasible.
LW – Northern Connection *	2	2 recorded exceedance of predicted noise level 15/09/20 and 17/10/20. Investigation into the former exceedance completed and provided to AA. For latter exceedance, LW Works compliant, caused by nearby yelling.
LW – Crows Nest Station *	3	3 recorded exceedance of predicted noise level 1/09/20 and 19/11/20. LW Works compliant, traffic dominant noise source
LW - Victoria Cross Station*	1	1 recorded exceedance of predicted noise level 27/11/20. LW Works compliant, traffic dominant noise source
LW - Blues Point	1	1 recorded exceedance of predicted noise level 5/2/21. LW Works compliant, traffic and pedestrians dominant noise source
LW – BPS Surry Hills *	3	3 recorded exceedance of predicted noise level 22/09/20 and 10/11/20. LW Works compliant, agi idling beside monitoring location and traffic and rail dominant noise source

#### **Sydney Metro**



Site (north to south)	Management Level Exceedances	Comments
LW – Martin Place & Pitt St*	0	No exceedances recorded
LW – Southern Dive*	2	2 recorded exceedance of predicted noise level 2/10/20. LW Works compliant, traffic and other non-project works dominant noise source
LW - BPS Campsie *	4	4 recorded exceedance of predicted noise level 1/12/20 and 15/12/20. LW Works compliant, rain and traffic and dominant noise source
LW – Campsie TSS*	1	1 recorded exceedance of predicted noise level 24/10/20. LW Works compliant, traffic and rail dominant noise source.

<sup>\*</sup>Note LW and SSJ reporting is one month in front, so this report includes September 2020 – February 2021 results, March results will be provided in the next report.

**Table 14: Vibration Monitoring Results Summary and Analysis** 

Site (north to south)	Management Level Exceedances	Comments
TSE - Chatswood Dive	0	No attended vibration measurements have been reported as being undertaken for this site during the reporting period.  Site handed over to follow on contractor on 30 Oct 2020
TSE - Victoria Cross Station	0	One (1) attended vibration measurements have been reported as being undertaken for this site during the reporting period.  Real-time monitoring removed on 11 Dec 2020.  Site handed over to follow on contractor on 18 Dec 2020.
TSE - Blues Point	0	No attended vibration measurements have been reported as being undertaken for this site during the reporting period. Site handed over to follow on contractor on 18 Dec 2020.
TSE - Barangaroo Station	0	No attended vibration measurements have been reported as being undertaken for this site during the reporting period.
TSE - Martin Place Station	0	Real-time monitoring removed on 09 Oct 2020.  No attended vibration measurements have been reported as being undertaken for this site during the reporting period.  Site handed over to follow on contractor on 11 Dec 2020.
TSE - Pitt Street Station	0	Real-time monitoring removed on 09 Oct 2020.  No attended vibration measurements have been reported as being undertaken for this site during the reporting period.  Site handed over to follow on contractor on 04 Dec 2020.
TSE - Marrickville Dive & Stabling Yard	0	One (1) attended vibration measurements have been reported as being undertaken for this site during the reporting period.  Dive site handed over to follow on contractor on 25 Sep 2020.

<sup>\*\*</sup> Note SMEW reporting is two months in front, so this report includes August 2020 – January 2021 results, February and March results will be provided in the next report.

# **Unclassified**

# **Sydney Metro**



Site	Management	
(north to south)	Level Exceedances	Comments
CN ISD	0	There were no exceedances of predicted levels or CSSI criteria recorded as a result of CISD works. No nonconformances raised.
VC ISD	0	Continuous monitoring undertaken. One event based attended monitoring was undertaken during detailed excavation in February 2021.  No non-conformances raised.
MP ISD	0	Continuous monitoring undertaken. No exceedances of predicted levels or CSSI criteria recorded from construction activities.  No non-conformances raised.
PSISD	0	Attended and unattended vibration monitoring was undertaken during the reporting period. There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.
CSM	0	No exceedances of building criteria observed attributable construction work. Occasional peaks of human comfort vibration criteria occurred adjacent to construction works within the Eastern Entrance footprint, however appropriate respite observed as required.
W ISD	0	Nil exceedances during the reported period were related to WISD construction activities and nil non-conformances raised
SSJ*	0	Attended and continuous vibration monitoring was undertaken during the reporting period. To date, there have been no exceedances of vibration from construction activities, and recorded vibration (PPV in mm/s) has been well below cosmetic vibration limits for affected structures.
SMEW – Cooks River Bridge**	0	To date, there have been no exceedances of vibration from construction activities, and recorded vibration (PPV in mm/s)
SMEW – Charles Street Commercial**	0	has been well below cosmetic vibration limits for affected structures.
SMEW – Foord Ave Bridge**	0	
LW - Northern Connection*	0	Attended vibration monitoring was undertaken during the reporting period. There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.
LW – Crows Nest*	0	Attended vibration monitoring was undertaken during the reporting period. There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.



Site (north to south)	Management Level Exceedances	Comments
LW – BPS Surry Hills*	0	Attended vibration monitoring was undertaken during the reporting period. There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.
LW – BPS Campsie *	0	Attended vibration monitoring was undertaken during the reporting period. There were no exceedances of predicted levels or CSSI criteria recorded as a result of PSISD works. No non-conformances raised.

<sup>\*</sup>Note LW and SSJ reporting is one month in front, so this report includes September 2020 – February 2021 results, March results will be provided in the next report.

#### 4.5.2. Blasting

No blasting activities were undertaken during the reporting period.

#### 4.5.3. Surface Water Quality

During the reporting period, surface water quality monitoring programs were applicable on the TSE, CSM, SSJ Stages and Linewide, Pitt Street Integrated Station Development.

#### 4.5.3.1. TSE

In accordance with the TSE Construction Soil, Water and Groundwater Management Plan, construction-phase surface water quality monitoring was undertaken every three months and after wet-weather events during the reporting period. A summary of the key parameter results is provided in Table 15.

Table 15: TSE Results Summary of Key Surface Water Monitoring Parameters during Reporting Period

Location	Average Acidity	Average Electrical Conductivity	Average Turbidity	Average Oil & Grease	Average Total Suspended Solids (TSS)	Average Fe	Average Mn
	(pH)	(mS/cm)	(Nephelometric Turbidity Unit)	(Liquid – Liquid Extraction)	(mg/L)	(mg/L)	(mg/L)
Upper Scotts Creek							
Lower Scotts Creek							
Upper Flat Rock Creek		Chatswood	Dive and Crows N	lest WTP no lo	nger under TSE co	ontrol.	
Lower Flat Rock Creek							
Milsons Park	8.0	37.0	0.0	< 10	25	0.36	0.02
Blues Point	8.1	51.0	0.0	< 10	7	<0.05	<0.005
Farm Cove	7.9	47.8	0.0	< 10	20	0.16	0.01
Barangaroo	8.0	49.8	0.0	< 10	68	<0.05	0.00
Alexandra Canal	Sampling location removed from Monitoring Program.						
Eastern Channel (01)	7.2	0.6	8.2	< 10	13	1.00	0.26
Eastern Channel (03)	7.3	27.9	2.8	< 10	20	0.30	0.01

<sup>\*\*</sup> Note SMEW reporting is two months in front, so this report includes August 2020 – January 2021 results, February and March results will be provided in the next report.

#### **Sydney Metro**

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Marrickville WTP	Not Discharging during Surface Water Sampling Events								
Barangaroo WTP	7.4	7.4 16.0 N/A < 10 48 0.07 0.35							
Victoria Cross WTP	Victoria Cı	Victoria Cross WTP decommissioned and removed before sampling events covered by this reporting period.							
Pitt Street WTP Pitt Street WTP decom			issioned and remo	ved before san period.	npling events cove	red by this r	eporting		
Bligh Street WTP	7.4	7.4 13.2 N/A < 10 13 0.15 0.02							
Chatswood Dive WTP	Chatswood Dive WTP no longer under TSE control.								

Of the parameters presented in Table 15, the TSE *Construction Soil, Water and Groundwater Management Plan* adopts 'visible oil and grease' as the trigger value for the 'Oil & Grease' parameter, and the 80<sup>th</sup> percentile of baseline monitoring results as the trigger value for the acidity, electrical conductivity, turbidity and TSS parameters.

In the event that a monitoring result meets one of these trigger values, the plan states that an investigation will be undertaken to assess the possible cause/source of the exceedance. If the cause/source is attributable to the project and there is a risk of adverse or significant effect on the receiving environment, the result will be re-tested for verification. If verified, a secondary investigation of the exceedance will be undertaken and actions will be proposed as required.

#### 4.5.3.2. Victoria Cross Integrated Station Development

During the reporting period, the groundwater quality monitoring program was not applicable as a WTP was not operational.

Monitoring of groundwater levels from surrounding boreholes was undertaken during the reporting period. No non-conformances raised.

#### 4.5.3.3. Pitt Street Integrated Station Development

Groundwater inflow is minimal at the PS ISD, and as such all water discharged is predominantly water from rainfall, or from sources supplied to undertake works such as core drilling, saw cutting and excavation. All water at PS ISD is collected through the use of a series of pumps and pipes, all of which direct water to makeshift sumps (i.e. unused excavations), before eventually being pumped to a water treatment plant. There is a WTP located at both sites (North and South), and this is managed by subcontractor Trident. Prior to the installation of the Trident Systems, all rainwater was collected in sumps where it was treated manually (if required) and laboratory tested against the criteria determined by the Water Discharge Impact Assessment (DIA), before being discharged after the issue of a Discharge Permit by the CPB Environmental Team. Set up of the Trident WTP required a series of steps including; 5 consecutive batches of water that was laboratory tested, and then a monthly NATA lab test. Once established and verified, water needing discharge must be tested by the CPB Environmental Team against the TSS, pH and Oil and grease criteria, before issuing a permit to discharge. There have been no non-compliances for water discharge on the project to date.



Table 16: Pitt St ISD Results Summary of Key Surface Water Monitoring Parameters during Reporting Period

Location	Acidity Range (pH)	Turbidity Range (Nephelometric Turbidity Unit)	Average Oil & Grease (Liquid – Liquid Extraction)
Pitt St ISD	6.63 – 8.4	0.5 – 41	No visible oil or grease

#### 4.5.3.4. Central Station Mainworks

Surface and groundwater was treated via the temporary or permanent Water Treatment Plant (WTP) during the reporting period. Other waters were treated by in-drain sediment devices.

- I. During the reporting period, there have been 45 discharges to discharge point 2 (land) via the temporary WTP, of which one discharge event failed to meet the EPL discharge criteria.
- II. There have been 136 discharges to stormwater via the permanent WTP, of which all discharge events have met EPL discharge criteria.

Please refer to <a href="https://centralstationmetro.com/documents/">https://centralstationmetro.com/documents/</a> for daily water monitoring (discharge) summaries uploaded on a monthly basis.

#### 4.5.3.5. Sydenham Station Junction

In accordance with the SSJ Construction Soil and Water Management Plan, constructionphase surface water quality monitoring was undertaken every three months and after wetweather events during the reporting period. A summary of the key parameter results is provided in Table 17.

 Table 17: SSJ Results Summary of Key Surface Water Monitoring Parameters during Reporting Period

Location	Average Acidity (pH)	Average Electrical Conductivity (mS/cm)	Average Turbidity (Nephelometric Turbidity Unit)	Average Oil & Grease (Liquid – Liquid Extraction)	Average Total Suspended Solids (TSS) (mg/L)
Eastern Channel 1 (Upstream)	7.75 (7.33-8.07)	0.203 (0.006-0.458)	162.8 (76.2-289)	No visible oil or grease	132.3 (42-253)
Eastern Channel 2 (Downstream)	7.56 (7.52-7.64)	0.236 (0.007-0.458)	133.7 (75.7-206)	No visible oil or grease	101.25 (43-207)

Monitoring during the reporting period took place once per quarter at each of the two monitoring locations (Eastern Channel 1 (Upstream) and Eastern Channel 2 (Downstream)), dated 22/09/2020 and 16/12/2020. In addition, sampling was conducted at EC1 and EC2 during two wet weather events on 26/10/2020 and 02/02/2021 – see results in Table 17.

Change in pH between upstream and downstream monitoring points varied within the acceptable range. Temperature varied significantly, likely due to the low flow levels in the concrete culvert during monitoring. As noted, Total Suspended Solids (TSS) levels within the channel have been exceeded in some baseline readings, and exceedances were recorded



at both EC1 and EC2 even when no construction activities have taken place. Previously this has been observed particularly after high rainfall prior to monitoring, which is consistent with baseline readings obtained after a rain event. In combination with prior identification of the ephemeral nature of the watercourse, it is considered likely that external factors (e.g. industry/residence in the area and other rail/residential building projects nearby) are connected to the higher TSS readings, including from inflows present from between EC1 and EC2 where a discrepancy has been noted. The same is considered for salinity, where tidal water and surface water enter through different parts of the stormwater system feeding into the canal may cause changes to upstream and downstream readings.

Note, these results are for 01/09/2020 to 28/02/2021. SSJ 6-monthly monitoring reporting period is one month behind and March results will be provided in the next report.

#### 4.5.3.6. Southwest Metro Early Works

Monitoring during construction phase took place once per quarter. In addition, one wet weather monitoring event was recorded during the reporting period as per Table 18. During the monitoring period, there were three occasions where the monitoring sites could not be safely accessed after rain events; 10th August, 26th October & 22nd December. Monitoring during the construction phase indicates that pH met the ANZECC criteria. Other parameters, including salinity, turbidity, dissolved oxygen, total phosphorus, total nitrogen and chlorophyll exceeded the ANZECC criteria, however the exceedances are comparable to those observed within the pre-Construction phase. Downstream and upstream readings are consistent.

It is noted that SMEW also monitors water quality prior to any planned discharges to ensure water quality is within the parameters listed within the Environmental Protection Licence (No.21147), to minimise any potential impacts to surrounding waterways. This data is published monthly on the project website: <a href="https://sydenhamstationupgrade.com/">https://sydenhamstationupgrade.com/</a>.

Table 18: SMEW Results Summary of Key Surface Water Monitoring Parameters during Reporting Period

Location	Average Acidity (pH)	Average Electrical Conductivity (mS/cm)	Average Turbidity (Nephelometric Turbidity Unit)	Average Oil & Grease (Liquid – Liquid Extraction)	Average Total Suspended Solids (TSS) (mg/L)
CRE 1	8.15 (7.54-9.06)	11.046 (0.539-17.8)	37.3 (28.2-83.5)	Visible oil or grease	55 (15-86)
CRE 2	8.14 (7.74-8.77)	12.542 (0.528-18.6)	51 (40-58.2)	Visible oil or grease	51 (16-77)

Note, these results are for 01/09/2020 to 28/02/2021. SMEW 6-monthly monitoring reporting period is one month behind and March results will be provided in the next report.

#### 4.5.3.7. Linewide

On 1 August 2020, Systems Connect took possession of a portion of the Chatswood Dive site from the Tunnelling and Station Excavation Contractor. The portion contains the Chatswood Water Treatment Plant, which is now operated by Systems Connect. It collects surface water from the Chatswood Dive site, station box water from Crows Nest station, and tunnel water from between Victoria Cross Station and the Chatswood Dive.

A WTP Checklist is completed by the WTP operator daily (working days), where a range of WTP observations, parameters and chemical levels are noted. This includes water discharge



parameters required for regulatory compliance. The compliance results from the checklists completed during the reporting period are described in Table 19.

Table 19: LW Results Summary of Key Surface Water Monitoring Parameters during Reporting Period

Location	Acidity Range (pH)	Turbidity Range (Nephelometric Turbidity Unit)	Average Oil & Grease (Liquid – Liquid Extraction)
Chatswood Dive WTP	7.1 – 8.0	0.1 – 3.0	None visible

Note, these results are for 01/09/2020 to 28/02/2021. Linewide 6-monthly monitoring reporting period is one month behind and March results will be provided in the next report.

#### 4.5.4. Groundwater Quality

During the reporting period, groundwater quality monitoring programs were applicable for the TSE, MP ISD and CSM Stages.

#### 4.5.4.1. TSE

The TSE monitoring program is provided in the TSE *Construction Soil, Water and Groundwater Management Plan*, which was approved by the Secretary on 22 December 2017. Section 6.2 of the plan states that:

- Groundwater inflow into sites will be captured and collected with onsite surface water and monitored prior to discharge.
- No additional groundwater quality monitoring will be undertaken for environmental management purposes (monitoring for geotechnical modelling and settlement analysis is undertaken in accordance with the Monitoring and Protection Plan).

#### 4.5.4.2. Martin Place Integrated Station Development

During the reporting period, groundwater quality was monitored as it was an influent to the water treatment plant (WTP). However the groundwater seeping into tunnels and excavations is mixed with construction runoff prior to monitoring, hence the WTP inflow water quality is not representative of local groundwater.

WTP inflow water reported variable concentrations of nutrients, metals, hydrocarbons and BTEXN (benzene, toluene, ethylbenzene, xylene and naphthalene). Concentrations were generally below the Australian and New Zealand Water Quality Guidelines (ANZG) 2018 95% protection levels for marine water quality (where applicable), with the exception of ammonia, copper, chromium, lead, manganese, mercury and zinc. The pH of the inflow water exceeded the NSW WQO for Sydney Harbour, due to runoff from recent concrete pours.

Monitoring of groundwater levels from surrounding boreholes was undertaken during the reporting period. Groundwater levels were found to be steady around the construction sites.



#### 4.5.4.3. Pitt Street Integrated Station Development

Groundwater inflow into sites is captured and collected with onsite surface water and monitored prior to discharge. Based on the discharge requirements outside of rain events no measurable groundwater is recorded.

#### 4.5.4.4. Central Station Mainworks

During the reporting period, the groundwater quality monitoring program was applicable for CSM.

The CSM monitoring program is provided in the CSM Construction Groundwater Management Plan, which was approved by the Secretary on 13 March 2019. Section 7.5 of the plan (the 'Construction Groundwater Monitoring Program') outlines that groundwater wells surrounding the Metro Box will be used to monitor the impacts of the Metro Box excavation activities.

- Deep excavation of the Metro Box has occurred during the reporting period causing the inflow of groundwater.
- Groundwater is collected and treated on site via the WTP to meet EPL and ANZECC guidelines before discharge to stormwater.
- Monthly groundwater monitoring is undertaken from boreholes (deep and shallow) and gasworks wells. Results are published on the project website: https://centralstationmetro.com/documents/.
- A 6-monthly Construction Groundwater Monitoring Report was under development for the period of September 2020 – March 2021 and will provide results and recommendations.
- Groundwater continues to be sampled and tested monthly throughout the period of construction.

#### 4.5.4.5. Southwest Metro Early Works

Groundwater samples were taken during 8 monitoring events between 21 October and 10 December 2020. The first round of sampling began following the excavation of first underbore launch pit until the backfill of these excavations. The samples were taken from the launch pit of Underbore 1 and 2, which are approximately in the same location as MW2 (see figure 1). A total of 10 water samples were taken, 7 samples from Underbore 1 and 3 samples from Underbore 2.

**Table 20 SMEW Groundwater Monitoring Results for Underbore** 

Date	Location	рН	Cyanogen Chloride as CN (mg/L)	Total Cyanide (mg/L)
21.10.2020	Underbore 1	8.86	<0.004	<0.004
26.10.2020	Underbore 1	NT	<0.004	<0.004
29.10.2020	Underbore 1	9.52	<0.004	0.026
02.11.2020	Underbore 1	NT	<0.004	0.023
06.11.2020	Underbore 1	9.48	<0.004	0.011
23.11.2020	Underbore 1	8.9	0.004	0.054
23.11.2020	Underbore 2	9.20	<0.004	0.389
04.12.2020	Underbore 1	11.6	<0.004	0.023
04.12.2020	Underbore 2	9.49	<0.004	0.354
10.12.2020	Underbore 2	8.29	<0.004	0.386



The seven samples collected from Underbore 1 did not exceed human health criteria for either Total Cyanide or Cyanogen Chloride, however all three samples collected from Underbore 2 launch pit exceeded both the human health guideline and recreational water quality guideline criteria for total Cyanide. This was consistent with preliminary monitoring well MW02, which detected existing levels of total cyanide (0.187mg/l) prior to the works, and no detectable levels of Cyanogen Chloride. Elevated levels of background total cyanide levels are likely part of existing contamination of perched groundwater in Sydenham due to historical industrial activity.

Due to the levels of Total Cyanide identified in initial samples and throughout the sampling, all mitigation measures were followed as documented in section 6.9 the Construction Soil and Water Management Plan and Groundwater ERAP—including containment and offsite disposal of all encountered groundwater from the underbore to a licensed liquid waste disposal facility.

Works were completed as of December 2020 with the underbore fully backfilled, sealed and grouted. Given no other works are planned that are likely to intercept the groundwater table, no further groundwater monitoring is proposed.

# 4.6. Business Impact Monitoring

C2S E64(f) and S2B E37(f) requires Business Management Plans to include provision of business monitoring results to the Secretary in accordance with the Sydney Metro *Compliance Monitoring / Tracking and Reporting Program* (CMTRP) report (document available on the Sydney Metro website - <a href="https://www.sydneymetro.info/documents">https://www.sydneymetro.info/documents</a>). The CMTRP requires a summary of the business monitoring program results to be included in each Construction Compliance Report (i.e. this report).

During the reporting period, business impact monitoring was undertaken as part of the TSE, CSM, SSJ, MPISD and Linewide Stages in accordance with the applicable C&SW Staging Reports. The following sections provides a summary of business impact monitoring results during the reporting period.

#### 4.6.1. Tunnel Station Excavation

The Tunnel Station Excavation contract is winding up and the Business Impact Monitoring condition was closed in the reporting period.

#### 4.6.2. Crows Nest Station Development

Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts	Notifications issued within required timeframes on 100% of occasions, unless otherwise agreed with Sydney Metro	Records in Consultation Manager database on number and timing of notifications	Number of notifications issued 3,595 notifications were distributed to businesses within our catchment area during the reporting period.
	Number of business briefings, building based information sessions and face to face meetings prior to works	Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and	Percentage of notifications issued on time 100%



Performance Parameters	Monitoring	Reporting	Status
		completed doorknocks / face to face meetings	
	The objective is to make contact via these measures with 100% of businesses within 50m prior to works which have the potential to impact the	Feedback from meetings, presentations and briefings (documented in Consultation Manager)	Number of briefings, information sessions and completed doorknocks. A total of 15 outgoing contact events were undertaken during the reporting period relating to doorknocks and business stakeholder briefings.
	owners.	Records in Consultation Manager database on complaints received from businesses relating to lack of	Percentage of businesses within 50m contacted prior to work 100%
		information about construction activities and impacts.	Number of complaints received from businesses relating to lack of information about construction activities and impacts One unavoidable complaint received during the reporting period relating to lack of information about construction activities. Complaint ID: 210114PENA
			Lessons learnt. Nil to report.
Measures implemented to maintain business vehicle and pedestrian access, parking,	Potential issues identified in advance and mitigation measures implemented in consultation with affected businesses to address access, parking, visibility and/or amenity issues	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues 441 businesses
visibility and amenity during construction activity	The objective is 100% implementation of agreed mitigation measures relating to access, parking, visibility and other amenity	Feedback on mitigation measures effectiveness (documented in Consultation Manager)	Percentage of businesses where mitigation measures were implemented as agreed 100%
	aspects.	Records in Consultation Manager database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including details of any repeat complaints about the same issue.	Details of mitigation measures implemented Provision of alternate parking provided to 11 businesses during tower crane arm erection in January. 392 businesses were offered dashboard access signs during Clarke Street closure in January. Provision of designated parking spaces during Clarke Lane closure provided to 14 businesses in January. 24 business stakeholders were offered alternate arrangements to address property access impacts. Business feedback on effectiveness of mitigation measures All business stakeholders were accepting of the mitigation measures offered and feedback received for the most part was positive.



Performance Parameters	Monitoring	Reporting	Status
Agreed	Businesses identified as	Documentation of	Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity Four repeat complaints about parking from the same stakeholder, two of which were avoidable, the other two were not related to CNS works. Complaint ID's: 201209LMAO; 210408LMAO; 210409LMAO; 210412MAO; 210419LAMO  One repeat complaint about vehicle access from the same stakeholder. Complaint was unavoidable. Complaint ID's: 210114HUR; 210118HUR Lessons learnt. Further reinforcement of projects logistics lane operational hours to subcontractors and action to be undertaken by construction vehicle drivers should they arrive to site earlier than required.  Summary of non-standard mitigation
measures to minimise noise and vibration impacts on noise and vibration sensitive businesses	potentially affected by high noise for extended periods, and requests for at property treatment or relocation, referred to Sydney Metro if all negotiated solutions offered under the scope of the contract fail to provide an acceptable solution to the impacted businesses	affected businesses impacts and mitigation measures in site specific CNVIS reports	measures implemented 90 sensitive business receivers were consulted about proposed works which had the potential to impact noise and vibration sensitive business receivers. Respite periods were proposed and implemented.
	·	Feedback on mitigation measures effectiveness (documented in Consultation Manager).	Number of referrals to Sydney Metro Zero during the reporting period.
	The objective is for zero referrals to Sydney Metro	Records of businesses referred to Sydney Metro for additional assessment / treatment	Number of repeat complaints from noise sensitive receivers relating to noise and vibration impacts.  Zero during the reporting period.
	over a six-month timeframe during standard construction.	Records in Consultation Manager database on noise and vibration complaints from businesses.	<b>Lessons learnt.</b> Nil to report.
Awareness of construction activity and likely impacts	Notifications issued within required timeframes on 100% of occasions, unless otherwise agreed with Sydney Metro	Records in Consultation Manager database on number and timing of notifications	Number of notifications issued 3,595 notifications were distributed to businesses within our catchment area during the reporting period.
	Number of business briefings, building based information sessions and face to face meetings prior to works	Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and	Percentage of notifications issued on time 100%

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Performance Parameters	Monitoring	Reporting	Status
		completed doorknocks / face to face meetings	

# 4.6.3. Victoria Cross Integrated Station Development

Doufousson			
Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Records in Consultation Manager database on number and timing of notifications	Number of notifications issued	<ul> <li>Total –</li> <li>5 OOH notifications,</li> <li>3 monthly notifications</li> <li>Zero quarterly newsletters issued.</li> </ul>
	Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings  Feedback from meetings, presentations and briefings (documented in Consultation Manager)  Records in Consultation Manager database on complaints received from businesses relating to lack of information about construction activities and impacts	<ul> <li>Percentage of notifications issued on time</li> <li>Number of briefings, information sessions and completed doorknocks</li> <li>Percentage of businesses within 50m contacted prior to works</li> <li>Number of complaints received from businesses relating to lack of information about construction activities and impacts</li> <li>Lessons learnt</li> </ul>	<ul> <li>100% of notifications issued on time</li> <li>Regular interface management meetings with regular updates provided to Winten Group and Channel Nine and one door knock to 100 Mount Street prior to traffic changes in Denison Street.</li> <li>100% of businesses within 50m have been contacted</li> <li>Nil complaints referred to Community Complaints Mediator</li> <li>Lessons learnt – regular interface</li> </ul>
		Lessons learnt	meetings are valued by the business community
-	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)  Feedback on effectiveness of mitigation measures (documented in Consultation Manager)  Records in Consultation Manager database on complaints received from	<ul> <li>Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues</li> <li>Percentage of businesses where mitigation measures were implemented as agreed</li> </ul>	<ul><li>Nil</li><li>Nil</li></ul>
	businesses relating to vehicle and pedestrian access, parking, visibility	<ul> <li>Details of mitigation measures implemented</li> </ul>	• Nil

(Uncontrolled when printed)



Performance Parameters	Monitoring	Reporting	Status
	and amenity, including details of any repeat complaints about the same issue.	Business feedback on effectiveness of mitigation measures	• Nil
		Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity	Zero repeat complaints from businesses
		<ul> <li>Lessons learnt</li> </ul>	Lessons learnt – develop relationships with Council to manage business enquiries and complaints effectively
Agreed measures to minimise noise and vibration impacts on noise and vibration	Consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.	Number of businesses with agreed mitigation measures to address noise and vibration impacts	Zero businesses with agreed mitigation measures
sensitive businesses.	Documentation of affected businesses, impacts and mitigation measures in site specific CNVIS reports.	<ul> <li>Summary of non- standard mitigation measures implemented</li> </ul>	• Nil
	Feedback on effectiveness of mitigation measures (documented in Consultation Manager).	<ul> <li>Number of referrals to Sydney Metro</li> </ul>	No referrals to Sydney Metro.
	Records of businesses referred to Sydney Metro for additional assessment / treatment.	<ul> <li>Number of repeat complaints from noise sensitive receivers relating to noise and</li> </ul>	Zero repeat complaints
	Records in Consultation Manager database on noise and vibration complaints from businesses.	vibration impacts  • Lessons learnt	• Nil

# 4.6.4. Martin Place Integrated Station Development

Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Records in Consultation Manager database on number and timing of notifications  Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings.	Number of notifications issued  Percentage of notifications issued on time	Total: 21    Out of hours: 12    Monthly updates: 6    Newsletters: 3    100%
		Number of briefings, information sessions	Total:  Doorknocks: 31  Meetings: 11



Performance	Monitoring	Reporting	Stat	tus
Parameters	Feedback from meetings, presentations and briefings (documented in Consultation Manager).	and completed doorknocks	•	Information sessions: 0 Briefings: 0
	Records in Consultation Manager database on complaints received from businesses relating to lack of information about	Percentage of businesses within 50m contacted prior to works	•	100% of businesses identified as being potentially affected by works were notified.
	construction activities and impacts	Number of complaints received from businesses relating to lack of information about construction activities and impacts	•	Nil
		Lessons learnt	•	Nil
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)  Feedback on effectiveness of mitigation measures (documented in Consultation Manager)	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues	•	Nil
amenity during construction activity.	Records in Consultation Manager database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including details of any repeat complaints about the same issue.	Percentage of businesses where mitigation measures were implemented as agreed	•	N/A
		Details of mitigation measures implemented	•	N/A
		Lessons learnt	•	N/A
		Business feedback on effectiveness of mitigation measures	•	N/A
		Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity	•	Nil
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses.	Consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.  Documentation of affected businesses, impacts and mitigation measures in site	Number of businesses with agreed mitigation measures to address noise and vibration impacts	•	1 - 37 Bligh Street
	specific CNVIS reports.  Feedback on effectiveness of mitigation measures (documented in Consultation Manager).	Summary of non- standard mitigation measures implemented	•	Acoustic mat installed and gaps around vents sealed up within property
	Records of businesses referred to Sydney	Number of referrals to Sydney Metro	•	Nil
	Metro for additional assessment / treatment.	Number of repeat complaints from noise sensitive receivers relating to	•	Nil

(Uncontrolled when printed)



Performance Parameters	Monitoring	Reporting	Status
	Records in Consultation Manager database	noise and vibration	
	on noise and vibration complaints from	impacts	
	businesses.	Lessons learnt	• N/A

# 4.6.5. Pitt Street Integrated Station Development

Performance	Mantening	Demonstration (	Otation
Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Records in Consultation Manager database on number and timing of notifications  Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings  Feedback from meetings, presentations and briefings are documented in Consultation Manager  Records in Consultation Manager database on complaints received from businesses relating to lack of information about construction activities and impacts if applicable	<ul> <li>Number of notifications issued (10 Nov 2020-31 March 2021)         Total: 9</li> <li>Percentage of notifications issued on time: 100%</li> <li>Number of ISD introductory briefings, information sessions and doorknocks completed: 7</li> <li>Business briefings         South (accepted project briefing invitation):         <ul> <li>FRNSW</li> <li>EuroTower (building management)</li> <li>Edinburgh Castle Hotel (business operator)</li> </ul> </li> <li>North (accepted project briefing invitation):         <ul> <li>Castlereagh Boutique Hotel (briefings being held monthly Dec 2020 to March 2021 reporting period)</li> <li>Liberty Place (inc. ANZ Tower)</li> <li>Citigroup Centre (2 Park Street)</li> <li>250 Pitt Street (The National Building)</li> </ul> </li> <li>Percentage of businesses within 50m contacted prior to works: 100%</li> <li>Meetings as above, all properties received a letter</li> </ul>	<ul> <li>All interactions with businesses are documented in Consultation Manager</li> <li>9 letterbox drop notifications issued; 5 monthly OOH notifications, 4 monthly work notifications/updates.</li> <li>26 weekly project email updates issued in period 01/10/21 to 31/03/21</li> <li>Specific notification of work and upcoming impacts including temporary road closures and detours in Jan-Mar 2021, and over run of day work shifts post 6pm.</li> <li>FRNSW</li> <li>EuroTower (building manager)</li> <li>Edinburgh Castle Hotel</li> <li>Primus Hotel</li> <li>Mixed use business premises 102-108 Bathurst Street</li> <li>Probuild – Greenland property developer</li> <li>North</li> <li>Castlereagh Boutique Hotel</li> <li>Park Regis Hotel</li> <li>Liberty Place (inc. ANZ Tower) and Citigroup Centre (2 Park Street)</li> <li>250 Pitt Street (The National Building)</li> </ul>



Performance Parameters	Monitoring	Reporting	Status
		notifications prior to commencement of ISD works.  No of complaints received from businesses relating to lack of information about construction activities and impacts - 0	<ul> <li>250 Pitt Street</li> <li>The Great Synagogue.</li> <li>respite offer for customer earplugs: offered to Castlereagh Boutique Hotel however they supply their own earplugs to customers</li> <li>0-quarterly biannual newsletters issued</li> <li>100% of notifications issued on time</li> <li>Regular face to face updates with Castlereagh Boutique Hotel, 250 Pitt Street, FRNSW and Edinburgh Castle Hotel</li> <li>Complaints summary: Business complaints were focussed on daytime concrete excavation work at the North site</li> <li>Compliments: 1. Facilitating ad hoc respite periods to suit the business activity schedule.</li> <li>Nil complaints referred to Community Complaints Mediator</li> <li>Lessons learnt – regular contact and the provision of timely, detailed information about possible construction impacts with business property managers is essential to reducing impact to business operations and preventing complaints.</li> </ul>
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and amenity during construction activity.	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)  Feedback on effectiveness of mitigation measures (documented in Consultation Manager)  Records in Consultation Manager database on	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues – no business property driveways are directly impacted as a result of the Pitt Street ISD work.	<ul> <li>No business complaints received regarding access, parking, visibility or amenity. CPB encourage works to use local stakeholder businesses and cafes for supplies and services.</li> <li>Site hoarding does not obscure business access or visibility</li> </ul>



Performance Parameters	Monitoring	Reporting	Status
	complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including details of any repeat complaints about the same issue.	<ul> <li>Percentage of businesses where mitigation measures were implemented as agreed – N/A</li> <li>Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity - 0</li> </ul>	The FRNSW Bathurst Street driveway is monitored by CPB traffic control to ensure that it is clear from construction vehicles at all times  Lessons learnt - Businesses to be consulted ahead of any disruption to driveway access as requested by business operators (FRNSW) should it be required in the future.
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses.	Consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.  Documentation of affected businesses, impacts and mitigation measures in site specific CNVIS reports.  Feedback on effectiveness of mitigation measures (documented in Consultation Manager).  Records of businesses referred to Sydney Metro for additional assessment / treatment.  Records in Consultation Manager database on noise and vibration complaints from businesses.	<ul> <li>Number of businesses with agreed mitigation measures to address noise and vibration impacts - 1</li> <li>Summary of nonstandard mitigation measures implemented: short ad hoc respite periods enforced (in addition to required respite periods) as requested by business operator for noise sensitive filming events</li> <li>Number of referrals to Sydney Metro - Nil</li> <li>Number of repeat business complaints from noise sensitive receivers relating to noise and vibration impacts - 0</li> </ul>	<ul> <li>CPB developed initiatives for minimising impact on nearby businesses during construction e.g. coordinating the work schedule with business stakeholder needs where possible</li> <li>No referrals to Sydney Metro.</li> <li>Lessons learnt - Continue to educate CPB workers and subcontractors on the community's specificities via induction presentation and toolbox talks on 'being a good neighbour', 'best site practice'. Mitigation strategies discussed with subcontractors</li> <li>Real-time monitors at both North and South site will alert CPB team if an exceedance of allowable noise or vibration levels is registered.</li> <li>Procedure in place for businesses to make complaints if the impact of construction activities becomes disruptive.</li> </ul>



## 4.6.6. Central Station Mainworks

Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Notifications issued within required timeframes on 100% of occasions, unless otherwise agreed with Sydney Metro.  Number of business briefings, building-based information sessions and face-to-face meetings prior to works.  The objective is to make contact via these measures with 100% of businesses within 50m prior to works that have the potential to impact the owners.	Records in Consultation Manager database on number and timing of notifications  Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to- face meetings.  Feedback from meetings, presentations and briefings (documented in Consultation Manager).  Records in Consultation Manager database on complaints received from businesses relating to lack of information about construction activities and impacts.	<ul> <li>Number of notifications issued</li> <li>Percentage of notifications issued on time</li> <li>Number of briefings, information sessions and completed doorknocks</li> <li>Percentage of businesses within 50m contacted prior to works</li> <li>Number of complaints received from businesses relating to lack of information about construction activities and impacts</li> <li>Lessons learnt</li> </ul>
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and amenity during construction activity.	Potential issues identified in advance and mitigation measures implemented in consultation with affected businesses to address access, parking, visibility and/or amenity issues.  The objective is 100% implementation of agreed mitigation measures relating to access, parking, visibility and other amenity aspects.	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)  Feedback on effectiveness of mitigation measures (documented in Consultation Manager)	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues      Percentage of businesses where mitigation measures were implemented as agreed      Details of mitigation measures implemented



Performance Parameters	Monitoring	Reporting	Status
Agreed	Agreed mitigations implemented, including	Records in     Consultation     Manager     database on     complaints     received from     businesses     relating to     vehicle and     pedestrian     access,     parking,     visibility and     amenity,     including     details of any     repeat     complaints     about the     same issue.  Consultation with	Business feedback on effectiveness of mitigation measures      Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity      Lessons learnt      Number of businesses
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses.	Agreed mitigations implemented, including agreed respite, work methods, proactive engagement and ongoing communication.  Businesses identified as potentially affected by high noise for extended periods, and requests for at property treatment or relocation, referred to Sydney Metro if all negotiated solutions offered under the scope of the contract fail to provide an acceptable solution to the impacted businesses.  The objective is for zero referrals to Sydney Metro over a six-month timeframe during standard construction.	consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.  Documentation of affected businesses, impacts and mitigation measures in site specific CNVIS reports.  Feedback on effectiveness of mitigation measures (documented in Consultation Manager).  Records of businesses referred to Sydney Metro for additional assessment / treatment.  Records in Consultation Manager database on noise and vibration complaints from	with agreed mitigation measures to address noise and vibration impacts  Summary of nonstandard mitigation measures implemented  Number of referrals to Sydney Metro  Number of repeat complaints from noise sensitive receivers relating to noise and vibration impacts



# 4.6.7. Waterloo Integrated Station Development

Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Records in Consultation Manager database on number and timing of notifications  Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings.  Feedback from meetings, presentations and briefings (documented in Consultation Manager).  Records in Consultation Manager database on complaints received from businesses relating to lack of information about construction activities and impacts	Number of notifications issued	Total: 9    Out of hours: 1    Monthly updates: 6    COVID extended hours: 1    E-news updates: 16    Bi-annual newsletters: 1 Note: this includes notifications combined with LWW contractor. The majority of out of hours work notifications are combined into the monthly notifications, minimising the number of notifications that stakeholders receive.
		Percentage of notifications issued on time Number of briefings, information sessions and completed doorknocks  Percentage of businesses within 50m contacted prior to works Number of complaints received from businesses relating to lack of information about construction activities and impacts	Total: 14 Doorknocks: 6 Meetings: 2 Information sessions: 1 Briefings: 5 100% of businesses identified as being potentially affected by works were notified. No complaints have been received from businesses.
		Lessons learnt	<ul> <li>Businesses do not want 'over communication'. Information shared must be relevant and informative.</li> <li>Communication for the sake of communication is viewed as disruptive to businesses, they prefer an informal conversation during "slow" hours and having a point of contact that they can reach out to at any time.</li> <li>Feedback from businesses around the site is predominately</li> </ul>

## **Unclassified**

## **Sydney Metro**



Performance Parameters	Monitoring	Reporting	Status
			positive due to the increase in business from workers.
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager)  Feedback on effectiveness of mitigation measures (documented in Consultation Manager)	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues	• Nil
amenity during construction activity.	Records in Consultation Manager database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including	Percentage of businesses where mitigation measures were implemented as agreed	• N/A
	details of any repeat complaints about the same issue.	Details of mitigation measures implemented	• N/A
		Lessons learnt	<ul> <li>Due to the location and nature of businesses surrounding the Waterloo site, there is very little impact to businesses.</li> <li>WISD proactively encourages workers to be mindful of businesses when parking their vehicle. This is reiterated during inductions and at prestarts.</li> </ul>
		Business feedback on effectiveness of mitigation measures	• N/A
		Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity	No complaints have been received from businesses.
Agreed measures to minimise noise and vibration impacts on noise and	Consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.  Documentation of affected businesses, impacts and mitigation measures in site	Number of businesses with agreed mitigation measures to address noise and vibration impacts	• Nil
vibration specific CNVIS reports sensitive businesses. Feedback on effective measures (documents)	specific CNVIS reports.  Feedback on effectiveness of mitigation measures (documented in Consultation	Summary of non- standard mitigation measures implemented	• N/A
	Manager).  Records of businesses referred to Sydney	Number of referrals to Sydney Metro Number of repeat	<ul><li>Nil</li><li>No complaints have</li></ul>
	Metro for additional assessment / treatment.  Records in Consultation Manager database on noise and vibration complaints from	complaints from noise sensitive receivers relating to noise and vibration	been received from businesses.
	businesses.	impacts	



Performance Parameters	Monitoring	Reporting	Status
		Lessons learnt	• N/A

# 4.6.8. Sydenham Station Junction and Southwest Metro Early Works

The Sydenham Metro Upgrade and Southwest Metro Early works Business Management Plan (BMP) will be reviewed at least every six (6) months and updated as required to reflect project progress and ensure communication tools and activities match the timing of construction activities and communication remains effective with all stakeholders, customers and the public.

Effectiveness of the strategies outlined in the BMP are monitored via three (3) key parameters:

- 1. Businesses being aware of construction work and potential impacts (monitored through feedback provided by businesses at meetings and Business Connect events)
- 2. Effectiveness of mitigation efforts to maintain access to and visibility of businesses monitored through feedback provided by businesses and evidence of complaints (or lack of) from Consultation Manager database
- Collaboration with businesses that have vibration or noise sensitive operations (evidenced in Construction Noise and Vibration Impact Statement (CNVIS), Consultation Manager records and escalation of any unresolved complaints)

This document will be updated monthly to assess the effectiveness of the measures outlined in the BMP as well as progress against the above three key performance parameters

Performance Parameters	Monitoring	Reporting	Status
Awareness of construction activity and likely impacts.	Records in Consultation Manager database on number and timing of notifications	Number of notifications issued	Number of monthly notifications issued during this period - 5622 Number of commercial businesses who received community notifications - 937
	Records in Consultation Manager database on	Percentage of notifications issued on time	100%
	number of (and attendance at) briefings, information sessions and completed doorknocks/face-to-face meetings.  Feedback from meetings, presentations and briefings (documented in Consultation Manager).  Records in Consultation Manager database on complaints received from businesses relating to lack of information about	Number of briefings, information sessions and completed doorknocks	Due to Covid-19, individual and face to face meetings, doorknocks and information sessions were not permitted during this time and business owners have relied on notifications, sorry we missed you cards, phone calls, emails and letterbox drops.  A few urgent business briefings were undertaken with strict social distancing measures, these businesses were the station shop owners at Sydenham Station, owners of 360 Edgeware Road and local business owner Richard Edmondson.
construction activities and impacts	Percentage of businesses within 50m contacted prior to works	100% of businesses were identified and contacted as being potentially affected by works, prior to works	



Performance Parameters	Monitoring	Reporting	Status
		Number of complaints received from businesses relating to lack of information about construction activities and impacts	Nil
		Lessons learnt	Currently, the Sydenham Metro Upgrade project team are very proactive and transparent when it comes to consulting, recording and actively communicating with the local businesses on all upcoming works. We will continue this approach for the duration of the project and during the COVID-19 restrictions.  As COVID-19 restrictions are starting to ease, more face to face meetings and doorknocks will be undertaken.  Woolworth vouchers will slowly be phased out and be replaced with movie vouchers, when residents feel more comfortable going back to the cinema
			- Regular contact with business managers/owners to understand (where possible) how their business was managing COVID-19 impacts (e.g. status of the business opening hours and for educational facilities, whether students are engaging virtually or inclass attendance) - Continue to educate each subcontractor (and workers) on the community's specificities via presentation and include subcontractor into decision process of mitigation strategies – e.g. particularly for the 20-28 Chalmers Street site. This was also undertaken with the subcontractor and staff working in the Railway Institute Driveway Engagement with counterpart of adjacent other projects (e.g. Linewide, another Sydney Metro contractor)
			another Sydney Metro contractor) - Introducing new project counterpart to key stakeholders to facilitate the project set up in the area - Understanding and mitigating (where possible) potential cumulative effects on businesses and nearby stakeholders - Combining communication to streamline the engagement process (where possible) (e.g. notification, regular meetings with key stakeholders).
Measures implemented to maintain business vehicle and pedestrian access	Consultation Manager)	l .	Sydney Portugal Community Club Sydenham Station Newsagency and Coffee Shop Richard Edmondson

## **Unclassified**

## **Sydney Metro**



Performance Parameters	lonitoring	Reporting	Status
parking, visibility and amenity during construction activity.	Feedback on effectiveness of mitigation measures (documented in Consultation Manager)	address access, parking, visibility or amenity issues	Residents located at 360 Edgeware Road Tommy Black Cafe
Mana comp busind and p visibil	Records in Consultation Manager database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity, including	Percentage of businesses where mitigation measures were implemented as agreed	100%
	details of any repeat complaints about the same issue.	Details of mitigation measures implemented	Lanopearl Building — 31 Sydenham Road Owner of the Lanopearl building had a pre-existing flooding issue at the backgarage door, the project (out of goodwill) placed extra sandbags in and around premises during the flooding event that took place over WE38 (20-21 March 2021). The project also helped clear out sections of the area located alongside the building so the owners can landscape the area  Sydenham Station Newsagency and Coffee Shop on Sydenham Station Regular telephone communication is required to discuss upcoming works at the station and potential impacts specifically to loss of power generator install / loss of water for short periods of time (20mins).  Richard Edmondson — Local owner of properties in and around Marrickville Ongoing one-one one telephone conversations with the owner to discuss all upcoming works/impacts and mitigation measure in and around all his properties. The project recently cleaned out the grass area in front of the factory located at 30 Garden Street, to help improve the look of the factory frontage. Sydney Portugal Community Club Ongoing telephone conversations with Manager to discuss all upcoming works/impacts and access.  Residents at 360 Edgeware Road Residents located at 360 Edgeware Road received top range (Sennheiser) noise cancelling headphones to help residents with associated construction noise whilst working from home during COVID-19 restrictions Tommy Black Café Ongoing communication with owner in regard to site cars "not parking" in front of café. Emails and memos have been sent out to remind employees and

## **Unclassified**

## **Sydney Metro**



Performance Parameters	Monitoring	Reporting	Status
			Communication is ongoing with Tommy, from Tommy Black Cafe
		Lessons learnt	It is crucial during COVID-19 that communication is clear and transparent and that shop owners at Sydenham Station are contacted 30mins prior to any electricity/water mains turning off
		Business feedback on effectiveness of mitigation measures	Verbal feedback undertaken during consultation reflected that mitigation measures were highly effective
		Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity	Nil
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses.		l .	Richard Edmondson – Local owner of properties in and around Marrickville Ongoing one-one one telephone conversations with the owner to discuss all upcoming works/impacts and mitigation measure around noise and vibration within the vicinity of his properties
		Summary of non- standard mitigation measures implemented	Noise monitoring Programming of works to suit business operating hours Agreed respite Notification Consultation Email updates
		Number of referrals to Sydney Metro	Nil
		to noise and vibration impacts	Nil
		Lessons learnt	Pre-empting scheduled noise or vibration works with local owners is greatly appreciated and helps any potential noisy activities run smoother



## 4.6.9. Linewide

Performance Parameters	Monitoring	Reporting	Update
Awareness of construction activity and likely impacts	Records in Consultation Manager database on number and timing of notifications Records in Consultation Manager database on number of (and attendance at) briefings, information sessions and completed doorknocks/face- to-face meetings.  Feedback from meetings, presentations and briefings (documented in Consultation Manager).  Records in Consultation Manager database on complaints received from businesses relating to lack of information about construction activities and impacts	Number of notifications issued  Percentage of notifications issued on time  Number of briefings, information sessions and completed doorknocks	Based on a Consultation Manager records for the period covering 1 October - 30 March 2020:  27 monthly notifications were issued, including:  Bulk Power Supply (BPS): 4 x Surry Hills, 5 x Campsie;  6 x Sydney Metro Trains Facility (SMTF);  2 x Crows Nest;  6 x Northern Connection;  4 x Blues Point.  11 specific notifications were issued, including:  2 for Surry Hills BPS  9 for Northern Connection works.  Consultation letters issued included:  23 email updates for BPS  42 email updates for Northern Connection  1 x additional OOHW letter for SMTF North  Newsletters:  1 project newsletter: SMTF Biannual Newsletter  The above excludes combined monthly and weekly email notifications issued by other contractors, with content contributions from Systems Connect.  100%  While Covid-19 had resulted in the reduction of face to face consultation during the previous reporting period, face to face consultation is increasingly carried out.  During this reporting period there have been a total of 34 door knocks, comprising:  18 door knocks for BPS Surry Hills  8 door knocks for BPS Surry Hills  8 door knocks for BPS Campsie and  8 doorknocks for Northern Connection  Weekly briefings to Hotel 56 on Foveaux Street, Surry Hills during weekend shutdowns.

## **Unclassified**

## **Sydney Metro**



Performance Parameters	Monitoring	Reporting	Update
- arameters			
		Percentage of businesses within 50m contacted prior to works	100%
			Nil for the current period.  During the last reporting period one complaint was received for Surry Hills night investigation work. The business claimed that there had been a lack of notification.  Since then, a positive relationship has been established with the manager of this hotel, located on Foveaux Street. This has occurred through ongoing efforts of the SCLWW Stakeholder Manager who forwards weekly emails to the operations manager of the hotel and phones him weekly to ensure he is aware of upcoming nights and/or weekend work.
		Number of complaints received from businesses relating to lack of information about construction activities and impacts	The construction team on site ensures noise blankets are in place as often as possible and parking is set aside for the hotel to minimise impacts.
		Lessons learnt	Ongoing provision of targeted, localised information and availability of a Systems Connect point of contact continues to be key to successfully engaging with alignment businesses.  Alignment businesses appreciated Systems Connect teams' efforts in using their services. For example, for the Surry Hills power supply package of work, the use of Little Albion to relocate residents when work was being carried out on Foveaux St and the use of Hotel 56 when work was underway on Albion St.  Businesses highly value having a nominated contact that is available and accessible to them on a 24/7 basis.  Email, telephone, and SMS updates outlining specific impacts a given business can expect along with a direct mobile number for any questions /
			Email, telephone, and SMS updates outlining specific impacts a given

## **Unclassified**

## **Sydney Metro**



Performance		<b></b>	
Parameters	Monitoring	Reporting	Update
Measures implemented to maintain business vehicle and pedestrian access, parking, visibility and amenity during construction activity.	Consultation with businesses on potential impacts and mitigation measures (documented in Consultation Manager).  Feedback on effectiveness of mitigation measures (documented in Consultation Manager).  Records in Consultation Manager database on complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and	Number of businesses with mitigation measures agreed in advance to address access, parking, visibility or amenity issues	Systems Connect agreed mitigation measures with 10 businesses in advance of the commencement of its Surry Hills Bulk Power Supply package of work.  Early communication with businesses resulted in agreed mitigation measures such as alternative parking / traffic management and modified hours of work. Use of services where possible as per above comment.
		businesses relating to vehicle and pedestrian access, parking, visibility and	usinesses relating to ehicle and pedestrian ccess, parking, visibility and  Percentage of businesses where mitigation measures were
	amenity, including details of	implemented as agreed	100%
	any repeat complaints about the same issue.	Details of mitigation measures implemented	Systems Connect contacted individual businesses who were impacted by works.
			Efforts were made to adjust working days and hours to better suit impacted business, where possible. Alternative parking and travel arrangements were made. Traffic management teams were briefing impacted business accordingly. As above use of their services where possible
		Lessons learnt	Providing a contact available for 24-hour work and introducing the site supervisors to the business managers was key to building positive relationships with local businesses. It allowed for quick communication and timely adjustment of approach where possible, avoiding escalation of issues. Ensuring construction and traffic management teams and subcontractors supporting the delivery of work are aware of local issues and are community focused, helps with meeting the needs of the local businesses and residents.
		Business feedback on effectiveness of mitigation measures	Positive feedback was received, generally based on businesses welcoming regular work updates and the willingness of the site supervisors and traffic teams to immediately address any issues arising onsite.
		Number of repeat complaints received from businesses relating to vehicle and pedestrian access, parking, visibility and amenity	Nil



Performance Parameters	Monitoring	Reporting	Update
Agreed measures to minimise noise and vibration impacts on noise and vibration sensitive businesses	Consultation with businesses on noise and vibration impacts and mitigation measures documented in Consultation Manager.	Number of businesses with agreed mitigation measures to address noise and vibration impacts	100% compliance with CNVIS  100% compliance with agreed respite periods from high noise impact activities
	Documentation of affected businesses impacts and mitigation measures in site specific CNVIS reports.	Summary of nonstandard mitigation measures implemented	Systems Connect has implemented a customised approach, including agreed respite, consultation and email updates.
	Feedback on effectiveness of mitigation measures	Number of referrals to Sydney Metro	Nil
	(documented in Consultation Manager).  Records of businesses referred to Sydney Metro for additional	Number of repeat complaints from noise sensitive receivers relating to noise and vibration impacts	Nil
	assessment / treatment.  Records in Consultation Manager database on noise and vibration complaints from businesses.	Lessons learnt	Ongoing consultation and advance notification of activities continues to be key, allowing businesses to adjust operations based on important information such as the nature, timing and duration of work.  Differentiating the project from nearby / adjoining works is important.

# 4.7. Complaints

A total of 284 complaints associated with the C&SW project CSSI planning approvals were received during the reporting period. Of these, 225 complaints were determined to be attributable to project works following investigation. Figure 3 to Figure 6 provide a breakdown of the complaints by month and planning approval, project stage, type and site.

Full details on each complaint received during the reporting period are provided in Appendix 1. Each complaint has been actioned and resolved in accordance with the Construction Complaints Management System.

The Central Station Mainworks Stage was attributable for the majority of complaints, followed by TSE (25% and 17% respectively of all complaints attributable to project works)

Complaints during the reporting period were heavily dominated by Noise & Vibration, representing 142, or 63% of all complaints attributable to project works. This was followed by 30 relating to Traffic, Transport and Access and 21 relating to Property and business (representing 13% and 9% respectively of all complaints attributable to the project).

Works at the Central Station, Victoria Cross, Crows Nest and Pitt Street sites generated the most number of complaints during the reporting period (56, 40, 34 and 29 respectively; representing 71% of all complaints attributable to the project).



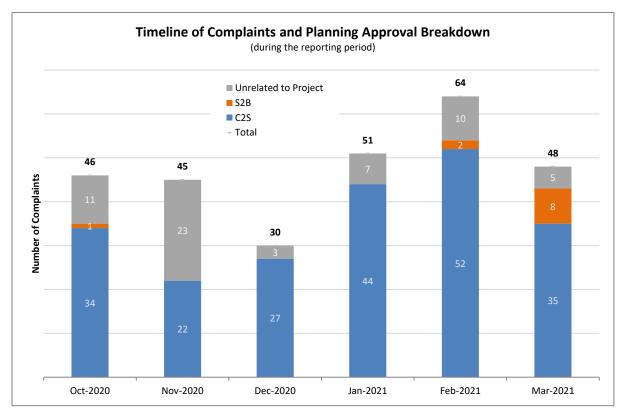


Figure 3: Timeline of Complaints and Planning Approval Breakdown during the Reporting Period



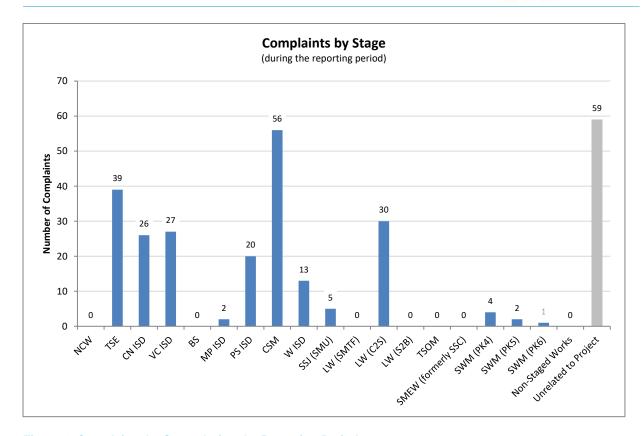


Figure 4: Complaints by Stage during the Reporting Period

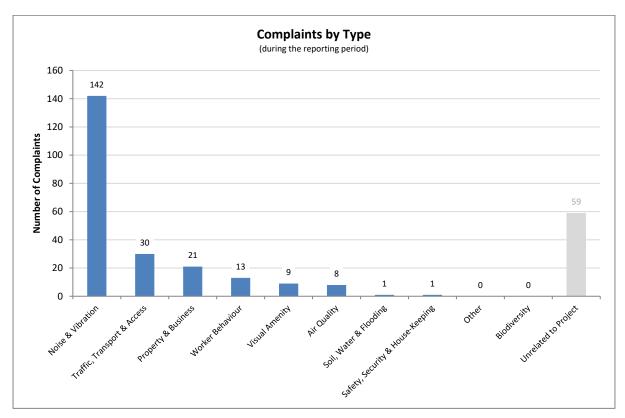


Figure 5: Complaints by Type during the Reporting Period



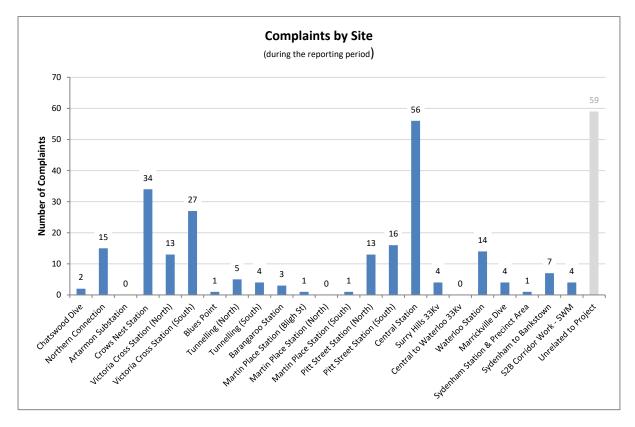


Figure 6: Complaints by Site during the Reporting Period



# 5. Sustainability and Environmental Initiatives

Sydney Metro's sustainability and environmental initiatives are outlined in its annual Sustainability Reports. Sydney Metro's inaugural Sustainability Report 2017 and all other subsequent annual Sustainability Reports are available on the Sydney Metro Sustainability webpage (https://www.sydneymetro.info/our-approach-sustainability).

A combined 2019/2020 report was released July 2021.



Figure 7: Sydney Metro 2017, 2018 and 2019/2020 Sustainability Reports



# Appendix 1 – Complaints during the Reporting Period