

Sydney Metro Trains Facility – Staging Report



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1	6 May 2019	Final	Delivery of the Sydney Metro Trains Facility planning approval will now be staged.	SM Environment Manager, City & Southwest	SM Director of Planning, Environment & Sustainability, City & Southwest

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1. Definitions and Abbreviations

All terminology in this report is taken to mean the generally accepted or dictionary definition, except where defined in any applicable planning approvals. Relevant acronyms, abbreviations and terms used throughout this report are explained in Table 1.

Table 1: Acronym, Abbreviation and Term Explanations

	Definitions
C&SW	City & Southwest
CBD	Central Business District
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CoA(s)	Condition(s) of Approval
Construction	As per the definition provided in the Sydney Metro Trains Facility planning approval
(C)SSI	(Critical) State Significant Infrastructure
CTP	Compliance Tracking Procedure
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
ER	(Independent) Environmental Representative
LW	Line-Wide
Low-Impact / Minimal Works	Low impact works that are not defined as 'Construction' in accordance with the definition of 'Construction' provided in the Chatswood to Sydenham planning approval conditions
NRT	Northwest Rapid Transit
NW	Northwest
OTS	Operations, Trains and Systems
QX	Quarter X
REMM(s)	Revised Environmental Mitigation Measure(s)
Secretary	The Secretary of the NSW Department of Planning and Environment
SM	Sydney Metro
SMP	Sustainability Management Plan
SMTF	Sydney Metro Trains Facility
TfNSW	Transport for New South Wales

2. Introduction

2.1. Purpose of this Report

This report has been prepared and structured to address the Staging Report requirements of Condition of Approval (CoA) B9 of the Sydney Metro Trains Facility (SMTF) planning approval (formerly known as the Rapid Transit Rail Facility planning approval). Updates to this report will be made as required, particularly following the determination of any modification approvals or changes to the delivery strategy (refer to Section 3).

Table 2 cross-references sections in this report that address each applicable planning approval requirement relating to the Staging Report.

Table 2: Staging Report Planning Approval Condition Cross-References

Planning Approval Condition	Condition Requirement(s)	Staging Report Section
SMTF – CoA B9	The Proponent may elect to construct and/or operate the SSI [State Significant Infrastructure] in stages. Where staging is proposed, the Proponent shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of:	This Staging Report will be submitted to the Planning Secretary prior to commencement of the second proposed stage. The first proposed stage commenced construction in Oct 2015.
SMTF – CoA B9(a)	How the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and	Section 3.
SMTF – CoA B9(b)	Details of the relevant conditions of approval which would apply to each stage and how these shall be complied with across and between the stages of the SSI.	Appendix A. The majority of the CoAs are fully applicable for each stage, unless specified otherwise within the Appendix A allocations. Furthermore, the Sydney Metro Northwest Compliance Tracking Procedure report outlines how compliance with CoAs will generally be achieved.

2.2. Background

The NSW Government is implementing Sydney's Rail Future (Transport for NSW, 2012a) – a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future. This 21st century network will deliver new metro stations and more than 88km of new metro rail for Australia's biggest city – revolutionising the way Sydney travels.

Sydney Metro currently comprises of three projects, all of which have been identified by the NSW Government as priority projects:

- **Northwest** (formerly North West Rail Link) – a 36 kilometre project currently under construction and opening in the first half of 2019 with a metro train every four minutes in the peak. Tunnelling has finished and construction is progressing.
- **City & Southwest** – a 30 kilometre metro line extending metro rail from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through new Central Business District (CBD) stations and southwest to Bankstown. The project is due to open in 2024 with ultimate capacity to run a metro train every two minutes in the peak.
- **West** – the next significant railway infrastructure investment proposed to be delivered by the second half of the 2020s. This project would link the CBDs of Parramatta and Sydney and communities along the way.

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



Figure 1: Sydney Metro Project Alignments

2.3. Northwest and City & Southwest Project Planning Approvals

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

2.3.1. (C)SSI Planning Approvals

The Northwest and City & Southwest projects comprise of several components that are each subject to the (C)SSI planning approval pathway. These include:

- **Major Civil Construction Works** – which covers the major civil activities for the Northwest project, including tunnelling and viaduct construction. This component was subject to the *Major Civil Construction Works Environmental Impact Statement (EIS)* that was granted planning approval on 18 April 2013.
- **Stations, Rail Infrastructure & System** – which covers the construction and operation of the railway for the Northwest project, including stations and stain precincts, rail systems and infrastructure. This component was subject to the *Stations, Rail Infrastructure & Systems EIS* that was granted planning approval on 8 May 2013.

- **Sydney Metro Trains Facility** – which covers the construction and operation of the Northwest and City & Southwest Sydney Metro Trains Facility (SMTF) at Rouse Hill, NSW for the purposes of train stabling and maintenance. This includes a testing section of track, administration, staff and training facilities (including an Operations Control Centre), access and maintenance roads and ancillary infrastructure, services and utilities. This component was subject to the *SMTF EIS* that was granted planning approval on 15 January 2014.
- **Chatswood to Sydenham** – which covers the construction and operation of the Sydney Metro railway between Chatswood and Marrickville. This includes the delivery of 7 new metro stations and 15.5 kilometres of twin railways tunnels from Chatswood, beneath Sydney Harbour and the Sydney CBD, to Marrickville. This component was subject to the *Chatswood to Sydenham EIS* that was granted planning approval on 9 January 2017.
- **Sydenham to Bankstown** – which covers the construction and operation of the Sydney Metro railway between Marrickville and Bankstown Stations. This includes the upgrading of 13.5 kilometres of the Sydney Trains T3 Bankstown Line between the Marrickville and Bankstown Stations. This component is subject to the *Sydenham to Bankstown Upgrade EIS* and *Sydenham to Bankstown Submissions and Preferred Infrastructure Report* that were granted planning approval on 12 December 2018.

Over-station developments are subject to separate State Significant Development planning approval processes.

This Staging Report covers the SMTF planning approval scope of works. Separate Staging Reports have been / will be prepared to address any Staging Report requirements following determination of any subsequent project planning approvals.

2.3.1.1. SMTF Modifications

No applications have been made or approvals granted to modify the SMTF planning approval.

2.3.2. EP&A Act Non-CSSI Planning Approvals

Table 3 provides a list of Northwest and City & Southwest non-CSSI planning approvals under the EP&A Act.

Table 3: List of NW and C&SW Non-(C)SSI Planning Approvals under the EP&A Act

Project	Planning Approval	Planning Instrument	Determining Authority	Approval Date
NW	Lindfield Substation	EP&A Act (Part 5, Division 5.1)	Transport for NSW	19 Sep 2014
NW	Epping to Chatswood Railway – Conversion to Rapid Transit	EP&A Act (Part 5, Division 5.1)	Transport for NSW	13 Feb 2015
NW	Lindfield Substation – Electrical Works Conversion	EP&A Act (Part 5, Division 5.1)	Transport for NSW	1 May 2015
NW	Main North and North Shore Line Corridor Works	EP&A Act (Part 5, Division 5.1)	Transport for NSW	19 Jun 2015
NW	Norwest Station Subsurface Pedestrian Link and Northern Entry	EP&A Act (Part 5, Division 5.1)	Transport for NSW	29 Oct 2015
NW	Main North and North Shore Line Corridor Works: Addendum 1	EP&A Act (Part 5, Division 5.1)	Transport for NSW	18 Dec 2015
NW	Willoughby to North Chatswood 33kV Underground Feeder Power Line	EP&A Act (Part 5, Division 5.1)	Transport for NSW	18 Mar 2016
NW	Operations, Trains & Systems Temporary Power Supply	EP&A Act (Part 5, Division 5.1)	Transport for NSW	13 Jun 2017
C&SW	Clyde Barging Facility Review of Environmental Factors	EP&A Act (Part 5, Division 5.1)	Sydney Metro	24 Apr 2018
NW	Main North and North Shore Line Corridor Works: Addendum 2	EP&A Act (Part 5, Division 5.1)	Transport for NSW	27 Apr 2018
NW	Epping to Chatswood Railway – Infrastructure Upgrades (Stage 2)	EP&A Act (Part 5, Division 5.1)	Transport for NSW	8 Jun 2018
NW	Main North and North Shore Line Corridor Works: Addendum 3	EP&A Act (Part 5, Division 5.1)	Sydney Metro	26 Jul 2018
NW	Epping to Chatswood Railway – Infrastructure Upgrades (Stage 2): Addendum 1	EP&A Act (Part 5, Division 5.1)	Sydney Metro	26 Jul 2018
NW	Area Y6 Roadworks Review of Environmental Factors	EP&A Act (Part 5, Division 5.1)	Sydney Metro	17 Aug 2018

2.3.3. Exempt Development

The Northwest and City & Southwest projects are also subject to a small amount of work that is undertaken as 'exempt development' under the EP&A Act. Due diligence and environmental assessments of exempt development works are undertaken by Sydney Metro and its contractors.

An example of exempt development works on the City & Southwest project is the construction and operation of the White Bay truck marshalling facility.

3. SMTF Planning Approval Stages

3.1. Northwest Operations, Trains & Systems Stage

Construction first commenced under the SMTF planning approval in late 2015 by the Operations, Trains & Systems (OTS) contractor, Northwest Rapid Transit (NRT), as part of the Northwest project. NRT commenced construction following the Planning Secretary's approval of the NRT Construction Environmental Management Plan (CEMP) and associated sub-plans in October 2015. Since this time, NRT have continued to undertake construction activities and are planned to finish construction activities in mid-2019.

3.2. City & Southwest Line-Wide Stage

As part of the City & Southwest project delivery strategy, Sydney Metro has awarded the Line-Wide (LW) contract to Systems Connect (SC) on 21 November 2018. This contract includes further development of the SMTF under the SMTF planning approval.

3.3. Overview

The SMTF planning approval now comprises two stages:

- The Northwest Operations, Trains & Systems Stage, and
- The City & Southwest Line-Wide Stage.

Staged operation is not being proposed. The OTS stage is the only stage with an operational component (i.e. the project comprises of one operational stage only).

3.3.1. Relationships between Planning Approvals and SMTF Stages

Table 4 outlines the applicability of the Northwest and City & Southwest planning approvals to the two SMTF stages.

Table 4: Applicability of Planning Approvals to SMTF Stages

Planning Approval	OTS Stage	LW Stage
Major Civil Construction Works		
Stations, Rail Infrastructure & Systems	✓	
Sydney Metro Trains Facility	✓	✓
Lindfield Substation		
Epping to Chatswood Railway – Conversion to Rapid Transit	✓	
Lindfield Substation – Electrical Works Conversion		
Main North and North Shore Line Corridor Works		
Norwest Station Subsurface Pedestrian Link and Northern Entry	✓	
Main North and North Shore Line Corridor Works: Addendum 1		
Willoughby to North Chatswood 33kV Underground Feeder Power Line	✓	
Chatswood to Sydenham		✓
Operations, Trains & Systems Temporary Power Supply	✓	
Clyde Barging Facility Review of Environmental Factors		
Main North and North Shore Line Corridor Works: Addendum 2		
Epping to Chatswood Railway – Infrastructure Upgrades (Stage 2)		
Main North and North Shore Line Corridor Works: Addendum 3		
Epping to Chatswood Railway – Infrastructure Upgrades (Stage 2): Addendum 1		
Area Y6 Roadworks Review of Environmental Factors		
Sydenham to Bankstown		✓

3.3.2. Indicative Timing

Construction of the Northwest project under the SMTF planning approval commenced in October 2015 by NRT. Construction has continued since this date and NRT will conclude construction activities in mid-2019. The LW contractor, Systems Connect, is planned to commence construction under the SMTF planning approval in Q3 2019. Table 5 provides an indicative timeframe for each SMTF stage.

Table 5: Indicative Timeframes for each SMTF Stage

Stage	Construction Commencement Date (bold indicates completed dates) <i>(italics indicates indicative future dates that are subject to change)</i>	Construction Completion Date (bold indicates completed dates) <i>(italics indicates indicative future dates that are subject to change)</i>
OTS	Oct 2015	<i>Q2 2019 and ongoing operational activities following construction completion.</i>
LW	<i>Q3 2019</i>	<i>Q2 2021</i>

3.3.3. Works outside of Stages

Some works will be undertaken outside of the stages identified or as 'exempt development' in accordance with Section 76(2) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

Where works are undertaken outside of the stages identified but still subject to (C)SSI planning approvals, these 'low-impact / minimal works' (as termed by Sydney Metro) will not be defined as 'Construction' in accordance with the definition of 'Construction' provided in the applicable planning approval.

Low-impact / Minimal works will only occur after the following activities have been undertaken:

- Consideration of relevant regulatory requirements,
- Identification of relevant CoAs and REMMs, and
- Preparation of a Low-Impact / Minimal Works Application by the relevant contractor and approval by Sydney Metro to confirm that the works do not represent 'Construction' in accordance with the definition provided in the applicable planning approval. This application must include (as a minimum):
 - A detailed description of the proposed works,
 - An environmental risk assessment (including identification of actual and potential environmental impacts),
 - Identification of mitigation measures to be implemented to address any actual or potential environmental risks and/or impacts (including details on community consultation relevant to the works),
 - An Environmental Control Map, and
 - Endorsement by the Environmental Representative as necessary in accordance with the definition of 'Construction' provided in the applicable planning approval.

3.4. Construction Stages

3.4.1. Operations, Trains & Systems (OTS)

The OTS Stage covers the design, construction and operation of the SMTF for the purposes of train stabling and maintenance. This includes:

- A testing section of track
- Administration, staff and training facilities, including an Operations Control Centre
- Access and maintenance roads, and
- Ancillary infrastructure, services and utilities.

The OTS Stage commenced construction in October 2015. Construction is expected to continue until Q2 2019, at which point operations will commence.

3.4.2. Line-Wide (LW)

The LW Stage covers:

- Design and construction of a new test track, turnouts, cross-overs and stabling roads,
- Design and construction of a new locomotive shed, including installation of new tracks, rail systems, building structures and fitouts, lifting beams, access platforms, shore supplies and associated roads, and
- Construction of an expansion to the existing maintenance building already constructed under the OTS Stage, including fit-out of some sheds/rooms, overhead wiring fitouts, installation of a new gantry crane and modifications to some existing roads.

Figure 2 provides an indicative view of the LW Stage scope of works.

The LW Stage was awarded to Systems Connect (SC) on 21 November 2018. SC is a an unincorporated joint venture between CPB Contractors and UGL. Low-impact / Minimal works are expected to be undertaken until construction commences around Q3 2019.



Figure 2: Indicative LW Stage Scope of Works

3.5. Operation Stages

Staged operation is not being proposed.

The OTS Stage is the only stage with an operational component (i.e. the project comprises of only one operational stage).

3.6. Simultaneous Construction and Operation

The OTS Stage will commence operations in Q2 2019 and will continue operations thereafter. The LW Stage will commence construction in Q3 2019. From this point until the completion of construction of the LW Stage (approximately Q2 2021), the SMTF will be subject to both construction and operational activities, and subsequently, construction and operational CoAs and REMMS under the SMTF planning approval. For example, during this period, the SMTF will simultaneously be managed under an Operational Environmental Management Plan (OTS Stage) and a Construction Environmental Management Plan (LW Stage). Both of these plans will clearly outline the scope that is subject to them.

This period of simultaneous construction and operational activity will continue until Q2 2021. Following this point, the SMTF will only be subject to operational activity (i.e. only subject to the OTS Stage).

4. Compliance

The applicability of the SMTF Conditions of Approval (CoAs) and Revised Environmental Mitigation Measures (REMMs) to each stage have been assessed, allocated and confirmed. These allocations to each stage are tabled in Appendix A and Appendix B respectively:

- Where a CoA or REMM has been determined to be relevant to a stage, it is defined as **Applicable** to that stage. This indicates that the CoA or REMM will be fully complied with during the stage.
- Where a CoA or REMM does not relate to the stage, it is defined as **Not Applicable**. This indicates that the CoA or REMM may not be complied with during the stage.
- Where only part of a CoA or REMM relates to the stage, it is defined as **Partial**. This indicates that the CoA or REMM will be at least partially complied with during the stage to the degree explained in Appendix A or Appendix B.

4.1. Construction Environmental Management Framework

Consistency in environmental management across each stage of the planning approval will be achieved through the implementation of the Sydney Metro *Construction Environmental Management Framework* (CEMF). The CEMF formed part of the SMTF planning approval documentation and provides a linking document to the construction environmental management documentation to be developed by Sydney Metro's contractors. A link to the CEMF contained in the SMTF EIS (Appendix L) is provided in Appendix C of this document.

The CEMF details the environmental, stakeholder and community management systems and processes to be implemented throughout construction of the project. More specifically, it details:

- The Sydney Metro requirement standards of:
 - CEMPs and sub-plans, and
 - Other supporting documentation for each environmental management category (i.e. noise and vibration, visual amenity, etc.), and
- Minimum requirements for each environmental management category, consistent with the *Sydney Metro Environment and Sustainability Policy* and the *Northwest Sustainability Strategy*.

Compliance with the CEMF will help achieve the environmental performance outcomes for the project. These performance outcomes outline the broader objectives to be achieved by Sydney Metro in the design, construction and operation of the project.

4.1.1. Applicability to Stages

Northwest contractors are required to implement the CEMF to a degree that is appropriate to their associated stage's level of environmental risk. This 'appropriateness' has been determined and confirmed in each contractor's deed and allows for effective and efficient management of environmental issues, including an appropriate level of management of each environmental management category listed in the CEMF (refer to Section 3.3 of the CEMF).

CEMF allocations for each stage are provided in Appendix C.

Table 6 indicates the applicability of the requirements relating to each CEMF environmental management category to each stage of the project. This includes for each environmental management category (from the highest risk level to the lowest risk level):

- Whether a stand-alone ‘Sub-plan’ will be prepared,
- Whether the category risks will be addressed in the main CEMF or Sustainability Management Plan (SMP) in the form of a procedure (‘Procedure’), or
- Whether the category risks will be addressed in the main CEMF/SMP document only (‘CEMF’ or ‘SMP’).

This assessment was based on each stage’s scope of work, relevant CoA and REMM requirements and the relevant environmental risks and impacts identified in the SMTF planning approval documentation.

Table 6: CEMF Applicability to each Stage

CEMF Environmental Management Category	OTS Stage	LW Stage
Spoil / Waste / Recycling	Sub-plan	Procedure
Groundwater	Sub-plan	CEMF
Traffic (& Transport)	Sub-plan	Sub-plan
Noise & Vibration	Sub-plan	Sub-plan
Heritage	Sub-plan	CEMF
Flora & Fauna / Biodiversity	Sub-plan	CEMF
Visual Amenity	Sub-plan	CEMF
Carbon & Energy	Sub-plan	SMP
Materials	SMP	SMP
Soil & Water	Sub-plan	Procedure
Air Quality	Sub-plan	Procedure
Ancillary Facilities	Sub-plan	CEMF

4.1.2. Reviews, Endorsements and Approvals of Plans

The sub-plans referenced in Table 6 are subject to multiple reviews, endorsements and approvals in accordance with Table 7. The requirement for these plans to receive these reviews, endorsements and external approvals as indicated in Table 7 is to ensure consistency with the CEMF and SMTF CoAs E27(e), E28 & E29.

Table 7: Reviews, Endorsements and Approvals of Plans

Plan	Contractor's Internal Review & Approval	Sydney Metro Review	Government Agency / Stakeholder Consultation	ER Endorsement prior to Implementation or Submission to the Secretary	Secretary Review & Approval	ER Approval of Minor Amendments
Construction Environment Management Plan	✓	✓	✓	●	✓	✓
Spoil / Waste / Recycling Management Sub-Plan	✓	✓	●	●		●
Groundwater Management Sub-Plan	✓	✓	●	●		●
Traffic (& Transport) Management Plan	✓	✓	✓	●	✓	✓
Noise & Vibration Management Sub-Plan	✓	✓	✓	●	✓	✓
Heritage Management Sub-Plan	✓	✓	✓	●	✓	✓
Flora & Fauna / Biodiversity Management Sub-Plan	✓	✓	✓	●	✓	✓
Visual Amenity Management Sub-Plan	✓	✓	●	●		●
Carbon & Energy Management Sub-Plan	✓	✓	●	●		●
Materials Management Sub-Plan	✓	✓	●	●		●
Soil & Water Management Sub-Plan	✓	✓	✓	●	✓	✓
Air Quality Management Sub-Plan	✓	✓	●	●	✓	✓
Ancillary Facilities Management Sub-Plan	✓	✓	●	●	✓	✓

● At the discretion of Sydney Metro (i.e. not strictly a project requirement).

4.2. Tracking

The tracking of compliance is implemented in accordance with the [North West Rail Link Environmental Compliance Tracking Procedure](#) report (as required by CoA D5 of the SMTF planning approval). This report outlines various activities that are undertaken across the stages in order to monitor compliance with the requirements of the SMTF CoAs, REMMs and other legal requirements. The Compliance Tracking Procedure (CTP) was first approved by the Director General in 2013.

Implementation of the CTP includes a quarterly assessment of each planning approval requirement (CoAs and REMMs) that is relevant across each stage. This assessment includes demonstration of how the requirement has been complied with and the status of its compliance (e.g. Compliant or Non-Compliant). These assessments include CoA B1, which requires compliance with the SMTF EIS, SMTF Submissions Report and CoAs.

4.2.1. Surveillance and Auditing

The CEMF requires contractors to undertake regular onsite environmental inspections to confirm the adequacy of all environmental mitigation measures. Furthermore, onsite environmental inspections are regularly undertaken and led by the Environmental Representative across all stages and involve key staff from the contractor, Sydney Metro representatives and the Independent Certifier (where applicable). Environmental Representative led inspections provide professional independent surveillance, guidance and advice on environmental management activities onsite.

Environmental inspections are supported by a range of other activities, including:

- Environmental performance reporting,
- Environmental risk assessment reviews,
- Regular environment meetings between Sydney Metro and the contractors, in conjunctions with the Environmental representative,
- Quarterly compliance reviews by the contractors and the Environmental Representatives,
- Environmental incident and non-compliance reporting,
- Environmental management documentation reviews and endorsements, and
- Internal, Sydney Metro or independent environmental auditing.

Appendix A – Applicability of SMTF CoAs to each Stage

This table has been based on the latest version of the [SMTF Conditions of Approval](#) as issued by the NSW Minister for Planning on 15 January 2014.

CoA Topic	CoA	OTS Stage	LW Stage
Terms of Approval	B1	Applicable	Applicable
	B2	Applicable	Applicable
	B3	Applicable	Applicable
	B4	Applicable	Applicable
	B5	Applicable	Applicable
Limits of Approval	B6	Applicable	Applicable
Statutory Requirements	B7	Applicable	Applicable
	B8	Applicable	Applicable
Staging	B9	Applicable	Applicable
	B10	Applicable	Applicable
	B11	Applicable	Applicable
Compliance	B12	Applicable	Applicable
	B13	Applicable	Applicable
	B14	Applicable	Applicable
	B15	Applicable	Applicable
Ecology – Ecological Monitoring	C1	Applicable	Not Applicable
Ecology – Riparian & Aquatic Ecology	C2	Applicable	Not Applicable
	C3	Applicable	Not Applicable
	C4	Applicable	Not Applicable
Noise & Vibration	C5	Applicable	Partial – To the extent of design activities only.
Soil, Water Quality & Hydrology	C6	Applicable	Partial – To the extent of construction activities only.
Soil, Water Quality & Hydrology – Flooding	C7	Applicable	Applicable
Soil, Water Quality & Hydrology – Flood Management Study	C8	Applicable	Not Applicable
Soil, Water Quality & Hydrology – Salinity	C9	Applicable	Not Applicable
Soil, Water Quality & Hydrology – Water Quality Monitoring Program	C10	Applicable	Not Applicable
Soil, Water Quality & Hydrology – Groundwater	C11	Applicable	Applicable
	C12	Applicable	Applicable
Soil, Water Quality & Hydrology – Contamination	C13	Applicable	Not Applicable
	C14	Applicable	Not Applicable
	C15	Applicable	Not Applicable
Hazards & Risks	C16	Applicable	Applicable

CoA Topic	CoA	OTS Stage	LW Stage
Waste Management	C17	Applicable	Applicable
	C18	Applicable	Applicable
	C19	Applicable	Applicable
Utilities & Services	C20	Applicable	Applicable
	C21	Applicable	Applicable
	C22	Applicable	Applicable
Design & Landscaping – Design & Landscape Plan	C23	Applicable	Applicable
Transport & Access	C24	Applicable	Not Applicable
	C25	Applicable	Applicable
	C26	Applicable	Applicable
	C27	Applicable	Not Applicable
Climate Change	C28	Applicable	Not Applicable
Community Information, Consultation & Involvement	D1	Applicable	Applicable
Community Information, Consultation & Involvement – Complaints & Enquiries Procedure	D2	Applicable	Applicable
	D3	Applicable	Applicable
Community Information, Consultation & Involvement – Provision of Electronic Information	D4	Applicable	Applicable
Compliance Monitoring & Tracking – Compliance Tracking Program	D5	Applicable	Applicable
Compliance Monitoring & Tracking – Incident Reporting	D6	Applicable	Applicable
	D7	Applicable	Applicable
Air Quality	E1	Applicable	Applicable
Biodiversity	E2	Applicable	Applicable
Visual Amenity	E3	Applicable	Applicable
Noise & Vibration – Land Use Survey	E4	Applicable	Applicable
Noise & Vibration – Construction Hours	E5	Applicable	Applicable
	E6	Applicable	Applicable
	E7	Applicable	Applicable
Noise & Vibration – Construction Noise & Vibration	E8	Applicable	Applicable
	E9	Applicable	Applicable
	E10	Applicable	Applicable
	E11	Applicable	Applicable
	E12	Applicable	Applicable
	E13	Applicable	Applicable
	E14	Applicable	Applicable
Soil, Water Quality & Hydrology – Construction Soil & Water Management	E16	Applicable	Applicable
	E17	Applicable	Applicable
Property & Business Impacts	E18	Applicable	Applicable
	E19	Applicable	Applicable

CoA Topic	CoA	OTS Stage	LW Stage
Transport & Access	E20	Applicable	Applicable
	E21	Applicable	Applicable
Transport & Access – Road Dilapidation	E22	Applicable	Applicable
Transport & Access – Access	E23	Applicable	Applicable
	E24	Applicable	Applicable
Ancillary Facilities	E25	Applicable	Applicable
	E26	Applicable	Applicable
Environmental Representative	E27	Applicable	Applicable
Construction Environmental Management Plan	E28	Applicable	Applicable
	E29	Applicable	Partial – To the extent of (b) and (c) only.
Noise & Vibration – Operational Noise & Vibration Criteria	F1	Applicable	Applicable
	F2	Applicable	Applicable
	F3	Applicable	Applicable
	F4	Applicable	Applicable
Noise & Vibration – Operational Noise & Vibration Compliance	F5	Applicable	Not Applicable
Operational Performance Audit Report	F6	Applicable	Not Applicable
Operational Environmental Management	F7	Applicable	Not Applicable

Appendix B – Applicability of SMTF REMMs to each Stage

This table has been based on the latest version of Section 4 of the [SMTF Submissions Report](#).

REMM Topic	REMM	OTS Stage	LW Stage
Soils, Groundwater & Contamination (Construction) - Contamination	SG14	Applicable	Applicable
	SG15	Applicable	Not Applicable
	SG16	Applicable	Applicable
Soils, Groundwater & Contamination (Construction) – Groundwater Management	SG17	Applicable	Not Applicable
	SG19	Applicable	Not Applicable
Soils, Groundwater & Contamination (Construction) – Groundwater Treatment	SG26	Applicable	Not Applicable
	SG27	Applicable	Applicable
	SG28	Applicable	Applicable
	SG29	Applicable	Applicable
	SG30	Applicable	Applicable
Soils, Groundwater & Contamination (Construction) – Soil Salinity	SG34	Applicable	Applicable
Soils, Groundwater & Contamination (Construction) – Soil Contamination	SG41	Applicable	Applicable
	SG48	Applicable	Applicable
Soils, Groundwater & Contamination (Operation) – Soils & Contamination	OpSG2	Applicable	Not Applicable
Traffic & Transport (Construction)	T1	Applicable	Applicable
	T2	Applicable	Applicable
	T3	Applicable	Applicable
	T4	Applicable	Applicable
	T5	Applicable	Applicable
	T6	Applicable	Applicable
	T7	Applicable	Applicable
	T10	Applicable	Applicable
	T12	Applicable	Applicable
	T34	Applicable	Applicable
	T35	Applicable	Applicable
	T36	Applicable	Applicable – managed through the Traffic & Transport Liaison Group.
Traffic & Transport (Operation)	OpT6	Applicable	Not Applicable
	OpT7	Applicable	Not Applicable
Noise & Vibration (Construction)	NV1	Applicable	Applicable
Noise & Vibration (Operation)	OpNV8	Applicable	Applicable
	OpNV9	Applicable	Applicable

REMM Topic	REMM	OTS Stage	LW Stage
	OpNV10	Applicable	Not Applicable
	OpNV14	Applicable	Not Applicable
Surface Water & Flooding (Construction) – Flooding	SW3	Applicable	Applicable
Surface Water & Flooding (Construction) – Water Quality and Erosion & Sediment Control	SW14	Applicable	Applicable
	SW15	Applicable	Applicable
	SW16	Applicable	Applicable
	SW17	Applicable	Applicable
	SW18	Applicable	Applicable
	SW20	Applicable	Applicable
	SW21	Applicable	Applicable
	SW22	Applicable	Applicable
	SW26	Applicable	Applicable
	SW27	Applicable	Applicable
Surface Water & Flooding (Construction) – Riparian Corridor	SW32	Applicable	Applicable
	SW37	Applicable	Applicable
Surface Water & Flooding (Construction) – Contamination & Spills	SW38	Applicable	Applicable
Surface Water & Flooding (Construction) – Monitoring & Implementation	SW40	Applicable	Applicable
	SW41	Applicable	Applicable
	SW42	Applicable	Not Applicable
	SW43	Applicable	Applicable
	SW44	Applicable	Applicable
Surface Water & Flooding (Operation)	SW45	Applicable	Not Applicable
	OpSW4	Applicable	Not Applicable
	OpSW6	Applicable	Applicable
	OpSW11	Applicable	Not Applicable
	OpSW14	Applicable	Applicable
	OpSW15	Applicable	Applicable
Non-Indigenous Heritage (Operation)	OpSW16	Applicable	Not Applicable
	OpEH2	Applicable	Not Applicable
Ecology (Construction)	E1	Applicable	Applicable
	E2	Applicable	Applicable
	E6	Applicable	Applicable
	E7	Applicable	Applicable
	E10	Applicable	Applicable
	E12	Applicable	Applicable
	E22	Applicable	Applicable
Ecology (Operation)	OpE2	Applicable	Not Applicable

REMM Topic	REMM	OTS Stage	LW Stage
	OpE6 & E15	Applicable	Not Applicable
Indigenous Heritage (Construction)	IH4	Applicable	Not Applicable
	IH7	Applicable	Not Applicable
Visual Amenity (Construction)	V1	Applicable	Applicable
	V2	Applicable	Applicable
	V4	Applicable	Applicable
	V5	Applicable	Applicable
	V10	Applicable	Applicable
Visual Amenity (Operation)	OpV2	Applicable	Applicable
	OpV3	Applicable	Applicable
	OpV10	Applicable	Applicable
Local Business, Land Use & Community Facilities (Construction & Operation)	LC1	Applicable	Not Applicable
	LC2	Applicable	Partial – To the extent of construction activities only.
	LB2	Applicable	Partial – To the extent of construction activities only.
Climate Change & Greenhouse Gas Emissions (Construction)	GHG1	Applicable	Applicable
	GHG2	Applicable	Applicable
	GHG3	Applicable	Applicable
	GHG4	Applicable	Applicable
	GHG5	Applicable	Applicable
	GHG6	Applicable	Applicable
	GHG9	Applicable	Applicable
	GHG11	Applicable	Applicable
	GHG12	Applicable	Applicable
Climate Change & Greenhouse Gas Emissions (Operation)	OpGHG1	Applicable	Not Applicable
	OpGHG5	Applicable	Not Applicable
Air Quality (Construction)	A1	Applicable	Applicable
	A2	Applicable	Applicable
	A4	Applicable	Applicable
	A5	Applicable	Applicable
	A6	Applicable	Applicable
	A7	Applicable	Applicable
	A9	Applicable	Applicable
	A10	Applicable	Applicable
Air Quality (Construction) – Spoil Stockpiles	A11	Applicable	Applicable
Air Quality (Construction) – Haul Roads	A12	Applicable	Applicable

REMM Topic	REMM	OTS Stage	LW Stage
	A13	Applicable	Applicable
	A14	Applicable	Applicable
	A15	Applicable	Applicable
	A16	Applicable	Applicable
Air Quality (Construction) – Demolition	A17	Applicable	Not Applicable
	A18	Applicable	Not Applicable
	A19	Applicable	Not Applicable
	A20	Applicable	Applicable
	A21	Applicable	Not Applicable
	A22	Applicable	Applicable
Air Quality (Construction) – Vehicles & Equipment	A23	Applicable	Applicable
	A24	Applicable	Applicable
	A25	Applicable	Applicable
	A26	Applicable	Applicable
Air Quality (Operation)	OpA1	Applicable	Not Applicable
	OpA2	Applicable	Applicable
	OpA3a	Applicable	Applicable
	OpA3b	Applicable	Not Applicable
Waste Management (Construction)	W1	Applicable	Applicable
	W2	Applicable	Applicable
	W3	Applicable	Applicable
	W4	Applicable	Applicable
	W5	Applicable	Applicable
	W6	Applicable	Applicable
	W7	Applicable	Applicable
	W8	Applicable	Applicable
	W9	Applicable	Applicable
	W10	Applicable	Applicable
	W11	Applicable	Applicable
	W13	Applicable	Applicable
	W14	Applicable	Applicable
	W15	Applicable	Applicable
W16	Applicable	Applicable	
Waste Management (Operation)	OpW1	Applicable	Not Applicable
Hazardous Goods (Construction)	DG1	Applicable	Applicable
Hazardous Goods (Operation)	OpDG1	Applicable	Not Applicable

Appendix C – Applicability of SMTF CEMF Sections to each Stage

This table has been based on the latest version of the Sydney Metro Trains Facility Construction Environmental Management Framework that was included as Appendix L to the Sydney Metro Trains Facility Environmental Impact Statement (accessible [here](#)).

CEMF Topic	CEMF Section	OTS Stage	LW Stage
Introduction	1.1	Not Applicable	Not Applicable
	1.2	Not Applicable	Not Applicable
	1.3	Applicable	Applicable
	1.4	Not Applicable	Applicable
Legislative & Other Requirements	2.1	Applicable	Applicable
	2.2	Applicable	Applicable
	2.3	Applicable	Not Applicable
	2.4	Applicable	Applicable
Environmental Management	3.1	Applicable	Applicable
	3.2	Applicable	Applicable
	3.3	Applicable	Partial – To be addressed in accordance with Table 6.
	3.4	Applicable	Applicable
	3.5	Applicable	Applicable
	3.6	Applicable	Applicable
	3.7	Applicable	Applicable
	3.8	Applicable	Applicable
	3.9	Applicable	Applicable
	3.10	Applicable	Applicable
	3.11	Applicable	Applicable
	3.12	Applicable	Applicable
	3.13	Applicable	Applicable
	3.14	Applicable	Applicable
Stakeholder & Community Involvement	4.1	Applicable	Partial – Excluding Part (c) requirements. This stage is not for the North West Rail Link project.
	4.2	Applicable	Applicable
	4.3	Applicable	Applicable
	4.4	Applicable	Partial – Urban design and temporary works requirements will be addressed in the relevant 'community' plan and/or the applicable CEMP.
	4.5	Applicable	Applicable
General Site Operations	5.1	Applicable	Applicable
	5.2	Applicable	Applicable
	5.3	Applicable	Applicable
Spoil	6.1	Applicable	Applicable

CEMF Topic	CEMF Section	OTS Stage	LW Stage
	6.2	Applicable	Partial – Procedure only (refer to Table 6).
	6.3	Applicable	Applicable
Groundwater	7.1	Applicable	Applicable
	7.2	Applicable – Part of the Soil & Water Management Sub-Plan	Partial – To be addressed in CEMP (refer to Table 6).
	7.3	Applicable	Not Applicable
Construction Traffic	8.1	Applicable	Applicable
	8.2	Applicable	Applicable
	8.3	Applicable	Applicable
Construction Noise & Vibration	9.1	Applicable	Applicable
	9.2	Applicable	Applicable
	9.3	Applicable	Applicable
Heritage	10.1	Applicable	Applicable
	10.2	Applicable	Partial – To be addressed in CEMP (refer to Table 6).
	10.3	Applicable	Applicable
Flora & Fauna	11.1	Applicable	Applicable
	11.2	Applicable	Partial – To be addressed in CEMP (refer to Table 6).
	11.3	Applicable	Not Applicable
Visual Amenity	12.1	Applicable	Applicable
	12.2	Applicable	Partial – To be addressed in CEMP (refer to Table 6).
	12.3	Applicable	Applicable
Carbon & Energy	13.1	Applicable	Applicable
	13.2	Applicable	Partial – To be addressed in SMP (refer to Table 6).
	13.1 [sic] 13.3	Applicable	Applicable
Materials	14.1	Applicable	Applicable
	14.2	Applicable	Applicable
	14.3	Applicable	Applicable
Soil & Water	15.1	Applicable	Applicable
	15.2	Applicable	Partial – Procedure only (refer to Table 6).
	15.3	Applicable	Applicable
	15.4	Applicable	Applicable
Air Quality	16.1	Applicable	Applicable
	16.2	Applicable	Partial – Procedure only (refer to Table 6).
	16.3	Applicable	Applicable
Waste	17.1	Applicable	Applicable
	17.2	Applicable	Partial – Procedure only (refer to Table 6).
	17.3	Applicable	Applicable

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