

Powering Sydney's Future

Potts Hill to Alexandria transmission cable project Construction Public Infrastructure Management Plan August 2020 TransGrid: State Significant Infrastructure - Powering Sydney's Future - Development and operation of a new 330 kV underground cable circuit



CONSTRUCTION PUBLIC INFRASTUCTURE MANAGEMENT PLAN (CPIMP) Rev 6

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Abbreviations and acronyms

Abbreviation/ Acronym	Expanded term
AMP	Asbestos Management Plan
ASSMP	Acid Sulfate Soils Management Plan
CAQMP	Construction Air Quality Management Plan
CEMP	Construction Environmental Management Plan
CHMP	Construction Heritage Management Plan
CLMP	Contaminated Land Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CPIMP	Construction Public Infrastructure Management Plan
CSWMP	Construction Soil and Water Management Plan
CTTMP	Construction Traffic and Transport Management Plan
CVBMP	Construction Vegetation and Biodiversity Management Plan
CWMP	Construction Waste Management Plan
DPIE	Department of Planning, Industry and Environment
ECM	Environmental Control Measure
EIS	Environmental Impact Statement
EMMM	Environmental Management and Mitigation Measure
ESCMP	Erosion and Sediment Control Plan
FMP	Flood Management Plan
FMS	Flood Mitigation Strategy
GMS	Groundwater Management Strategy
OOHW Protocol	Out-of-hours work Protocol
PSF	Powering Sydney's Future
SSLGMP	Site Specific Landfill and Gas Management Plan
SWMP	Surface Water Management Plan
TARP	Trigger, Action and Response Plan
ТСР	Traffic Controls Plans
UCLAFP	Unexpected Contaminated Land and Asbestos Finds Procedure

1 Introduction

1.1 Context

The Powering Sydney's Future – Potts Hill to Alexandria transmission cable project (the project) involves the construction of 330kV underground cables between TransGrid's Rookwood Road substation at Potts Hill and the Beaconsfield West substation Alexandria.

The NSW Department of Planning, Industry and Environment (DPIE) has assessed the State Significant Infrastructure (SSI-8583) and has granted Infrastructure Approval on 14 May 2020 in accordance with Section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

TransGrid and its contractors will construct the Project infrastructure.

The purpose of the CPIMP is to address:

- the requirements of the Minister's Conditions of Approval (CoA) for SSI-8583
- the Environmental Management and Mitigation Measures (EMMMs) listed in the *Powering Sydney's Future (PSF) Potts Hill to Alexandria transmission cable project* Environmental Impact Statement (EIS) as documented in the Amendments Report;
- applicable environmental legislation; and
- applicable contract requirements.

1.2 Scope and objectives of the CPIMP

This Construction Public Infrastructure Management Plan (CPIMP) outlines the arrangements and agreements with public infrastructure asset owners to ensure that potential direct or indirect impacts are reduced to a level acceptable to both parties. TransGrid and its contractors will manage and control potential interactions with existing public infrastructure during construction of the Project.

Public Infrastructure is defined as (as per CoA for SSI-8583);

'Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas and fuel supply, electricity, telecommunications, etc.'

This Sub-plan is applicable to all activities during construction of the Project, including all areas where physical works will occur or areas that may be otherwise impacted by the construction works, and under the control of the TransGrid and its contractors. All staff and sub-contractors are required to operate fully under the requirements of this Sub-plan and related environmental management plans, over the full duration of the construction program.

1.3 Project environmental management system overview

The Project Environmental Management System (EMS) is described in Figure 1-1.

To achieve the intended environmental performance outcomes, TransGrid and its contractors has established, implemented, maintained and continually improved an EMS.

The EMS consists of environmental plans, including this Sub-plan, procedures, protocols and tools as set out below and illustrated in Figure 1-1.

1.4 Changes since the Project EIS relevant to the CPIMP

The EIS included a number of potential route options and other project alternatives. Further detailed design and assessment has been undertaken for the final route only, consistent with the Amendment Report and Conditions of Approval. The following changes documented in the EIS and Conditions of Approval are considered in this CPIMP.

- Construction and operation of the cable bridge (special crossing) required to cross the Cooks River has been replaced with an underbore from the cul-de-sac at the end of Lindsay Street into Lees Park before the cable route continues on to Harmony Street, Ashbury.
- The proposed construction laydown area at Cooke Park in Belfield, within the Strathfield Local Government Area (LGA) will not be used, as it is no longer required to support construction of the project.
- There are some changes to locations of open trenching and underboring, however the alignment has been maintained.

1.5 Consultation for preparation of the CPIMP

This CPIMP has been provided to relevant stakeholders where a potential 'direct' impact was unable to be avoided, during the detailed design phase of the project.

Ongoing consultation with councils, utilities (water, gas, electricity, fuel, and telecommunications), TfNSW (RMS, TMC, Sydney Trains, Sydney Metro) and ARTC has occurred throughout the planning and design phases of the project and will continue throughout the construction of the project to manage any concerns of both parties. Table 3.1 and Table 3.2 identify the agreements or arrangements made with each potentially affected public infrastructure authority. Consultation requirements are described in the CEMP.

Appendix 1 includes a comments register of all comments received during the formal consultation period.

Appendix 5 includes additional correspondence with relevant authorities.



Figure 1-1 Project environmental management system

2 Environmental Requirements

2.1 Legislation

Legislation relevant to public infrastructure management includes:

- Electricity Supply Act 1995
- Gas Supply Act 1996
- Local Government Act 1993
- Pipelines Act 1994
- Roads Act 1993
- Sydney Water Act 1994
- Telecommunications Act 1997
- Transport Administration Act 1998.

Relevant provisions and clauses of the above legislation that protect and restore public infrastructure assets are described in Table 3.2 are explained in the register of legal and other requirements included in Appendix A1 of the CEMP.

2.2 Relevant Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this Sub-plan include:

- AS 1345-1995, Identification of the contents of pipes, conduits and ducts.
- AS 1742.3 2009 Manual of uniform traffic control devices Traffic control for works on roads. AS 1743 2018 Road signs – Specifications
- AS 1744 2015 Standard alphabets signs
- AS 1906.1 2017 Retroreflective materials and devices for road traffic control purposes
- AS 1906.3 2017 Retroreflective materials and devices for road traffic control purposes -Raised pavement markers
- AS 5488-2013 Classification of Subsurface Utility Information (SUI)
- ARTC Third Party Works Underbores Guide in ARTC Corridors
- ARTC (2019), Protocol for Entering the ARTC Rail Corridor.
- AusGrid (2016), NS156 Working near or around underground cables, 15 December 2016.
- Caltex Caltex Sydney Metropolitan Pipeline requirements
- DialBeforeYouDig (2020), Best Practice Guide Preventing Damage to Underground Services.
- Jemena, GAS-999-PR-HSE-008, Pipeline Excavation Procedure (previously GAS PR 0005)
- Jemena, GAS-960-GL-PL-001_AS2885, Guideline to designing, constructing and operating around existing AS2885 natural gas pipelines
- NBN, Working near NBN cables.
- NBN, Overview of technical Standard.
- NSW Streets Opening Coordination Council (2018), Guide to Codes and Practices for Street Opening.
- Optus (2014), Work in the vicinity of underground assets, 16 June 2014.
- Qenos Pty Ltd, Ethylene gas pipeline requirement for third party activities
- Roads and Maritime Service (2003), SI/TCS/8 Installation and reconstruction of traffic light signals, Revision 1, August 2003.
- Roads and Maritime Service, Standard Drawings and Specifications.
- Safework NSW (2007), Work Near Underground Assets Guide.
- Safework NSW (2020), Code of Practice: Excavation Work.



- Safework NSW (2006), Code of Practice: Work Near Overhead Powerlines.
- Sydney Metro (2017), Underground Corridor Protection Technical Guidelines, 16 October 2017.
- Sydney Metro (2018), Sydney Metro At Grade and Elevated Sections Corridor Protection Guidelines, September 2018
- Sydney Trains (2020), Guide to Working with Sydney Trains, 25 February 2020.
- Sydney Water, Clearances between underground services.
- Sydney Water, Guidelines for building over/adjacent to Sydney Water stormwater assets
- Sydney Water, Technical guidelines Building over and adjacent to pipe assets
- Sydney Water, Managing new development process
- Sydney Water, WSAA Water and sewer codes for adjustments
- Telstra (2017), Duty of Care, 20 October 2017.
- Transport for NSW (2016), Technical note TN 042:2016 Service Installations within Rail Corridor, 10 June 2016.
- Transport for NSW (2019), Guidelines on External and Developer-led works affecting Transport assets.
- Transport Management Centre (2018), Road Occupancy Manual, 8 May 2018
- Viva Energy Australia (2018), Conditions for Works near Viva Energy Australia Pty Ltd owned and operated High Pressure Pipelines in New South Wales, 27 August 2018.

2.3 Minister's Condition of Approval

The CPIMP is developed in accordance with the relevant Conditions of Approval (CoA) from the DPIE as described in Table 2-1.

2.4 Updated Environmental Management and Mitigation Measures (EMMMs)

The EMMMs as documented in the Amendments Report are presented in Table 2-2.

Table 2-1 Relevant Conditions of Approval

CoA.	Conditions of approval	Document Reference	How addressed
C3	The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan in Table 1. g) Public Infrastructure	This CPIMP	A Sub-Plan has been prepared which incorporates all mitigation and management measures identified in the Project EIS and Amendments Report. Consultation of this plan was undertaken with the following Stakeholders & Authorities; City Of Canterbury Bankstown Council Inner West Council City Of Sydney Traffic Management Centre Sydney Coordination Office Transport for NSW Sydney Trains Australian Rail Track Cooperation Sydney Water Ausgrid Jemena Sydney Metro Sydney Transport Authority
C4	Details of all information requested by an agency to be included in a CEMP Sub- plan as a result of consultation, including copies of all correspondence from those agencies, must be provided with the relevant CEMP Sub-Plan.	This CPIMP	Refer to appendix 1 & appendix 5
C5	Any of the CEMP Sub-plans may be submitted along with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction.	This CPIMP	Plan submitted July 7 th 2020
C6	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary, must be implemented for the duration of construction. Where construction of the SSI is staged, construction of a stage must	This CPIMP	Plan submitted July 7 th 2020

	not commence until the CEMP and sub-plans for that stage have been approved by the Planning Secretary.		
C7	The CEMP and CEMP Sub-plans required under this approval must be prepared by suitably qualified and experienced persons in accordance with relevant guidelines, and include where relevant:	Separate correspondence	Collation of Curriculum Vitea's for persons responsible for preparing reviewing or approving the Sub Plan.
C7 (a)	(a) a summary of relevant background or baseline data;	This CPIMP Section 4.2	The project has obtained all Dial Before You Dig plans and conducted investigations to identify/validate various characteristics of above ground and sub-surface infrastructure. This information has been used as part of detailed design. The CPIMP establishes a process for gathering additional baseline data, through pre-construction dilapidation surveys.
C7 (b)	 (b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the SSI or any management measures; 	This CPIMP Section 3.3 Table 4-2	Table 3.2 identifies the relevant statutory requirements. Table 3.3 identifies measures for dealing with authorities impacted either directly or indirectly Specific performance indicators will include comparison between pre- construction and post-construction dilapidation (where applicable see Table 4-2) or other measures if applicable in asset owner standard design guidance, DBYD information and asset owner project specific guidance as outlined in Section 3.3.
C7 (c)	(c) any relevant commitments or recommendations identified in the EIS;	N/A	The EIS did not make commitments or recommendations in relation to Public Infrastructure.

C7 (d)	(d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	This CPIMP Section 3.3	Table 3.2 & Table 3.3 identifies measures for dealing with authorities impacted either directly or indirectly
C7 (e)	 (e) a program to monitor and report on the: (i) impacts and environmental performance of the SSI; and (ii) effectiveness of the management measures set out pursuant to paragraph (d); 	Section 4.2	Dilapidation surveys will be conducted, which is the program to monitor potential impacts and environmental performance of the SSI on the public infrastructure.
			As the project progresses comparisons will be possible between pre- construction and post-construction dilapidation information. These can be used as a gauge to determine the effectiveness of the measures referred to in Condition C7(d).
C7 (f)	(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Section 3.4	Works will be delivered to meet the relevant standards identified in the CPIMP.
			Unpredicted impacts will be managed as outlined in section 3.4.
C7 (g)	(g) a program to investigate and implement ways to improve the environmental performance of the SSI over time;	Section 3.4	If unpredicted impacts are identified, this plan would be revised as necessary to identify additional controls to manage public infrastructure.
C7 (h)	(h) a protocol for managing and reporting any:(i) incident, non-compliance or exceedance of any impact assessment criterion and	CEMP Section 7.7 CEMP Section 8.1.4	A protocol for managing and reporting incidents is included in the CEMP Section 7.7.
	performance criterion; (ii) complaint; or (iii) failure to comply with other statutory requirements;	Sections 5.4 and 5.5	A protocol for compliance or exceedance of any impact assessment criterion and performance criterion or compliance with a statutory requirement will be managed in accordance with CEMP Section 8.1.4 and Sections CPIMP 5.4 and 5.5. Complaints would be managed as described in the CCS.

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C7 (i)	a description of the roles and environmental responsibilities for relevant employees	This CPIMP	Section 5.1 specifies roles and
	as well as training and awareness;	Section 5.1 & Section 5.2	responsibilities in relation to authorities Section 5.2 outlines training and documents employees need to be made aware of.
C7 (j)	a protocol for periodic review of the CEMP and associated subplans and programs		Protocols for continuous improvement and update and amendment are included in Section 6
E31	The Public Infrastructure CEMP Sub-Plan required under Condition C3 must:	This CPIMP	This document outlines all reasonably practicable measures that must be
	 a) identify all existing and proposed public infrastructure (including buildings, structures, roads, light and heavy rail, utilities and services, and other assets) that may be directly or indirectly affected by the SSI; b) identify all public authorities and service providers responsible for this public infrastructure; c) identify any statutory approvals or other legal requirements that are required to be obtained by the Proponent in relation to this public infrastructure; d) identify applicable Australian Standards and other relevant standards, procedures and guidelines in relation to this public infrastructure; e) describe the proposed interactions between the SSI and this public infrastructure (including relevant drawings), and the proposed management measures for addressing these interactions in consultation with the applicable public authorities and service providers; f) identify access and other requirements for working in proximity to this public infrastructure, and measures for ongoing consultation with the relevant public authorities and service providers; and g) describe the process for ongoing maintenance of SSI assets located within the applicable public infrastructure corridors, and provision of as-built drawings to public authorities if required. 	Section 4.	 implemented prior to construction. E31 (a) & (b) Table 3.1 details the existing and proposed public infrastructure that may be directly or indirectly affected by the SSI and the responsible public authority or service provider. It should be noted that the potential impacts to public infrastructure that is heritage listed (e.g. paving in Enmore Road and Juliett Street in Marrickville) are captured in the Construction Heritage Management Plan (CHMP) and Construction Noise and Vibration Management Plan (CNVMP). (c) Table 3.2 details the statutory obligations, protections and agreements in relation to public infrastructure. (d) Relevant Australian Standards and other relevant standards, procedures and guidelines in relation to this public

			infrastructure is provided in Section 2.2.
			It should be noted that DBYD provides the relevant Guidelines in relation to the potential interaction with public infrastructure assets.
			(e) Detailed route plans have been submitted, separately, to DPIE as Appendix 6, Detailed Route Plans (redacted) Due to security concerns of this plan requiring to be made public, an example has been provided in Appendix 2
			(f) Refer to Table 3.3
			(g)Post energisation, TransGrid will undertake routine inspection and maintenance tasks including non- intrusive weekly route patrols (walk/drive the cable route).
			On an annual basis it may undertake monitoring for cable movement, cable testing, which would be undertaken by accessing the cable at selected pits and joint bays. Rail bridge surveys would be undertaken approximately every five years.
			Appendix 3 provides further details of inspections that will be undertaken.
E32	The Proponent must prepare a:	This CPIMP.	CNVMP Section 9.3.6 identifies the requirements for building dilapidation
	a) Pre-construction Dilapidation Report of the public intrastructure in the vicinity of the SSI prior to the commencement of construction; and	Section 4.2	surveys.
	 b) Post-construction Dilapidation Report of the public infrastructure in the vicinity of the SSI that was the subject of the Pre-construction Dilapidation Report within 3 months of the completion of construction, or other timing as may be agreed by the applicable authority, in consultation with the applicable public authority or service provider responsible for that public 	& Construction Noise and Vibration Management Plan (CNVMP)	CPIMP Section 4, Table 4.1 identifies what dilapidation surveys will be undertaken and when for all public infrastructure other than buildings.

	infrastructure, and submit a copy of the report to the Planning Secretary	Section 9.3.6	
E33	 Unless the Proponent and the applicable public authority or service provider agree otherwise, the Proponent must: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI; and b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the SSI, to the satisfaction of the applicable public authority or service provider. <i>Note: This condition does not apply to any damage to roads caused as a result of general road usage.</i> 	This CPIMP Section 3.3	Table 3.1 identifies arrangements or agreements to ensure any 'potential' damages cause to other public infrastructure assets are at the expense of TransGrid.

Table 2-2 Relevant Environment Mitigation and Management Measures included in the Amendments Report

Impact	EMMM ID	Measure	Document Reference	How addressed
Underground utilities	HR7	Minimise public safety risks such as flooding and fire/explosions from damaging underground utilities by:	Section 3.3	The CPIMP describes how the project will minimise safety risks such as flooding and fire/explosions from damaging underground utilities by:
		enquiries and consulting with relevant service infrastructure providers, prior to commencement of construction;		 undertaking Dial-Before-You-Dig (DBYD) enquiries and consulting with relevant service infrastructure providers, prior to
		 undertaking service and utility identification works; employing non-destructive excavation methods 		 undertaking service and utility identification works;
		to expose buried services prior to excavation where works are required in close proximity to the utility and there is a high risk of striking that utility; and		 employing non-destructive excavation methods to expose buried services prior to excavation where works are required in close proximity to the utility and there is a high risk of striking that utility; and
		protecting utilities prior to any excavation works being undertaken in proximity to the utility where required.		 protecting utilities prior to any excavation works being undertaken in proximity to the utility where required.
Identification of utilities	LP5	Further surveys (including pot holing) will be undertaken to confirm the locations of major utilities identified in DBYD. Thermal resistivity assessments will be undertaken to determine the potential for reduced trench widths in order to minimise the need for utility relocation	Sections 3.2 and 3.3	Further surveys (including pot holing) will be undertaken to confirm the locations of major utilities identified in DBYD. Thermal resistivity assessments will be undertaken to determine the potential for reduced trench widths in order to minimise the need for utility

Impact	EMMM ID	Measure	Document Reference	How addressed
		or support/protection measures.		relocation or support/protection measures.
Disruption of services or relocation of utilities	LP6	Where services need to be disrupted or utilities relocated, relevant stakeholders will be consulted and affected communities notified.	Section 3.4	Where services need to be disrupted or utilities relocated, relevant stakeholders will be consulted and affected communities notified.
Utility damage	LP7	Where works are to be carried out in close proximity to	Section 2	Where works are to be carried out in close proximity to
		utilities, consultation will be undertaken with the relevant utility provider to determine safety and network integrity requirements.	Section 3	utilities, consultation will be undertaken with the
	requ		Section 4	integrity requirements.
Utilities impacts	SE5	Consultation and construction planning with relevant utility/service providers (including councils, TfNSW, Sydney Trains, ARTC and Roads and Maritime) and measures such as searches of DBYD will be undertaken to minimise the potential for damage or disruption to utilities and services.	Table 3-3	Consultation and construction planning with relevant utility/service providers (including councils, TfNSW, Sydney Trains, ARTC and Roads and Maritime) and measures such as searches of DBYD has been undertaken to minimise the potential for damage or disruption to utilities and services.
				Details of utilities are included on the Design Plans and have guided the final infrastructure location.
				Construction planning is being undertaken in consultation with stakeholders.

3 Public Infrastructure

3.1 Construction activities

During construction, excavation activities have the potential to come in close proximity to underground services and public infrastructure. Risks to underground utilities and services include possible punctures/ruptures from excavation plant, during the excavation of cable trenches.

In addition, utilities which have not properly been identified prior to works commencing may result in project delays associated with implementing appropriate protection/support measures or potential utility relocation (if required) or service disruption caused by damaging a utility.

3.2 Mitigation measures completed prior to construction

The development of the detailed design, including the alignment of the transmission cable route, has taken into consideration other existing utilities and council assets within the road reserve in order to minimise impacts on these services. Investigations into the exact location of utilities and council assets has been completed along the transmission cable route.

TransGrid and its contractors has undertaken ground penetrating radar testing, potholing and slit trenching, with the results used to inform development of the detailed design. (See below example avoidance of key stormwater features).

The exact alignment within the road reserve has been refined to avoid any direct impacts on utilities or council assets.

As a result of the detailed investigation works, the risk of impact on unknown public infrastructure assets is considered unlikely.

Location / type	Tributary	Method		
Muir Road, Chullora	Stormwater drain	Trenching over/under the channel with no direct impact		
Concrete box culvert		on the structure.		
Wangee Road	Coxs Creek	Underbore		
Concrete lined channel				
Rawson Road	un-named tributary	Underbore		
Concrete lined channel	of the Cooks River			
Cooks River	Cooks River	Underbore		
Natural channel				
Omaha Street	un-named tributary	Underbore		
Concrete lined channel	of the Cooks River			
Centennial Street	Stormwater drain	Trenching over/under the channel with no direct impact		
Concrete lined channel		on the structure.		

Approach to conduit installation where the Project alignment intersects with key stormwater features



3.3 Mitigation measures to be implemented during construction

During construction activities, standard processes and guidelines will be implemented common to excavation of carriageway activities.

Examples of these are listed below:

- 1. Conduct DBYD
- 2. Apply standard design guidance and procedures identified in DBYD information
- 3. Apply asset owner project specific guidance and procedures
- 4. Collect survey condition information when asset is exposed during construction (dilapidation survey)
- 5. Protection and/or adjustment/relocation of asset during construction
- 6. Restoration of service

Specific mitigation measures in relation to public infrastructure assets are described in Table 3.3.

Note: Work, Health and Safety risks of working close or near public infrastructure is captured in the relevant Work, Health and Safety Management Plan.

3.4 Managing unpredicted impacts

During construction some utility interruptions may be required. Arrangements with affected organisations or persons will be made ahead of working near utilities to manage potential service impacts. The effectiveness of the management of utility interruptions will be managed by monitoring complaints and through stakeholder reference groups.

Should unpredicted impacts be observed, a review and revision of this plan would be conducted as required to identify relevant control measures that could be implemented to avoid, manage and mitigate against unpredicted impacts associated with the relevant public infrastructure.

Public Infrastructure Authority	Built infrastructure assets potentially impacted	Describe impact	Is impact direct or indirect?	Infrastructure directly/ indirectly impacted
RMS	Classified state roads	Cutting into roads, ancillary (kerb & guttering) & traffic signal loops. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Direct	 Rookwood Road, Yagoona Hume Highway, Chullora Juno Parade, Greenacre Roberts Road, Greenacre Punchbowl Road, Lakemba Old Canterbury Road, Summer Hill New Canterbury Road, Dulwich Hill Sydenham Road, Marrickville Princes Highway, St Peters
Sydney Trains	Tracks & ancillary infrastructure	Construction of bridges over tracks and piling within rail corridor. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Direct	 Illawarra/Bankstown rail line Chullora goods line
Sydney Metro	Tracks & ancillary infrastructure	Construction of bridges over tracks and piling within rail corridor. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	Bedwin Road cable bridge will be constructed in proximity of Sydney Metro tunnel & Shunt track. Sydney Metro will endorse the bridge design to ensure no direct impact on Sydney Metro assets.
TfNSW / Transdev (Sydney Light Rail)	Tracks & ancillary infrastructure	Underboring of Sydney Light Rail, Dulwich Hill – Central line. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The Underbore crosses under Sydney Light Rail and has been designed in accordance with TfNSW & Transdev requirements. TfNSW & Transdev will endorse the underbore design to ensure no direct impact on light rail track.
ARTC	Tracks & ancillary infrastructure	Underboring of Sydney Freight Line. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSL	Indirect	The Underbore crosses under ARTC freight line and has been designed in accordance with ARTC requirements. ARTC will endorse the underbore design to ensure no direct impact on light rail track

Table 3.1 - Existing and proposed public infrastructure that has the potential to be directly or indirectly affected by the project (SSI).

Public Infrastructure Authority	Built infrastructure assets potentially impacted	Describe impact	Is impact direct or indirect?	Infrastructure directly/ indirectly impacted
RMS Motorways Division	Bedwin Road cycle path and retaining wall	TransGrid and their subcontractors are constructing a combined cycle / cable bridge, including modification of existing wall.	Direct	Bedwin Road, St Peters
Telstra	Assets in streets	Exposure of assets, and construction near assets. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The new duct bank crosses several Telstra assets along the alignment. Design ensures Telstra minimum separation is maintained in accordance with NSW Streets Opening Coordination Council. Refer to Appendix 4 for minimum separations.
Optus / UECOMM	Assets in streets	Exposure of assets, and construction near assets. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The new duct bank crosses several Optus/ Uecomm assets along the alignment. The design ensures Optus/ Uecomm minimum separation is maintained in accordance with NSW Streets Opening Coordination Council. Refer to Appendix 4 for minimum separations.
NBN	Assets in streets	Exposure of assets, and construction near assets. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The new duct bank crosses several NBN assets along the alignment. The design ensures NBN minimum separation is maintained in accordance with NSW Streets Opening Coordination Council. Refer to Appendix 4 for minimum separations.
Vocus	Assets in streets	Exposure of assets, and construction near assets. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The new duct bank crosses several Vocus assets along the alignment. The design ensures Vocus minimum separation is maintained in accordance with NSW Streets Opening Coordination Council. Refer to Appendix 4 for minimum separations.
Caltex	Pipeline	Underboring near pipeline. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The Underbore crosses under Caltex's pipeline and has been designed in accordance with Caltex requirements. Caltex will endorse the underbore design to ensure no direct impact on the pipeline.

Public Infrastructure Authority	Built infrastructure assets potentially impacted	Describe impact	Is impact direct or indirect?	Infrastructure directly/ indirectly impacted
Viva Energy	Pipeline	Underboring near pipeline. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The Underbore crosses under Viva's pipeline and has been designed in accordance with Viva requirements. Viva will endorse the underbore design to ensure no direct impact on the pipeline.
Sydney Water	Water pipes, sewerage and storm water	Exposure of assets, construction near Sydney Water assets and work in William Holmes Street. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Direct	William Holmes Street
AusGrid	Electricity cables	Exposure of assets, construction near assets, and potential relocation of assets. TransGrid and their subcontractors will pay the full costs associated with relocating.	Direct	Sydenham Road 11kV relocation
City of Sydney	Unclassified roads, footpaths, street furniture	Trenching in roadways and parks with minimal impact to ancillary assets. The restored road surface would match what was there previously i.e. an asphalt or concrete roadway, or as otherwise agreed with the relevant roads authority. TransGrid and their subcontractors would only reinstate the area that was excavated and not entire lanes or roadways	Direct	Parks: • Sydney Park Roads: • Barwon Park Road • Euston Road • Burrows Road
Inner West Council	Classified regional roads; Unclassified roads, footpaths, street furniture	Trenching in roadways and parks with minimal impact to ancillary assets. The restored road surface would match what was there previously i.e. an asphalt or concrete roadway, or as otherwise agreed with the relevant roads authority. TransGrid and their	Direct	Parks: • Camdenville Park Roads: • Holden Street • Hanks Street • Arlington Street • Constitution Road

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Public Infrastructure Authority	Built infrastructure assets potentially impacted	Describe impact	Is impact direct or indirect?	Infrastructure directly/ indirectly impacted
		subcontractors would only reinstate the area that was excavated and not entire lanes or roadways		 Denison Road Pigott Street Herbert Street Fairfowl Street Pile Street Livingstone Road Hawkhurst Street Centennial Street Neville Street Surrey Street Charles Street Illawarra Road Addison Road Enmore Road Scouller Street Juliett Street Llewellyn Street Edgeware Road May Street
Canterbury Bankstown Council	Classified regional roads; Unclassified roads, footpaths, street furniture	Trenching in roadways and parks with minimal impact to ancillary assets. The restored road surface would match what was there previously i.e. an asphalt or concrete roadway, or as otherwise agreed with the relevant roads authority. TransGrid and their subcontractors would only reinstate the area that was excavated and not entire lanes or roadways	Direct	Parks: • Lees Park Roads: • William Holmes Street • Rookwood Road • Muir Road • Hillcrest Avenue • Rawson Road • Maiden Street • Acacia Avenue • Wangee Road • Yangoora Road • Neale Street • Lucerne Street • Lucerne Street • Knox Street • Walker Street • Carter Street • Burwood Road • Bruce Avenue

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Public Infrastructure Authority	Built infrastructure assets potentially impacted	Describe impact	Is impact direct or indirect?	Infrastructure directly/ indirectly impacted
Jemena	Pipelines	Exposure of assets, and construction near assets. Potential asset relocation. TransGrid and their subcontractors will pay the	Indirect	 Omaha Seventh Avenue Fifth Avenue Beamish Street Byron Street Cowper Street Lindsay Street Harmony Street Malleny Street Cheviot Street Roslyn Street King Street Second Street Holden Street Note: relocations are no longer anticipated based current design.
		full costs associated with relocating.		
Qenos	Pipeline	Underboring of disused pipeline. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The Underbore crosses under the Qenos pipeline has been designed in accordance with Qenos requirements. Qenos will endorse the underbore design to ensure no direct impact on the pipeline.
Sydney Desalination Plant	Pipeline	Over boring of pipeline. TransGrid and their subcontractors will pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the SSI.	Indirect	The Underbore crosses over Sydney Desalination Plant pipeline and has been designed in accordance with Sydney Desalination Plant requirements. Sydney Desalination Plant will endorse the underbore design to ensure no direct impact on the pipeline.

Table 3.2 – Existing and proposed public infrastructure statutory obligations, protections and agreements in relation to the SSI.

Public Infrastructure Authority	Legislative obligations to protect / restore public assets	Has a separate agreement been requested to manage impacts to infrastructure?	Other consultation/permit process agreed?	Timing
RMS	<i>Roads Act 1993</i> Sections 138, 97, 101, 102, 103 and 104	No	Yes S138 consent will be the basis of agreement to reinstate the road and any damage caused. A Road Occupancy Licence (ROL) will also be obtained from the Transport Management Centre. Refer to Construction Traffic and Transport Management Plan (CTTMP)	Prior to construction in the area to which the consultation/ permit relates
Sydney Trains	Transport Administration Act 1988 Section 99A Schedule 1, Clause 8I Schedule 1, Clause 8IJ Schedule 6A, Clause 16 Schedule 6B, Clauses 3, 4 and 6	Yes Master Access Deed (addresses property access, interface protocols, & protection of assets in the event of damage).	Yes Designs will be submitted via Configuration Control Board (CCB) review process to ensure asset protection to their satisfaction.	Prior to construction in the area to which the consultation/ permit relates
Sydney Metro	<i>Transport Administration Act 1988</i> Section 99A Schedule 1, Clause 8I Schedule 1, Clause 8IJ Schedule 6A, Clause 16 Schedule 6B, Clauses 3, 4 and 6	No Specific advice by Metro is that an Interface Agreement is not required.	Yes Designs will be submitted via Sydney Metro's gateway review process to ensure asset protection to their satisfaction.	Prior to construction in the area to which the consultation/ permit relates
TfNSW / Transdev (Light Rail)	<i>Transport Administration Act 1988</i> Section 99A Schedule 1, Clause 8I Schedule 1, Clause 8IJ Schedule 6A, Clause 16 Schedule 6B, Clauses 3, 4 and 6	Yes O&M Interface & Access Deed Poll (addresses property access, interface protocols, & protection of assets in the event of damage).	Yes TfNSW & Transdev have provided guidelines and design standards. Designs will be submitted via Configuration Control Board (CCB) review process to ensure asset protection to their satisfaction.	Prior to construction in the area to which the consultation/ permit relates

ARTC	<i>Transport Administration Act 1988</i> Section 99A Schedule 1, Clause 8I Schedule 1, Clause 8IJ Schedule 6A, Clause 16 Schedule 6B, Clauses 3, 4 and 6	Yes ARTC Works Agreement (addresses property access, interface protocols, & protection of ARTC assets in the event of damage).	Yes ARTC Third Party Access Application required to obtain ARTC authorisation to access rail corridor, with relevant training and safety controls listed.	Prior to construction in the area to which the consultation/ permit relates
RMS Motorways Division	<i>Roads Act 1993</i> Sections 138, 97, 101, 102, 103 and 104	Yes Deed of Agreement (confirming commitment to design bridge to accommodate cycle traffic).	Yes A Road Occupancy Licence (ROL) will also be obtained from the Transport Management Centre (TMC). Refer to Construction Traffic and Transport Management Plan (CTTMP)	Prior to construction in the area to which the consultation/ permit relates
Telstra	<i>Telecommunications Act 1997</i> Volume 2, Schedule 3A, Part 2, Division 4, Clause 36	No Minuted in meeting with Telstra in March 2020 that no agreement required.	No Not required as no direct impact	N/A
Optus / UECOMM	<i>Telecommunications Act 1997</i> Volume 2, Schedule 3A, Part 2, Division 4, Clause 36	No	No Not required as no direct impact	N/A
NBN	<i>Telecommunications Act 1997</i> Volume 2, Schedule 3A, Part 2, Division 4, Clause 36	Νο	No Not required as no direct impact	N/A
Vocus	<i>Telecommunications Act 1997</i> Volume 2, Schedule 3A, Part 2, Division 4, Clause 36	No	No Not required as no direct impact	N/A
Caltex	Pipelines Act 1994 Section 64	No	Yes Caltex have advised they will rely on the Viva Energy Recoverable Works Agreement and process, as the pipelines are co-located.	Prior to construction in the area to which the consultation/ permit relates

Viva Energy	<i>Pipelines Act 1994</i> Section 64	Yes Recoverable Works Agreement (addresses interface protocols & protection works) and Cost Recovery Agreement	Yes Viva Energy Recoverable Works Agreement and process, as the pipelines are co-located.	Prior to construction in the area to which the consultation/ permit relates
Sydney Water	Sydney Water Act 1994 Sections 44, 45 and 48A	Yes TransGrid's letter dated 13 July 2020 outlines how it intends to undertake works adjacent to Sydney Water critical assets.	No	N/A
AusGrid	<i>Electricity Supply Act 1995</i> Sections 58 and 60	Yes AusGrid Network Asset Relocation Request	Yes Design review process	Prior to construction in the area to which the consultation/ permit relates
City of Sydney	Local Government Act 1993 Sections 68, 635 and 124 Electricity Supply Act 1995 Section 45 & 46	No	Yes TransGrid and its contractors to obtain Road Opening Permit or similar advice from Council. TransGrid and its contractors has made a commitment to consult council at completion of the works on the scope of permanent restoration. <u>Parks and reserves:</u> the local council will be notified of works and given reasonable opportunity (being not less than 40 days from the date on which the notice was given) to make submissions in relation to the proposed works. Due consideration will be given to any submissions made.	Prior to construction in the area to which the consultation/ permit relates
Inner West Council	Roads Act 1993 Sections 138, 97, 101, 102, 103 and 104 Local Government Act 1993 Sections 68, 635 and 124 Electricity Supply Act 1995 Section 45 & 46	Νο	Yes <u>Classified roads</u> : S138 consent will be the basis of agreement to reinstate the road and any damage caused. A Road Occupancy Licence (ROL) will also be	Prior to construction in the area to which the consultation/ permit relates

	_	<u>.</u>		
			any submissions made.	
Jemena	Gas Supply Act 1996	Yes	No	N/A
	Sections 50, 50A, 64C, 64E and 66	Recoverable Works Agreement		
			Not required as no direct	
			impact	
Qenos	Pipelines Act 1994	No	Yes	N/A
	Section 64		Verbal arrangement to	
			provide regular update and	
			detailed design where cable	
			crosses pipeline	
Cudney Decelination	Dinalinas Act 1001	Na		N1/A
Sydney Desalination	Pipelines Act 1994	NO	NO	N/A
	Section 64			
			Not required as no direct	
			impact	

Table 3.3 – Access and other requirements for working in proximity to the public infrastructure

Utilities	Access requirements for working in proximity to the public infrastructure	Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
AusGrid Caltex Viva Energy Qenos Svdney Desalination	Comply with relevant legislation and standards	 Conduct DBYD Apply guidance and procedures identified in DBYD information. Apply asset owner project specific guidance and procedures. Collect survey condition information when asset is exposed during construction (dilapidation survey) Protection and/or adjustment/relocation of asset during construction as 	 DBYD process Coordination meetings General correspondence Provide as-built
Plant Jemena	Comply with relevant	6. Restoration of road 1. Conduct DBYD	drawingsDBYD process
	legislation, standards & correspondence dated 28/7/20. Refer to appendix 4	 Apply guidance and procedures identified in DBYD information. Apply asset owner project specific guidance and procedures. Collect survey condition information when asset is exposed during construction (dilapidation survey). If required. In coordination with asset owner, protect and/or adjustment/relocation of asset during construction. Methods of compaction within the compaction of gas mains and services shall be restricted to prevent damage. Compaction requirements are subject to site review Comply with compaction requirements set out in email dated 28/7/20. Refer to Appendix 5 Restoration of road 	 Coordination meetings General correspondence Provide as-built drawings
Sydney Water	Comply with correspondence dated 7/7/20. Refer to appendix 5.	 Conduct DBYD Apply guidance and procedures, where agreed in writing between both parties A dilapidation survey would be undertaken before any specific works at the location commence A second survey when the pipelines etc. are exposed A third survey post conduit installation Protection and/or adjustment/relocation of asset during construction, where agreed in writing between both parties Restoration of road 	 DBYD process Coordination meetings General correspondence Provide as-built drawings
Telecommunications			
Vocus Telstra NBN	Comply with relevant legislation and standards.	 Conduct DBYD Apply guidance and procedures identified in DBYD information Apply asset owner project specific guidance and procedures Collect survey condition information when asset is exposed during 	 DBYD process Coordination meetings General

Utilities	Access requirements for working in proximity to the public infrastructure	Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
Optus / UECOMM		 construction (dilapidation survey) 5. Protection and/or adjustment/relocation of asset during construction as required 6. Restoration of road 	 correspondence Provide as-built drawings

Council Assets	Access requirements for working in proximity to the public infrastructure	Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
Stormwater (including	WSUD and detention basins)		
City of Canterbury Bankstown Council Inner West Council City of Sydney Council	Comply with relevant legislation and standards	 Conduct DBYD Apply Council guidance and procedures when working near assets. Collect survey condition information when asset is exposed during construction (dilapidation survey) Protection and/or temporary bandage of asset during construction if asset is required to be cut. 	 DBYD process Coordination meetings General correspondence Provide as-built drawings
Roads			
City of Canterbury Bankstown Council Inner West Council City of Sydney Council	Road Opening Permit	 Pre-construction Dilapidation survey, prior to commencing works in a specific area. Post-construction dilapidation survey (following road restoration) 	 Coordination meetings General correspondence Provide as-built drawings

RMS	Access requirements for working in proximity to the public infrastructure		Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
Signalised intersections				
William Holmes Drive/Rookwood Road Rookwood Road/Muir Road Muir Road/Worth Street Muir Road/Worth Street Muir Road/Hume Highway Rawson Road/Waterloo Road Wangee Road/Punchbowl Road Seventh Avenue/Fifth Avenue Centennial Street/Sydenham Road Illawarra Road/Addison Road/Agar Street Addison Road/Enmore Road Enmore Road/Llewellyn Street Llewellyn Street/Edgeware Road/Alice Street	Road Occupancy Licence	1. 2. 3. 4. 5.	Pre-construction Dilapidation survey, prior to commencing works in the specific intersection Underboring where feasible Restoration of pavement surface & subsurface in accordance with specifications. Restoration of traffic signal loops by an accredited traffic signal contractor (timing agreed with TfNSW) Post-construction dilapidation survey	 Coordination meetings General correspondence Online application Provide as-built drawings
Edgeware Road midblock crossing				
Bridges				
Muir Road Bride	Sydney Trains consent	Spe	cific management measures agreed with Svdnev Trains via CCB	CCB approval
Bedwin Road Bridge	, ,	proc	cess	 Coordination
-		Тур	ically includes:	 meetings General
		•	Pre-construction Dilapidation survey	correspondence
		•	Post-construction dilapidation survey	 Provide as-built

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	drawings

Transport	Access requirements for working in proximity to the public infrastructure	Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
Sydney Light Rail network ARTC network Sydney Metro network Sydney Trains network	Land owner consent	 Specific management measures agreed with asset owner via CCB process or other agreed process Typically includes: Pre-construction Dilapidation survey Post-construction dilapidation survey 	 CCB approval (Light Rail) Coordination meetings General correspondence Provide as-built drawings
Other – For discussion	Access requirements for working in proximity to the public infrastructure	Other requirements for working in proximity to the public infrastructure	Measures for ongoing consultation
		 Specific management measures agreed with unidentified public authority or service provider. Typically includes: Pre-construction Dilapidation survey Post-construction dilapidation survey 	 Coordination meetings General correspondence Provide as-built drawings

4 Environmental control measures

4.1 Public Infrastructure control measures

Specific Environmental Control Measures (ECMs) to meet the objectives of this CPIMP and to address potential impacts on utilities and public infrastructure are outlined in Table 4-1.

Table 4-1 Environmental Control Measures

ID	Indicative Mitigation and Management Measures	Responsibility	When to implement
PI1	Undertaking utility service checks such as Dial-Before-You-Dig (DBYD) and consulting with the relevant service infrastructure provider spotter prior to the commencement of excavation, if required by DBYD cover letter.	Site Manager	Pre-excavation
PI2	Undertaking service and utility identification works (for example, non-destructive excavation methods) to expose buried services prior to excavation.	Site Manager	Pre-construction Detailed design During Construction
PI3	Protection of utilities during works as directed by relevant service infrastructure provider spotter. An example, where we Underbore under critical assets. Where separation is minimal a steel plate may be used to ensure the Underbore cannot strike the asset.	Site Manager	During Construction
PI4	Identifying the required distance to be maintained between the proposed transmission cable circuit and other services, ensuring compliance with relevant design criteria. Refer to Streets Opening Coordination Council table in Appendix 4.	Site Manager	Detailed design During Construction
Pl6	All relevant public infrastructure or service providers along the transmission cable route would be contacted regarding the necessary construction service relocation requirements, if required.	Interface Manager/ Site Manager	Pre-construction During Construction

4.2 Dilapidation reports

Pre and post dilapidation report requirements for public infrastructure as required by CoA E32 are set out in Table 4-2.

Dilapidation requirements for other assets potentially impacted by the works, buildings, structures and heritage items are covered in detail in the Construction Noise and Vibration Management Plan (CNVMP).

Table 4-2 Public Infrastructure dilapidation reports

Asset	Dilapidation completed	Scope
Roads & other aboveground	Pre-Construction	photographs of the assets existing condition will be taken prior to construction commencement.
structures		Road and above ground dilapidation reports will be provided to the planning secretary prior to commencement of construction.
	Post-Construction	photographs of the assets existing condition will be taken following construction completion. This will be completed within 3 months of the completion of construction.
 Sydney Light Rail network ARTC network 	Pre-Construction	Scope will be determined once Issued For Construction (IFC) drawings are approved. Dilapidation will be carried out in accordance with rail Authority standards and guidelines prior to commencement of construction in the authority corridor.
 Sydney Metro network Sydney Trains 		Where a dilapidation report is required by the authority, the dilapidation report will be provided to the planning secretary prior to commencement of construction in authority corridor.
network	Post-Construction	Following completion of construction, a dilapidation survey will be undertaken in accordance with authority guidance. This will be completed within 3 months of the completion of construction.
 Sydney Water Jemena Vocus 	Pre-Construction	Road dilapidation undertaken prior to commencing construction. Pre-existing damage to the road may indicate existing utility damage. The survey will consist of photographic evidence of existing condition
 Telstra NBN Optus / UECOMM AusGrid Caltex 	During Construction	Collect survey condition information when asset is exposed during construction. The condition survey will consist of photographic evidence of existing condition In circumstances where the service is exposed and backfilled within the same shift, the photographic evidence will be taken prior to backfilling.
 Viva Energy Qenos Council drainage 		Where the service is exposed for more than one shift a condition survey will be taken when the service is exposed and second condition survey will be undertaken prior to backfill.
	Post-Construction	Road dilapidation undertaken post construction will confirm compaction has been undertaken correctly. The survey will consist of photographic evidence of final condition. This will be completed within 3 months of the completion of construction.
Buildings	Refer requirements for buildings in CNVMP.	Where dilapidation surveys are required, pre- construction survey will be undertaken prior to commencement of construction in the area likely to impact the building.
		Post construction survey will be completed within 3 months of the completion of construction.

5 Compliance Management

5.1 Roles and responsibilities

The Project Team's organisational structure and overall roles and responsibilities are outlined in Section 3.3 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Section 4 of this Sub-plan.

Key roles with relevance to the management of public infrastructure are identified in Table 5-1.

Table	5-1	Roles	and	responsibility
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Role	Authority and responsibility
Project Manager	Ensure works are undertaken in accordance with relevant legislation, standards & specifications.
Interface Manager	Coordination with Public Authorities & Service Providers throughout the project.
Site Manager	Ensure access and other requirements for working in the proximity of public infrastructure is complied with.
Environment and Sustainability Manager	Responsible for ensuring any update to this plan is communicated adequately and approved by the Planning Secretary, if required.

5.2 Training & Induction

All project personnel will only be permitted to perform project works if they have had the following training and signed a register of acknowledgement for each step. Each person has:

- completed a full site-specific induction, including an environmental component;
- agreed to work under the constraints of the CEMP;
- have read and understood all relevant site-specific Safe Work Method Statement (SWMS) documents for the project site work; and
- attended the daily pre-start toolbox talk where aspects of environmental protection and worker's safety are discussed.

The induction training will address elements related to potential public infrastructure interactions including:

- relevant authorities and service providers;
- relevant mitigation measures and controls; and
- appropriate training required, if required.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in managing these interfaces.

Further details regarding staff induction and training are outlined in Section 3.4 of the CEMP.

5.3 Excavation Permit

An excavation permit will be utilised on site prior to the commencement of mechanical excavation to ensure compliance with the relevant legislation, guidelines, specifications and standards.



5.4 Monitoring and inspection

Regular monitoring and inspections will be undertaken during construction to ensure the controls in this plan are being adhered too, adequate for the task and that appropriate controls are in place to manage the safety risks of potential interactions with public infrastructure.

Monitoring and inspection requirements are detailed in the CEMP.

5.5 Audits

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Sub-plan, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in the CEMP.

5.6 Licenses and permits

No additional permits or licences are expected to be required in relation to this sub-plan.

6 Review and improvement

6.1 Continuous improvement

Refer CEMP Section 7.4.

6.2 CPIMP update and amendment

Refer CEMP Section 7.4.

7 References

AECOM (2019), Powering Sydney's Future - Potts Hill to Alexandria transmission cable project, Environmental Impact Statement, Volume 1 – Main Volume, 11 October 2019.

ARTC - Third Party Works - Underbores Guide in ARTC Corridors

ARTC (2019), Protocol for Entering the ARTC Rail Corridor.

AusGrid (2016), NS156 Working near or around underground cables, 15 December 2016.

Caltex - Caltex Sydney Metropolitan Pipeline requirements

DialBeforeYouDig (2020), Best Practice Guide Preventing Damage to Underground Services.

Jemena, GAS-999-PR-HSE-008, Pipeline Excavation Procedure (previously GAS PR 0005)

Jemena, GAS-960-GL-PL-001_AS2885, Guideline to designing, constructing and operating around existing AS2885 natural gas pipelines

NBN, Working near NBN cables.

NBN, Overview of technical Standard.

NSW Streets Opening Coordination Council (2018), Guide to Codes and Practices for Street Opening.

Optus (2014), Work in the vicinity of underground assets, 16 June 2014.

Qenos Pty Ltd, Ethylene gas pipeline requirement for third party activities

Roads and Maritime Service (2003), SI/TCS/8 Installation and reconstruction of traffic light signals, Revision 1, August 2003.

Roads and Maritime Service, Standard Drawings and Specifications.

Safework NSW (2007), Work Near Underground Assets – Guide.

Safework NSW (2020), Code of Practice: Excavation Work.

Safework NSW (2006), Code of Practice: Work Near Overhead Powerlines.

Sydney Metro (2017), Underground Corridor Protection – Technical Guidelines, 16 October 2017.

Sydney Metro (2018), Sydney Metro At Grade and Elevated Sections Corridor Protection Guidelines, September 2018

Sydney Trains (2020), Guide to Working with Sydney Trains, 25 February 2020.

Sydney Water, Clearances between underground services.

Sydney Water, Guidelines for building over/adjacent to Sydney Water stormwater assets

Telstra (2017), Duty of Care, 20 October 2017.

Transport for NSW (2016), Technical note – TN 042:2016 – Service Installations within Rail Corridor, 10 June 2016.

Transport for NSW (2019), Guidelines on External and Developer-led works affecting Transport assets.

Transport Management Centre (2018), Road Occupancy Manual, 8 May 2018

Viva Energy Australia (2018), Conditions for Works near Viva Energy Australia Pty Ltd owned and operated High Pressure Pipelines in New South Wales, 27 August 2018.



Appendix 1 – Consultation Evidence

TransGrid Powering Sydney's Future Project – SSI 8583 TEA-PSF-MP-004.700 – Revision 6

#	Document No	Plan Title	Date	Organisation	Name	Document name Page / section / reference	Revision	Comment	TransGrid/Taihan How addressed	Status
57	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	City of Canterbury Bankstown	Jeff Senior		0	Section 3.2 It is clear that detailed design drawings are available with the reference to the Muir Road Chullora box culvert being cut through, Council request an urgent review of these particular works and review of the design to assess impacts to Council drainage infrastructure. Table 3.1 under Canterbury Bankstown Council Impacts, amend to "Trenching in roadways and parks" Table 3.2 Canterbury Bankstown Council under other consultation/permit process agreed? Amend to add "The default requirement is to replace all affected traffic facilities in total, to the current relevant standard"	Comment about box culvert is incorrect. The duct bank will not impact the culvert. Council clearances will be maintained. Table 3.1 will be updated as requested. Table 3.2, will be updated as follows "The restored road surface would match what was there previously i.e. an asphalt or concrete roadway, or as otherwise agreed with the relevant roads authority. TransGrid would only reinstate the area that was excavated and not entire lanes or roadways."	Closed
58	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	17- Jun-20	Ausgrid	Jason Wall		0	Thanks for including Ausgrid in the consultation and the opportunity to provide comment. I can confirm Ausgrid does not have a submission.		Closed
59	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Jemena	Vinu George Joseph		0	Jemena is currently in the process of reviewing the documents provided for a clash study, and we expect to provide a feedback by mid-July.	TransGrid's &/or its subcontractors have engaged in a preliminary cost agreement with Jemena and will continue to work with Jemena throughout this project.	Closed
60	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 6/ Section 1 / Reference 1.5	0	Sydney Water does not have agreement on management of our assets. We do not support only 16 interfaces only requiring review.	TransGrid has committed to meaningfully engaging with SWC to seek comments on designs for the dual benefit of the project and the protection SWC's assets. This is outlined in TransGrid's letter to SWC dated 30 June 2020.	Closed
61	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 9/Section 2.2	0	Incomplete reference to Sydney Water's guidelines and Standards - additional References are: - Technical guidelines - Building over and adjacent to pipe assets - Managing new development process - Building bridges over Sydney Water's open stormwater channels -WSAA Water and sewer codes for adjustments	TransGrid has committed to meaningfully engaging with SWC to seek comments on designs for the dual benefit of the project and the protection SWC's assets. This is outlined in TransGrid's letter to SWC dated 30 June 2020. TransGrid and its subcontractors will endeavour to use the design principles and intent of each of the documents identified by Sydney Water, where applicable.	Closed
62	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.1	0	Construction activities may cause impacts to public utilities due to vibration, settlement and other construction activities - not only puncture and ruptures. Affecting Sydney Water's assets in all possible interactions (direct and as a consequence of works) could be catastrophic and not limited to impact and risks identified	Comment noted. For sewer and stormwater assets TransGrid will maintain clearances in accordance with <i>NSW Streets</i> <i>Opening Coordination Council (2018),</i> <i>Guide to Codes and Practices for Street</i> <i>Opening.</i> For water mains greater that 375mm dia, TransGrid will provide clearances to SWC assets, for which SWC can provide comments on the design , as per the TransGrid correspondence sent to Sydney Water on 30 June 2020.	Closed

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6	3 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.2	0	we disagree that exact location of all of Sydney Water's service has been undertaken. It has been confirmed by TransGrid that other than some major ones - DBFYD and alignment location -not exact depth or position of asset in relation to cables has been determined.	Prior to excavation on site, all utilities are located by an accredited locating company. Any Sydney water assets that cannot be located to quality level B, will be exposed prior to excavation of the trench.	Closed
64	4 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.2	0	GENERAL - the 80% detailed designs provide no further clarification as to the exact impact on our assets NOR where they are in relation to the proposed trench, NOR the proposed treatment measure, nor detail that would enable assessment of any part of the route other than identifying a clash. We repeat Sydney Water has never been provided with any specific crossing on any asset for assessment or review. The mitigation measures propose provide no confidence to Sydney Water that our concerns have been considered OR will be.	Comment noted. For sewer and stormwater assets TransGrid will maintain clearances in accordance with NSW Streets Opening Coordination Council (2018), Guide to Codes and Practices for Street Opening. For water mains greater that 375mm dia, TransGrid will provide clearances to SWC assets, for which SWC can provide comments on the design , as per the TransGrid correspondence sent to Sydney Water on 30 June 2020.	Closed
6	5 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.2 - Table	0	there is no reference to Sydney Water assets here and SW has not been consulted for these crossings from a clearance or impact where we are the asset owner. There are significant water and sewer assets that need to be managed	Comment noted. For sewer and stormwater assets TransGrid will maintain clearances in accordance with NSW Streets Opening Coordination Council (2018), Guide to Codes and Practices for Street Opening. For water mains greater that 375mm dia, TransGrid will provide clearances to SWC assets, for which SWC can provide comments on the design , as per the TransGrid correspondence sent to Sydney Water on 30 June 2020.	Closed
6	6 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.2 - Table	0	Muir Rd Chullora - this is a Sydney Water asset - this work is a direct adjustment to our asset (trench Through) and does not have our endorsement at all.	The comment in the CPIMP is incorrect. The duct bank will go over the asset without any impact.	Closed
6	7 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 14/ Section 3/ Reference 3.3 point 3	0	Section 3.3 Point 3 says "apply asset owner project specific guidance and procedures" Sydney Water's understanding is that TransGrid and their contractor are not going to follow our guidance in seeking approval and lodging for review via a WSC? Please confirm. DBFYD is indicative only and not a representation of requirements applied to an asset.	TransGrid and its subcontractors will apply asset owner project specific guidance and procedures. Where agreed to in writing during meetings or in interface deeds.	Closed
6	8 TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 19/ Table 3.1 / Sydney Water	0	This is wholly incorrect - TransGrid & SW have not agreed on a mutual position. We have discussed with TransGrid for 3 years without an agreement where both parties are comfortable to sign yet occurring.	TransGrid and Sydney Water have agreed requirements for this project. Refer to email between SWC General Manger & TransGrid Project Director dated 17/7/20.	Closed

TransGrid Powering Sydney's Future Project – SSI 8583 TEA-PSF-MP-004.700 – Revision 6

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69	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 19/ Table 3.1 / Sydney Water	0	Cell " Other Consultation/permit Process Agreed" This is under review and part of why there has not been agreement as referenced in Section 3.3 we would be happy for TransGrid and their consultant to apply our guidelines and procedures" our understanding is that this is not the process TransGrid are to take.	TransGrid and its subcontractors will apply asset owner project specific guidance and procedures. Where agreed to in writing during meetings or in interface deeds.	Closed
70	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 13/ Section 3/ Reference 3.2	0	Dilapidation surveys should be undertaken on the major assets including the Stormwater Bores and others as part of the CVIS/CHMP & CNVMP	All assets within our trench alignment will be exposed with due diligence and in accordance with <i>Safework NSW (2007),</i> <i>Work Near Underground Assets – Guide.</i> The relevant asset owner will be advised of any pre-existing damage as part of the pre-construction dilapidation survey (condition survey).	Closed
71	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 24 / Section 4/ reference 4.1 Pl 1	0	Pl1 seems to be in conflict with Sections 3.3 in following utility owners guidance etc - this is only a consultation process, not an approval process indicated here	TransGrid and its subcontractors will apply asset owner project specific guidance and procedures, where agreed to in writing during meetings or in interface deeds.	Closed
72	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 24 / Section 4/ reference 4.1 PI 3	0	Note: TransGrid's detailed designs do not provide sufficient evidence to meet utility owners guidelines and requirements for assessment. The Detailed designs are for construction of a Cable route, not management of utilities - no utility crossings are shown on 80% detailed designs. No boring plans or anything from a methodology or engineering perspective to see that that asset owners requirements have been addressed and met.	TransGrid will provide designs to SWC for comment, as per TransGrid's correspondence to SWC dated 30 June 2020.	Closed
73	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 24 / Section 4/ reference 4.1 PI 4	0	What happens where they cannot meet the distance criteria. No clarity or confidence in proposal relating to protection of Sydney Water assets.	Comment noted. For sewer and stormwater assets TransGrid will maintain clearances in accordance with <i>NSW Streets</i> <i>Opening Coordination Council (2018),</i> <i>Guide to Codes and Practices for Street</i> <i>Opening.</i> For water mains greater that 375mm dia, TransGrid will provide clearances to SWC assets, for which SWC can provide comments on the design , as per the TransGrid correspondence sent to Sydney Water on 30 June 2020.	Closed
74	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 24 / Section 4/ reference 4.1 PI 6	0	please define what proposed here? How has the timing of this work been factored, how is it to be managed, what controls are to be in place, who determines that it is required and under what conditions will this be made? Will the asset owner be informed? what consultation is proposed?	TransGrid and its subcontractor do not envisage any modification or relocation of SWC assets.	Closed

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75	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 24 / Section 4/ reference 4.2	0	what is meant by " post const dilapidation reports including timing will be discussed in consultation? Does this mean that the Contractor can choose not to undertake this OR that the timing is to be discussed And what happens if the post dilap shows remediation required? what is the criteria and who decides and agrees?	Post dilapidation of Sydney Water assets will be undertaken as the trench is backfilled. Dilapidation will be in the form of photographic evidence. Any damage caused by TransGrid and its subcontractors will be repaired during construction. The CPIMP has been updated to reflect this. Agreed in email dated 6/7/20. Refer to appendix 5	Closed
76	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 25 / Section 5/ reference 5.2	0	Does training and induction include Public Utility owners accessing their assets and undertaking audits or inspections? How is this proposed to be managed?	As required the Site Supervisor will provide access to SWC personnel. For safety reasons SWC personnel must undertake a visitor induction and listen to a pre-start briefing.	Closed
77	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 28 / Section 6 / Reference 6.1	0	As this relates to Public infrastructure - what reporting and involvement will this improvement plan involve the asset owners?	As works progress, the CPIMP will be updated to reflect any changes in how the works are being delivered and any new agreements with utility providers. If the process with SWC changes throughout the project, the plan will be updated to reflect these changes.	Closed
78	TEA-PSF-MP- 004.700	Construction Public Infrastructure Management Plan	19- Jun-20	Sydney Water	Peter Jansen	Page 31 / Appendix 2	0	TransGrid are not included in the provisions of the NSW Streets Opening Coordination Council.	Figure 1 from the Streets Opening Coordination Council (2018) will guide references 330kV HV Transmission Electricity assets (TransGrid is the only operator of 330kV cables in NSW).	Closed
Cor	sultation summary									

5 June 2020 Invitation to CEMP and sub-plan briefing.

10 June 2020 CEMP and sub-plan "Zoom" briefing to Relevant Government Agencies/. Councils/ Authorities/Service providers.

16 June 2020 Open invitation to all stakeholders for drop in Q&A session.

19 June 2020 Original closure of consultation period.

Email sent to all organisations identifying (a) how all comments received on this Sub-Plan were addressed and closed; and (b) confirming formal consultation period is closed. 3 July 2020

Comment status at time of submission to DPIE

- Comments received on this Sub-Plan from:
 - City of Canterbury Bankstown Council closed
 - Ausgrid closed
 - o Jemena closed
 - Sydney Water closed
- No comments received on this Sub-Plan from:
 - Inner West Council closed
 - City of Sydney Council closed
 - City of Canterbury Bankstown Council closed
 - Inner West Council closed
 - City of Sydney Council closed
 - ARTC closed
 - Sydney Metro closed
 - STA closed
 - Sydney Trains closed

Note: comments were only sought from public authorities and utility providers that are directly impacted by the project.

Appendix 2 – Example of potential interactions with Public Infrastructure



State Road: Major Trunk Utility Services

© NSW Streets Opening Coordination Council (2018)

Figure 1: Example of cross-section of potential interactions with public infrastructure



Figure 2: Example of section of route alignment and potential public infrastructure interactions.

Appendix 3 – Operation and Maintenance activities undertaken post energisation.

Cables outside TransGrid premises are subject to possible damage from excavations and underground works. These activities are generally controlled through parties performing a "Dial Before You Dig" (DBYD) enquiry to identify underground services. TransGrid responds to these enquiries with cable locations and requires observers to monitor cable safety.

Where a cable is located outside TransGrid premises, visual inspection of the cable route shall be carried out to discover observe activities near the cable that may threaten its integrity. Before commencement of the cable route patrol, the patrol officer shall be aware of any DBYD inquiries or activities that might impact upon the cables.

Monitoring of all construction activities in the near vicinity of the cable including:

- > Underground bores;
- > Open trenching;
- > Post hole digging;
- > Pot hole digging to check for underground services.

Observe and record other abnormalities requiring maintenance such as:

- > Any sort of encroachment on cable easement;
- > Damaged cable markers;
- > Graffiti on above ground structures;
- Erosion, subsidence or up-lift of ground or pavement in close proximity to the cable alignment;
- > Poorly fitting link box or oil pit Gatic covers;
- > Cable bridge integrity;
- > Signs of forced entry (e.g. at bridges, pits, etc.).

Minor problems identified during inspections will be rectified during the course of the inspection.

A survey of rail bridges by a registered surveyor will be completed. The surveyor will also provide a report of the movement from the previous survey as well as the "works as executed" survey. A copy of this report will be sent to the railway owner's nominated representative. The railway bridge surveys require Possession from the railway owner. (SRA Master Deeds of Access).

No staff shall enter railway corridors (fenced corridor) without the controlling authorities' permission. Staff requiring access to the rail corridor shall be trained and qualified in Track Awareness, conducted by RailCorp. For procedures regarding access rights, safety and property rights (MDA agreement).

Property owner information is recorded and appropriately available in the TransGrid Spatial information System as required. This information relates to owners of cable easements, mainly in private land. This information is required to be systematically reviewed and kept up to date to ensure that any property owner contact details as required is to the appropriate person or authority.

TransGrid will ensure that enquires are being responded to by the automated system.

The standard maintenance and operation activities will be documented in further detail once incorporated into the ISO55001 Asset Management and ISO14001 Environmental Management Systems (EMS) or Operational Environmental Management Plan (OEMP).

Appendix 4 – NSW Streets Opening Coordination Council

Desirable Minimum Separations Between Utility Services

Desirable Minimum Seperations Horizontal mm

	Gas mains up to 75mm diameter	Gas mains greater than 75 mm diameter and up to 200mm diameter	Gas mains greater than 200mm diameter	Telecommunication cables and/or conduits	Protected ⁽²⁾ low voltage electricity cables	Protected ⁽²⁾ high voltage electricity cables	High voltage electricity cables	Water Mains	Sawar Mains	Drainage
Gas mains up to 75mm diameter	150	300	500	150	150	300	500	150	300	300
Gas mains greater than 75 mm diameter and up to 200mm diameter	300	300	500	300	300	300	4000	150	300	300
Gas mains greater than 200mm diameter	500	500	500	500	500	500	4000	150	300	300
Telecommunication cables and/or coduits	150	300	500	100	100	300	1000	150	300	300
Protected ⁽²⁾ low voltage electricity cables	150	300	500	100	TBN	TBN	1000	1000	100	100
Protected ⁽²⁾ high voltage electricity cables	300	300	500	300	TBN	TBN	TBN	TBN	300	300
High voltage electricity cables	500	4000	4000	1000	1000	TBN	TBN	2000	1000	1000
Water Mains	150	150	150	150	300	300	2000	300	500	500
Sewer Mains	30.0	300	300	300	300	300	1000	500	300	300
Drainage	300	300	300	300	300	300	1000	500	300	300

Desirable Minimum Seperations Vertical mm

	Gas mains up to 75mm diameter	Gas mains greater than 75 mm diameter and up to 200mm diameter	Gas mains greater than 200mm diameter	Telecommunication cables and/or conduits	Protected ⁽²⁾ low voltage electricity cables	Protected ^{GD} high voltage electricity cables	High voitage electricity cables	Water Mains	Sewer Mains	Drainage
Gas mains up to 75mm diameter	150	300	500	150	150	300	500	150	300	300
Gas mains greater than 75 mm diameter and up to 200mm diameter	300	300	500	300	300	300	4000	150	300	300
Gas mains greater than 200mm diameter	500	500	500	500	500	500	4000	150	300	300
Telecommunication cables and/or coduits	150	300	500	100	100	300	500	150	300	300
Protected ⁽²⁾ low voltage electricity cables	150	300	500	100	TBN	TBN	600	225	50	150
Protected ⁽²⁾ high voltage electricity cables	300	300	500	300	TBN	TBN	TBN	TBN	300	300
High voltage electricity cables	50.0	1000	4000	1000	1000	TBN	TBN	2000	1000	600
Water Mains	150	150	150	150	300	300	1000	300	500	500
Sewer Mains	300	300	300	300	300	300	500	500	300	300
Drainage	300	300	300	300	300	300	600	500	300	300

Appendix 5 – Consultation with Agencies Jemena:

From: Colin O`Mahony Sent: Monday, 27 July 2020 12:43 PM To: Vinu George Joseph Subject: CONSTRUCTION PUBLIC INFRASTUCTURE MANAGEMENT PLAN

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and are expecting the content or attachment from the sender.

Hi Vinu,

During consultation on CONSTRUCTION PUBLIC INFRASTUCTURE MANAGEMENT PLAN you provided the following comment on Friday, 19 June 2020 @ 3:51 PM.

Hi Amanda,

That's correct, Jemena is currently in the process of reviewing the documents provided for a cash study, and we expect to provide a feedback by mid-July.

In terms of vibration limits , Peak particle velocity for Jemena Gas assets: •Primary and Secondary (Steel Main) – 20mm/s •Distribution < 1050 kPa (Nylon / Plastic) – 10mm/s

Taihan provided the attached response to your comment. Can you confirm Jemena's acceptance of the CONSTRUCTION PUBLIC INFRASTUCTURE MANAGEMENT PLAN (CPIMP) and are satisfied with Transgrid & Taihan's commitment to continue to work with Jemena throughout this project.

In addition to the above can you also confirm our process for conducting dilapidation survey during construction is acceptable.

- Conduct DBYD
- 2. Apply guidance and procedures identified in DBYD information.
- Apply asset owner project specific guidance and procedures.
- Collect survey condition information when asset is exposed during construction (dilapidation survey).
- If required. In coordination with asset owner, protect and/or adjustment/relocation of asset during construction.
- 6. Restoration of road

Regards,

Colin O'Mahony Interface Manager

Taihan Electric Australia Pty Ltd Suite 704, Level 07, 815 Pacific Highway, Chatswood, NSW 2067



From:	Vinu George Joseph
Sent:	Tuesday, 28 July 2020 8:31 AM
То:	Colin O`Mahony
Subject:	RE: CONSTRUCTION PUBLIC INFRASTUCTURE MANAGEMENT
	PLAN

Hi Colin,

As discussed yesterday, Jemena will complete the review of clash study once the requested information is provided by Taihan. In relation to CEMP, we have no further comments based on information we have been provided.

Please note that there are Items to consider and requirements whilst working around gas main.

Consider these points to your query below, and note that Secondary steel mains and Primary main have additional set of requirements apart from below listed items.

- 1. Conduct DBYD
- 2. Apply guidance and procedures identified in DBYD information.
- 3. Apply asset owner project specific guidance and procedures.
- 4. Collect survey condition information when asset is exposed during construction (dilapidation survey).
- If required. In coordination with asset owner, protect and/or adjustment/relocation of asset during construction.
- Methods of compaction within the compaction of gas mains and services shall be restricted to prevent damage. Compaction requirements are subject to site review
 7.

Horizontal distance to pipeline	Minimum undisturbed depth-of-cover provided	Size of compacter/roller	Vibration mode
	300mm	Small hand-held plate compacter only	Any vibration setting
	500mm	Hand-held larger plate compacter	Any vibration setting
0 - 5 metres	Suomin	Maximum (total) 8- tome tandem-drum	Static roller only(no vibration)
	750mm - Distribution < 1050 kPa	Maximum (total) 8- tome tandem-drum	Low-amplitude vibration setting only
	900mm - Secondary	Maximum (total) 10- tome tandem-drum	Static roller only (no vibration)
		Maximum (total) 8- tome tandem-drum	Any vibration setting
5 - 10 metres	N/A	Maximum (total) 10- torne tandem-drum	Low-amplitude vibration setting only
10 - 15 metres	N/A	Maximum (total) 10- tome tandem-drum	Any vibration setting
>15 metres	N/A	No rest	rictions

9. Restoration of road

8.

Vinu George Joseph FEED Project Manager Jemena Level 14, 99 Walker Street, North Sydney



Sydney Water:

Project Requirements:

From: GOULD, CHRIS Sent: Friday, 17 July 2020 5:26 PM To: Evonne Bennett Cc: WILLIAMS, IRA; JANSEN, PETER; BLANCH, STEVEN; Colin Mayer; Padraig Clifford; EVANS, EBONY Subject: RE: PSF - Project Manager letter

Hi Evonne

Thanks for your email and for the constructive conversations between our teams.

I've attached a brief reply to move forward on a few matters. I believe this has already been worked through with your team.

Look forward to talking soon.

Chris

Chris Gould General Manager Business Development Business Development Sydney Water, 1 Smith Street, Parramatta NSW 2150





ABN 70 250 995 390 180 Thomas Street, Sydney PO Box A1000 Sydney South NSW 1235 Australia T (02) 9284 3000 F (02) 9284 3456

13/07/2020

Chris Gould General Manager, Business Development Group Sydney Water Corporation 1 Smith Street, Parramatta

Dear Chris

Powering Sydney's Future – Sydney Water proposal for Project Manager

Thank you for your letter of 1 July 2020.

TransGrid appreciates the offer of a project manager, engineering and planning related resources to assist by providing information that we require on the 16 identified interactions outlined by us previously. We accept that these resources will be charged to at the IPART rate of (exclusive of GST). We agree to pay these costs on a monthly basis, provided always that they are subject to a monthly cap approved by TransGrid in advance. TransGrid will not be liable for costs in excess of the cap except where these costs have been incurred without the prior written approval of TransGrid (which will not be unreasonably withheld). This will allow us to efficiently manage the cost of review work undertaken. We also request 28 day payment terms for payment of invoices.

The designs that are being undertaken by our Contractor are being prepared generally to the WSAA Code. A key parameter that is required for all interactions is minimal acceptable clearance required to avoid destruction, damage or interference to Sydney Water assets. This information has been requested from Sydney Water previously but has not been provided. Hence, in the absence of this design parameter our contractor has undertaken its work in accordance with the standard expected of a contractor competent in designing and constructing works of a similar nature, whilst preparing the design for these interactions.

To provide visibility and facilitate timely design review and comment, we will provide Peter Jansen a program of works, including details of when we expect to receive packages of design information.

Note, that TransGrid has engaged Rose Atkins Rommer (Infrastructure) to review the cable route design and provide advice based on the WSAA Code. It is noted that Sydney Water has not provided any specific scope requirements in this regard. A flow chart indicating how TransGrid intends to interact with RARI and Sydney Water during design review as attached to this letter.

TransGrid appreciates the assistance of Sydney Water and remains confident that notwithstanding Sydney Water's confirmation that such assistance will not amount to consent to undertake the proposed works, that the processes and planning put in place and timely input of Sydney Water and its consultants will mitigate against any risk to destruction, damage or interference to Sydney Water assets.

Yours faithfully

E Hent

Evonne Bennett Project Director- Powering Sydney's Future





PROPOSED SYDNEY WATER DESIGN REVIEW/APPROVAL PROCESS



Dilapidation:

From: Colin Mayer	
Sent: Monday, 6 July 2020 10:05 AM	
To: JANSEN, PETER	
Cc: Luke Fania	Padraig Clifford
	Evonne Bennett
GOULD, CHRIS	

Subject: PSF - CPIMP Timing of dilapidation surveys

Peter,

Taihan are proposing that for sub-terrain dilapidation they would:

- A dilapidation survey would be undertaken before any specific works at the location commence
- · A second when the pipelines etc. are exposed
- A third post conduit installation

Please can you confirm that this timing is acceptable.

A prompt response would be appreciated.

Regards

Colin Mayer Program Manager - Powering Sydney's Future | Works Delivery

TransGrid | 200 Old Wallgrove Road, Wallgrove, NSW, 2766

W: www.transgrid.com.au

From: JANSEN, P	ETER
Sent: Tuesday, 7	July 2020 6:07 PM
To: Colin Mayer	
Cc: Luke Fania	; Padraig Clifford
	Evonne Bennett <
GOULD, CHRIS	
Cubicate DE, DCE	CDIMD Timing of dilagidation surveys

Subject: RE: PSF - CPIMP Timing of dilapidation surveys

Hi Colin,

Thanks for taking the time to discuss with me the Dilapidation surveys as detailed below.

While the details of what the dilapidation surveys entails for Sydney Water are to be confirmed for assessment of the "16", we support the proposal dilapidation as shown below.

Should you have any questions on this please let me know.

Regards,

Peter Jansen

Account Manager, Infrastructure Development City Growth & Development Sydney Water, Level 13, 1 Smith Street, Parramatta NSW 2150



Appendix 6 – Route Plans

(REDACTED)