# Pre – Operation Compliance Report:

## November 2022

### M4-M5 Link Mainline Tunnels

WestConnex M4-M5 Link Tunnels

acciona | SAMSUNG C&T | BOUYGUES CONSTRUCTION AUSTRALIA

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# Document Control

## Approval and authorisation

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# Abbreviations/Glossary

| Abbreviation | Expanded text |
|---|---|
| AA | Acoustic Advisor |
| ASBJV | Acciona Samsung Bouygues Joint Venture |
| CCR | Construction Compliance Report |
| CEMP | Construction Environmental Management Plan |
| CNVMP | Construction Noise and Vibration Monitoring Program |
| CRCP | Continuously Reinforced Concrete Pavement |
| CSSI | Critical State Significant Infrastructure |
| CoA | Conditions of Approval |
| CTEAP | Compliance Tracking and Environmental Audit Program |
| DDMP | Depositional Dust Monitoring Program |
| DPE | Department of Planning and Environment |
| EC | Electrical Conductivity |
| EIS | Environmental Impact Statement |
| EMS | Environmental Management System |
| EPA | NSW Environment Protection Authority |
| EPL | Environment Protection Licence |
| Environmental Representative (ER) | A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance. |
| Environmental impact | Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects. |
| EP&A Act | *Environmental Planning and Assessment Act 1979* (NSW) |
| EWMS | Environmental Work Methods Statements |
| GWMP | Groundwater Monitoring Program |
| HSS | Hawkesbury Sandstone |
| HV | Heavy Vehicle |
| Incident | An occurrence or set of circumstances that causes, or threatens to cause, material harm to the environment, community or any member of the community, being actual or potential harm to the health or safety of human beings or to threatened species, endangered ecological communities or ecosystems that is not trivial. |
| ISO | International Organisation for Standards |
| M&E | Mechanical and electrical |

| Abbreviation | Expanded text |
|---|---|
| Minister, the | Minister of the NSW Department of Planning, Industry and Environment (or delegate) |
| NCR | Non-Conformance |
| NSW | New South Wales |
| NZS | New Zealand Standard |
| NTU | Nephelometric Turbidity Units |
| NVMP | Noise and Vibration Management Sub-Plan |
| OBS | Observation |
| OFI | Opportunity for Improvement |
| PBR | Pyrmont Bridge Road civil and tunnel site |
| POEO Act | *Protection of the Environment Operations Act 1997* (NSW) |
| POCR | Pre-Operations Compliance Report |
| PREW | Parramatta Road East and West civil sites |
| Project, the | M4-M5 Link Mainline Tunnels |
| Roads and Maritime | Roads and Maritime Services (now Transport for New South Wales) |
| SPIR | Submissions and Preferred Infrastructure Report |
| SSI | State Significant Infrastructure |
| SSTV | Site Specific Trigger Value |
| SWL | Standing Water Level |
| SWQMP | Surface Water Quality Monitoring Program |
| T&C | Testing and commissioning |
| TCR | Traffic Control Room |
| TfNSW | Transport for New South Wales |
| TTAMP | Traffic, Transport and Access Management Sub-Plan |
| WCX | WestConnex Transurban |
| WMCC | WestConnex Motorway Control Centre |
| WTP | Water Treatment Plant |

# 1 Introduction

## 1.1 Background

WestConnex is one of the NSW Government's key infrastructure projects which aims to ease congestion, create jobs and connect communities. The 33-kilometre WestConnex motorway will link Sydney's west and south-west with the Sydney Central Business District, Sydney Airport and Port Botany. WestConnex is one component of an integrated solution to meet Sydney's growing transport and infrastructure needs and is consistent with NSW Government transport and planning policies and strategies.

The project was declared by Ministerial Order to be State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI), under Section 5.12 (4) and Section 5.13 (previously referred to as 115U(4) and 115V prior to amendment of the *Environmental Planning and Assessment Act 1979* (EP&A Act)) as well as under clause 16 of the State Environmental Planning Policy (State and Regional Development) 2011. The project remains subject to assessment under the EP&A Act and requires the approval of the NSW Minister for Planning. The proposal is critical State significant infrastructure by virtue of Schedule 5, clause 4 of State Environmental Planning Policy (State and Regional Development) 2011.

An Environmental Impact Statement (EIS) (AECOM 2017) was prepared and placed on public exhibition from 18 August 2017 to 16 October 2017. Submissions were received from government agencies, organisations and the public in repose to the project. A Submissions and Preferred Infrastructure Report (SPIR) was prepared by Roads and Maritime Services (now Transport for NSW (TfNSW)) in response to submissions received during the exhibition period. The Project was approved by the Minister for Planning on 17 April 2018.

Subsequently, a Project Modification Report for MOD 1 (AECOM, September 2018) was prepared and placed on public exhibition for 14 days from 12 September 2018. The Project Modification was approved by the Minister for Planning on 25 February 2019 and the Minister's Conditions of Approval (CoAs) were also modified.

A Modification Report for MOD 2 was prepared and placed on public exhibition between 21 August 2019 and 25 September 2019. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period. This report and a Design Amendment Report were lodged with the Department of Planning and Environment (DPE) in April 2020. The Modification was determined by the NSW Minister for Planning on 30 September 2020, along with modification to CoAs.

A Modification Report for MOD 3 was prepared and placed on public exhibition by between 20 November and 18 December 2019. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period. This report was lodged with DPE in March 2020. The Modification was determined by the NSW Minister for Planning and Public Space on 28 July 2020, along with modification to CoAs.

A Modification Report for MOD 4 was prepared and lodged with DPE in June 2020. The Modification was determined by DPE on 28 July 2020, along with modification to CoAs.

A Modification Report for MOD 5 was prepared and lodged with DPE in October 2020. The Modification was determined by DPE on 17 November 2020, along with modification to CoAs.

A Modification Report for MOD 6 relating to Stage 2 of the approved project (Rozelle interchange) was withdrawn.

A Modification Report for MOD 7 relating to Stage 1 of the approved project was prepared and lodged with DPE in May 2022. The modification was determined by DPE on 14 October 2022, along with modification to CoAs.

## 1.2 Project Description

The WestConnex M4-M5 Link project is being constructed in two stages:

- Stage 1 (the Project and subject of this document): M4-M5 Link Mainline tunnels
- Stage 2: Rozelle interchange.

WestConnex Transurban has engaged Acciona Samsung Bouygues Joint Venture (ASBJV), formerly Lendlease Samsung Bouygues Joint Venture to design and construct Stage 1 of the project. The key features of the Mainline tunnel project include:

- Twin mainline motorway tunnels between the M4 at Haberfield and the M8 at St Peters. Each tunnel would be around 7.5 kilometres long and would generally accommodate up to four lanes of traffic in each direction
- Connections of the mainline tunnels to the M4 project, comprising:
    - A tunnel-to-tunnel connection to the M4 mainline stub tunnels east of Parramatta Road near Alt Street at Haberfield
    - Entry and exit ramp connections between the mainline tunnels and the Wattle Street interchange at Haberfield (which is currently being constructed as part of the M4 project)
    - Minor physical integration works with the surface road network at the Wattle Street interchange including road pavement and line marking
- Connections of the mainline tunnels to the M8 project, comprising:
    - A tunnel-to-tunnel connection to the M8 mainline stub tunnels north of the Princes Highway near the intersection of Mary Street and Bakers Lane at St Peters
    - Entry and exit ramp connections between the mainline tunnels and the St Peters interchange at St Peters (which is currently being constructed as part of the M8 project)
    - Minor physical integration works with the surface road network at the St Peters interchange including road pavement and line marking
- Construction of tunnel stubs to provide for future underground connection of the mainline tunnels to the Rozelle interchange and Iron Cove Link
- A motorway operations complex at St Peters (Campbell Road) (MOC5). The types of facilities that would be contained within the motorway operations complexes would include substations, water treatment plants, ventilation facilities and outlets (the Campbell Road ventilation facility), offices, on-site storage and parking for employees
- Tunnel ventilation systems, including ventilation supply and exhaust facilities, ventilation fans, ventilation outlets and ventilation tunnels
- Fit out (mechanical and electrical) of part of the Parramatta Road ventilation facility at Haberfield (which was constructed as part of M4 project) for use by the M4-M5 Link project
- Drainage infrastructure to collect surface and groundwater for treatment at dedicated facilities
- Water treatment would occur at the operational water treatment facility at the Campbell Road motorway operations complex
- Ancillary infrastructure and operational facilities for electronic tolling and traffic control and signage (including electronic signage)
- Emergency access and evacuation facilities, including pedestrian and vehicular cross and long passages and fire and life safety systems
- Utility works, including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities

- Temporary construction ancillary facilities to facilitate construction of the project at the following locations:
  - Northcote Street civil and tunnel site (C3a), Haberfield
  - Haberfield civil site (C2b), Haberfield
  - Parramatta Road East civil site (C3b), Haberfield
  - Parramatta Road West civil site (C1b), Ashfield
  - Wattle Street civil and tunnel site (C1a), Haberfield
  - Pyrmont Bridge Road tunnel site (C9), Camperdown/Annandale
  - Campbell Road civil and tunnel site (C10), St Peters

An overview of the project footprint and ancillary facilities is presented in the Construction Environmental Management Plan (CEMP). Further detail of the project description is presented in Section 1.3 of the CEMP.

## 1.3 Purpose of this report

This Pre-Operation Compliance Report (POCR) has been prepared to address CoA A34 of the planning approval.

The POCR will detail:

- How the terms of the approval, for CoAs required to be satisfied pre-operation, have been addressed and complied with on the WestConnex M4-M5 Link Mainline Tunnels prior to the commencement of operation and,
- Provide the anticipated commencement date for operation.

Refer to Table 1-1 for all CoA requirements relating to the POCR.

This report will provide summary of the Projects implementation of the Compliance Tracking Environmental Audit Program (CTEAP), as documented throughout construction via Construction Compliance Reports (CCR), in accordance with CoA A33, and report on the compliance of all Project CoAs at the time of pre- operation. This is detailed under Appendix A – Conditions of Approval Compliance Table.

**Table 1-1 CoA requirements for this POCR**

| CoA no. | Requirement | Reference |
|---|---|---|
| A34 | A Pre-Operation Compliance Report must be prepared and submitted to the Secretary for information no later than one (1) month prior to the commencement of operation. The Pre-Operation Compliance Report must include: | This Document |
| | a) details of how the terms of this approval that must be addressed before the commencement of operation have been complied with; and | Appendix A – Table 1 |
| | b) the commencement date for operation | Section 2.1 |

| CoA no. | Requirement | Reference |
|---|---|---|
| A35 | Operation must not commence until the Pre-Operation Compliance Report has been submitted for information to the Secretary. | This document |

# 2 Project Delivery

## 2.1 Staging

As stated in the EIS Chapter 6 (Construction Work) and previously in Section 1.2, the M4-M5 Link Project will be constructed and opened to traffic in two stages. A Staging Report has been prepared for the project, which will be updated prior to opening of the Mainline tunnels, following the approval of MOD 7.

Stage 1 can be summarised to include:

- Construction of mainline tunnels between the M4 at Haberfield and the M8 at St Peters, stub tunnels to the Rozelle interchange (at the Inner West subsurface interchange) and ancillary infrastructure at Campbell Road motorway operations complex (MOC5)
- These works commenced in 2018 with the mainline tunnels programmed to be open to traffic in 2023. [redacted]

Stage 2 can be summarised to include:

- Construction of the Rozelle interchange including:
  - Connections to the stub tunnels at the Inner West subsurface interchange (built during Stage 1)
  - Ancillary infrastructure at the Rozelle West motorway operations complex (MOC2), Rozelle East motorway operations complex (MOC3) and Iron Cove Link motorway operations complex (MOC4)
  - Connections to the surface road network at Lilyfield and Rozelle
  - Construction of tunnels, ramps and associated infrastructure as part of the Rozelle interchange to provide connections to the proposed future Western Harbour Tunnel and Beaches Link project
- Stage 2 works commenced in mid-2019 with these components of the project will be open to traffic in 2023.

The total construction period for the Project is programmed to occur across five years, which includes commissioning that occurred concurrently with the final stages of construction.

A more detailed description of how the Project would be constructed is provided in Chapter 6 (Construction Work) of the EIS and Section 1.3 of the CEMP.

ASBJV, TfNSW and WestConnex Transurban together are responsible for compliance with the requirements of the CoA and SPIR. However, ASBJV is responsible for maintaining the CTEAP for the Project and for the preparation of POCR prior to operation as required by CoA A34.

## 2.2 Project construction and tunnel overview

The M4-M5 Link Project commenced construction in November 2018 following CEMP approval on 28 November 2018. The Project underwent site establishment works across three ancillary facility sites (Parramatta Road East and West, Pyrmont Bridge Road (PBR) and St Peters Interchange (SPI)) to facilitate the construction of the CSSI which were completed by May 2019.

The Project took over the Northcote Street civil and tunnel site, otherwise referred to as Haberfield, in February 2019 under MOD 1, from the former M4 East tunnelling project.

Tunnelling commenced in May 2019 across the three tunnelling sites. At the peak of tunnelling a total of 28 road headers were brought into operation across the main tunnel heading drives producing a total of 20,000 tonnes of spoil on average per day.

After a year of tunnelling, over three million tonnes of spoil had been excavated and removed from the Project with 50 per cent of tunnel heading excavation completed by the end of July 2020.

The first mainline tunnel breakthrough between SPI and PBR occurred on 16 April 2021, a key milestone for the Project, with the final mainline tunnel breakthrough between Haberfield and PBR in September 2021.

Tunnel completion was reached in January 2022 with approximately 8.9 million tonnes of spoil removed across the Project and more than 21,580 metres of tunnel excavated. This completion date was reached ahead of schedule.

Due to the design and programme sequence of tunnelling, tunnel excavation and in-tunnel civil works (reinforce concrete pavement, trenching, drainage, waterproofing and services) worked in a tunnel production line (TLP). This allowed for tunnel civil to start relatively early in the tunnelling phase commencing in January 2020, with mechanical and electrical work (M&E) commencing closely after.

By September 2021, over 70 per cent of the continuously reinforced concrete pavement had been poured in the tunnel with 100 per cent completion achieved by April 2022.

Following completion of the in tunnel civil works, sections of the tunnel were handed over to the M&E teams. The first M&E early works commenced at the end of February 2020 to begin permanent tunnel fit out works. This included lighting, panels, cable trays and ladders, signage and jet fans. There are a total of 195 jet fans installed throughout the tunnel to provide the ventilation and air quality requirements stipulated through the design (refer to Figure 2-1).


**Figure 2-1 – M&E works underway at Haberfield, May 2022.**

M&E completed areas were handed over to the Testing and Commissioning (T&C) team to test and energise the M&E assets. By the end of November 2021, 29 per cent of assets had been handed over to the T&C team and by the end of May 2022, over 70 per cent had been handed over. This shows a significant increase in testing. By August 2022, 100 per cent of the tunnel had been handed over to the T&C team.

As well as the permanent main line tunnel works, the project was required to tie into the already established cut and cover entrance and exit ramps at Wattle Street and SPI and complete their fit out and finish works. Cut and cover works at Wattle St included installation of permanent drainage and services, throw screens, cladding, lighting, signage, architectural panels and asphalting.

Cut and cover works at SPI included the construction of road pavement to tie into the existing pavement constructed by the M8, installation of permanent concrete barriers, cladding, lighting, asphalting, signage and line marking works.

## 2.3 Project permanent works and reinstatement overview

The project was required to build the permanent Campbell Road motorway operations complex motorway (MOC 5) which consists of an operational water treatment plant (Op WTP), ventilation and substation building, workshop and amenity building and a supply shaft.

Construction of the permanent works for MOC 5 commenced in August 2020 after the approval of the Urban Design and Landscape Plan (UDLP).

### 2.3.1 Op WTP

The civil construction of the Op WTP which included the in-ground drainage, first flush tanks and concrete slab footings commenced in July 2021. This area was handed over to the M&E team at the end of October 2021 where the assembling of the plant structure commenced. The plant was completed in April 2022 where it then underwent testing and commissioning. Refer Figure 2-2. Throughout August and September 2022, a three-staged commissioning process begun to ensure the plant could operate to its required specification. The three staged approach consisted of: dry, freshwater and effluent commissioning. After a successful proving period, discharge under the operational EPL commenced 12 October 2022.

**Figure 2-2 Operational water treatment plant, St Peters April 2022**

### 2.3.2 Ventilation and substation building, workshop and amenities and supply shaft

The SPI ventilation and substation building provides the permanent ventilation, air exchange and power for the entire tunnel. The ventilation building houses seven main axial fans (refer Figure 2-3) that were fully tested and commissioned by April 2022.

**Figure 2-3 Ventilation building axial fans, St Peters, April 2022**

The ventilation building harnesses the site narrative and indigenous connection which is reflected in the architectural cladding designed by a local indigenous female artist to represent and acknowledge the value and contribution of the Timbery family and the nation's history – past and

contemporary. The cladding of the ventilation building was completed August 2022. Refer to Figure 2-4.

There are a total of six substations (SS) throughout the tunnel. SS06 was the first substation to achieve energisation in September 2021 with all substations achieving energisation by January 2022 with all HV cable hauling was completed. Testing and commissioning of all substations continued throughout 2022 in preparation for tunnel opening.


**Figure 2-4 Ventilation and substation cladding, St Peters, April 2022**

The project was also required to fitout the permanent Parramatta Road Ventilation Facility (PRVF). The construction of the PRVF was completed by the M4 East contractor with ASBJV responsible for M&E fit out and commissioning for the project elements. M&E installation was completed in June 2022 when it was handed over to be commissioned. Commissioning of the PRVF was undertaken between June and November 2022 in preparation for tunnel operation.

### 2.3.3 Project reinstatement

Following completion of permanent infrastructure and the start of tunnel backfill, site demobilisation and reinstatement in preparation for operation commenced. Site demobilisation includes:

- Removal of temporary services
- Removal of temporary infrastructure to facilitate the construction of the Project
- Removal of temporary hardstand
- Establishing the final design levels across all sites and leaving the site suitable for construction at handover with a permanent pavement/bitumen/asphalt hardstand surface and chain wire fence.

## 2.4 Planning Approvals

### 2.4.1 Consistency assessments

Throughout the Project construction, 19 consistency assessments were determined by TfNSW under the planning approval.

### 2.4.2 Project modifications

Seven Modification Reports have been prepared for the Project, Six Modifications were approved by the Secretary under the CSSI Project planning approval. Refer to Table 2-1.

Of the seven modifications, three were related to Stage 1 being the Mainline tunnels:

- Modification 1: Ancillary Facilities, determined 25 February 2019
- Modification 5: Establishment of other Ancillary Facilities – Additional Condition, determined 18 November 2020
- Modification 7: Northcote Street Reinstatement, determined 14 October 2022.

**Table 2-1 - Project modifications**

| Mod No. | Title | Determination Date | Project |
|---|---|---|---|
| 1 | Civil Site and Ancillary Facilities | 25 February 2019 | Stage 1 – Mainline tunnels |
| 2 | The Crescent overpass and active transport links | 28 July 2020 | Stage 2 – Rozelle Interchange |
| 3 | Iron Cove ventilation underground | 30 July 2020 | Stage 2 – Rozelle Interchange |
| 4 | The Glebe Island construction ancillary facility | 30 September 2020 | Stage 2 – Rozelle Interchange |
| 5 | Establishment of other Ancillary Facilities - Additional Condition | 18 November 2020 | Stage 1 – Mainline tunnels |
| 6 | Haul Road Relocation | Withdrawn | Stage 2 – Rozelle Interchange |
| 7 | Northcote Street Cul-de-Sac | 14 October 2022 | Stage 1 – Mainline tunnels |

## 2.5 Construction environmental management plan reviews

In accordance with CoA C1, a CEMP was prepared in accordance with Department's Guideline for the Preparation of Environmental Management Plans (DIPNR 2004). The CEMP main body was endorsed by the Project's Environmental Representative (ER) on 3 September 2018, in accordance with CoA C3, prior to the commencement of construction, and approved by DPE on 24 November 2018, in accordance with CoA C2.

Throughout Project construction, the CEMP and its sub-plans have been progressively reviewed and updated to reflect changes as the Project shifts phases.

Where only minor amendments are made, only ER endorsement is required. Any other amendments required approval by DPE.

Each CEMP and/or subplan review has been reported on in the 6 Monthly CCR Reports submitted to DPE.

Refer to Table 2-2 below for details of the most recent revision of the CEMP main body and CEMP subplans.

**Table 2-2 CEMP update and review**

| Relevant Plan | Revision | Updates | Approval Date |
|---|---|---|---|
| Construction Environmental Management Plan Main body | Revision 26 | Appendix A8 – Ancillary Facility site Layouts:<br>• Northcote Tunnelling Site<br>• Pyrmont Bridge Road Tunnelling Site<br>• Campbell Road Civil and Tunnel Site | 27 September 2022 |
| Traffic and Transport Access Management Plan | Revision 39 | Minor update following Hawthorne Canal works completion and to include parking at the Burrows Road Ancillary Facility | 2 February 2022 |
| Noise and Vibration Management Sub Plan | Revision 21 | Review conducted; no changes/ updates necessary | 1 September 2020 |
| Flora and Fauna Management Sub Plan | Revision 7 | Review conducted; no changes/ updates necessary | 29 July 2020 |
| Pollution Incident Response Management Sub Plan | Revision 05 | Annual review conducted July 2022 | 17 July 2022 |
| Air Quality Management Sub Plan | Revision 5 | Review conducted; no changes/ updates necessary | 1 March 2019 |
| Soil and Surface Water Management Sub Plan | Revision 09 | Review conducted; no changes/ updates necessary | 28 April 2020 |
| Groundwater Management Sub Plan | Revision 13 | Review conducted; no changes/ updates necessary | 10 June 2021 |
| Non- Aboriginal Heritage Management Sub Plan | Revision 10 | Review conducted; no changes/ updates necessary | 1 September 2020 |
| Aboriginal Cultural Heritage Management Sub Plan | Revision 5 | Review conducted; no changes/ updates necessary | 4 March 2019 |
| Waste Management Sub Plan | Revision 8 | Review conducted; no changes/ updates necessary | 29 June 2020 |

# 3 Compliance Management

ASBJV, TfNSW and WestConnex Transurban are together responsible for compliance with the Project's requirements detailed in the CoA and SPIR. Refer to the CTEAP for further information on how ASBJV manages and tracks compliance with the planning approval throughout construction.

A variety of activities are undertaken to ensure that compliance is managed effectively on the Project. These compliance management activities are summarised in Table 3-1.

**Table 3-1 Compliance management activities**

| Activity | Responsibility | Frequency |
|---|---|---|
| Ongoing site surveillance | ASBJV | Daily |
| Site Inspections | ASBJV<br>ER | Weekly<br>Fortnightly |
| Environmental compliance status update with relevant delivery owners | ASBJV | As required |
| Environmental risk assessment review | ASBJV | Annual |
| Environmental and sustainability auditing | ASBJV<br>Independent Auditor<br>ER | Annual<br>Annual<br>As requested by Secretary |
| Environmental management reviews | ASBJV | 6-Monthly CEMP Reviews |

Following Project planning approval, compliance with the requirements contained in the CoA are regularly monitored by the ASBJV.

Regular meetings have been held with the relevant Project CoA delivery owners to review applicable requirements and assess the environmental compliance status. These meetings allow ASBJV to ensure ongoing compliance and to ensure all conditions required prior to operation have been met. Where requirements are deemed to be compliant, evidence is collected and verified by ASBJV.

### 3.1 Construction environmental management system

The environmental management system (EMS) is the projects primary system to manage and control the environmental aspects of the Project during delivery to ensure environmental impacts are minimised and legislative requirements are fulfilled. The ASBJV EMS is based on the Lendlease Engineering ISO 14001 Certified EMS which was adapted to address Project and Joint Venture requirements.

The strategies defined in the CEMP have been developed with consideration of the Project approval requirements, safeguards and mitigation measures presented in the environmental assessment and approval documents. The CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

The Compliance Tracking and Environmental Audit Program (CTEAP) is part of a suite of environmental management documents prepared for the Project. The CTEAP is administered by the Environment and Sustainability Manager or delegate for the duration of the Project.

The CTEAP was prepared in accordance with CoA A27 and A36 to address, alongside the CEMP, the project requirements contained in the CoAs and REMMS and is implemented in accordance with ISO 19011:2014. The CTEAP has enabled the Project to track compliance throughout construction to operation.

# 4 Pre- Operation Compliance Performance and Status

### 4.1 Pre- operation compliance performance

The Project has tracked its compliance throughout construction to ensure all conditions required prior to operation have been successfully met. As detailed under section 3.1, compliance on the Project has been tracked in accordance with the CTEAP. This includes but is not limited to:

- Review of environmental management documentation
- Project audits (internal and external)
- Regular site inspections conducted by the project ER, WestConnex representative, TfNSW representative and ASBJV environmental personnel.

A summary of key pre-operation performance is detailed in the below sections.

#### 4.1.1 Incidents

In accordance with CoA A40 to A43, incidents which cause or threaten to cause material harm to the environment, community or health and safety will be notified to the EPA and Secretary.

To date, there have been 139 incidents reported. The most frequent incident was spills, resulting in 50 per cent of the total, with traffic incidents contributing to 31 per cent of total reported incidents. Refer to Figure 4-1 for a breakdown of the incidents by issue.

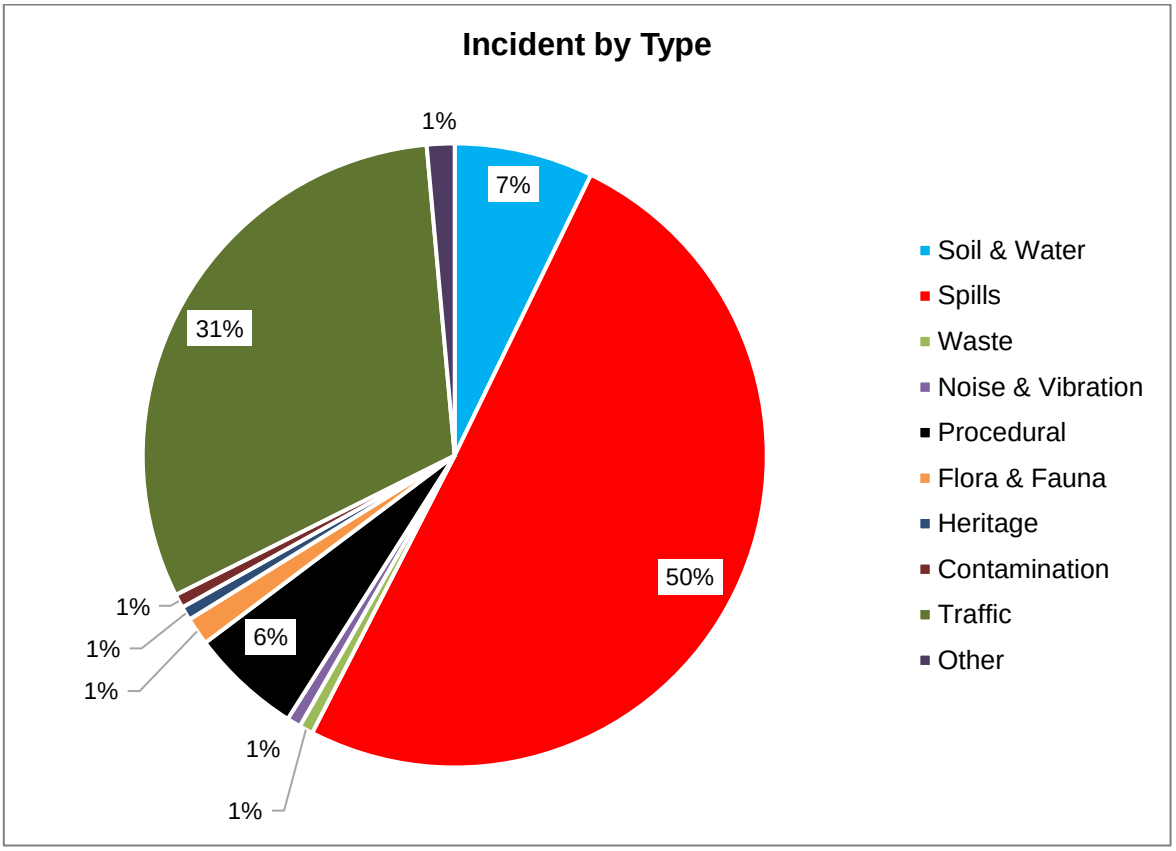


**Figure 4-1 Environmental incidents by type**

Details of these incidents have been previously captured in the Construction Compliance Reports (CCR) submitted to the Secretary every six months.

The incidents on the project have predominantly been raised as Category 2 incidents with the Project triggering only one 'regulatory action' incident. Throughout Project construction, while there have been Category 1 incidents, none have resulted *'…in actual off-site environmental harm'*.

Refer to Figure 4-2 for the TfNSW environmental incident classification definitions that the Project reports under.

| Incident classification: | |
|---|---|
| ☐ Category 1 | Potential breaches of legislation or failures of process that result in actual off-site environmental harm, or residual on-site environmental harm<br>or<br>Works undertaken outside approved areas, without required approval, or without environmental assessment<br>or<br>Any Material Harm pollution incident as defined by Part 5.7 of the *Protection of the Environment Operations Act 1997*. |
| ☐ Category 2 | Failures of process or events that do not result in off-site environmental harm or residual on-site environmental harm. These incidents may result in temporary on-site environmental harm that can be rectified to pre-existing conditions. |
| ☐ Reportable event | An event or unexpected find that occurs outside the scope of reasonable environmental controls and mitigation measures. |
| ☐ Regulatory Action | Formal regulatory action by an environmental regulator (that has not already been reported in conjunction with another incident). |

**Figure 4-2 TfNSW environmental incident classification**

Where Category 1 or Regulatory Action incidents have been triggered, appropriate notification to the regulator and/or Secretary has been submitted and where required, captured in the Project's EPL annual return.

Refer to Figure 4-3 for a breakdown of incidents by category.

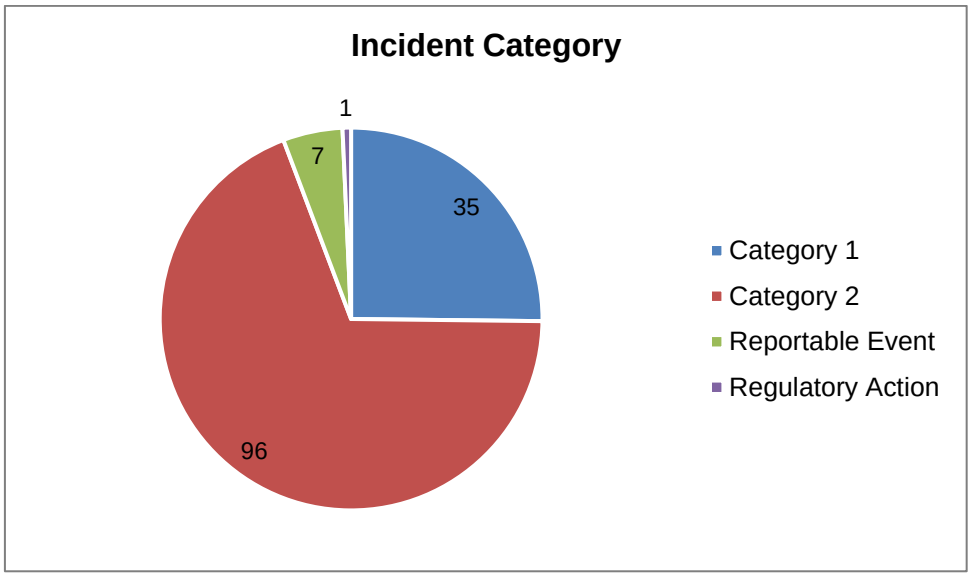


**Figure 4-3 Environmental incidents by category**

The type of incident, for example spills vs traffic, can generally be trended in accordance with different construction phases; there were more spills reported during the site establishment, commencement of early tunnelling and demobilisation phase with traffic incidents being concentrated during the peak of tunnel and spoil production.

The project upholds a good reporting culture with awareness and reminders being raised to the workforce through inductions (both project and site specific) and toolboxes.

### 4.1.2 Non-Conformances

Of the 139 incidents, 59 incidents were reported as non-conformances (NCR) against the following project documents:

- Project EPL Licence (21149) – 11
- Project Conditions of Approval - 29
- Project CEMP and Subplans – 19.

### 4.1.3 Environmental Representative inspections

The ER has a requirement to regularly monitor the implementation of the documents listed in CoA C1, C4 and C9. Generally, the monitoring in line with this condition has been conducted throughout fortnightly environmental inspections as detailed under the Project's CEMP.

87 environmental inspections have been undertaken by the ER with 140 issues raised and 247 positive observations across all sites. Of the 140 issues, only 3 have been high risk actions. All actions have generally been closed out to the satisfaction of the ER. Figure 4-4 provides a breakdown of issue type raised during the ER inspections.

All inspections conducted by the ER have been given a 'Green' inspection status in accordance with the Road and Maritime 'traffic light' status as an indicator of the overall environmental performance and effectiveness of site management measures.

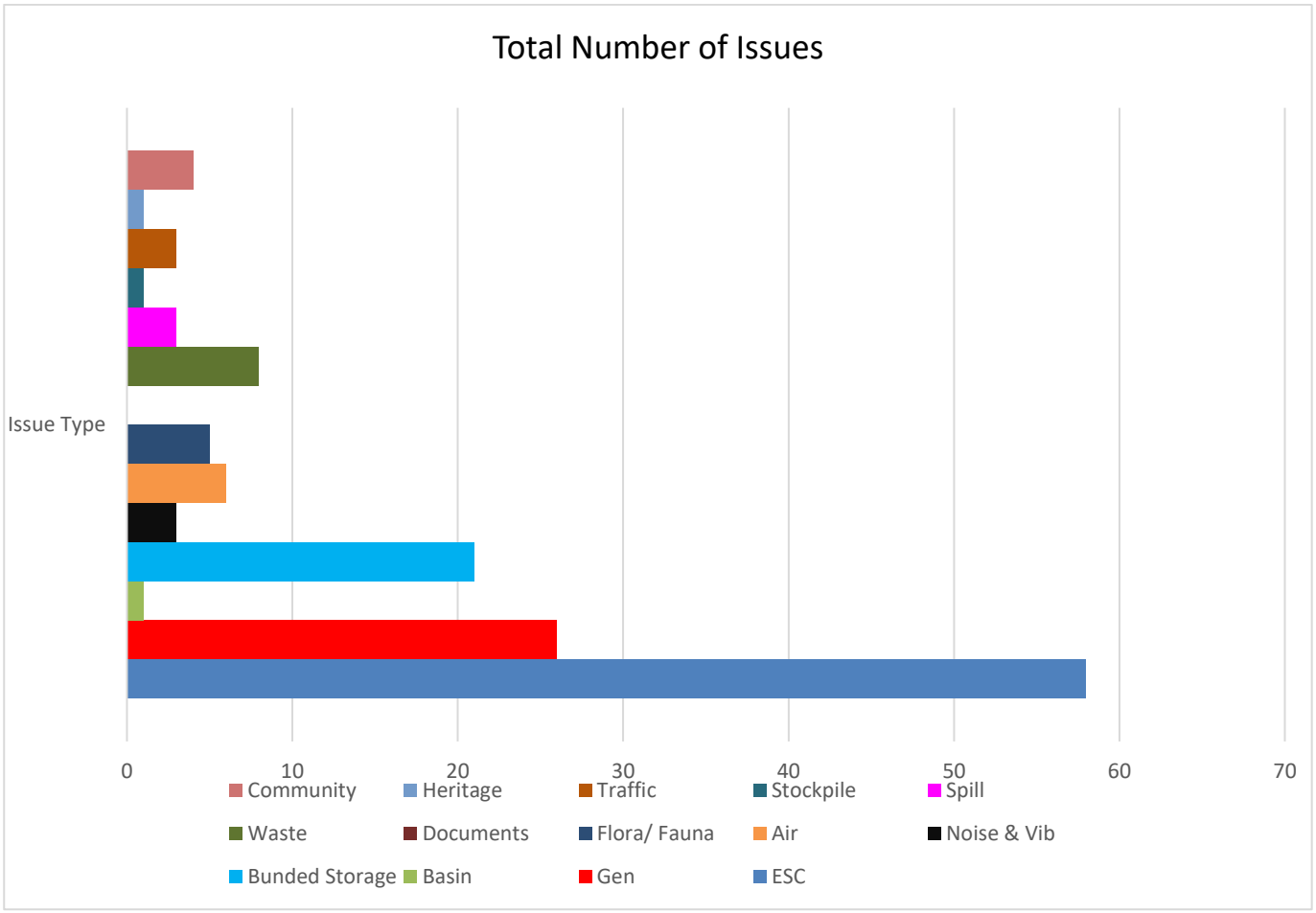


**Figure 4-4 ER inspection issues by type**

Notwithstanding, the Environment Protection Authority (EPA) has also regularly conducted Project site inspections throughout project duration. To date, nine EPA inspections have been held, two of which were unannounced. Any actions raised have been closed out in consultation with the EPA and communicated to the Secretary within the 6 Monthly CCRs.

### 4.1.4 Audits

Internal and external audits on the implementation of the environmental management system and management plans have been carried out by approved independent auditors, the ER, parent company environmental personnel and ABSJV environmental representatives.

Findings of all external independent audits undertaken to date have been communicated in the periodic 6 Monthly CCRs with the environmental audit reports also provided to the Secretary within the timeframe specified under CoA A39.

Refer to Table 4-1 for all audits undertaken up prior to operation.

**Table 4-1 Summary of completed audits against the EMS**

| Date | Audit | Internal/External | Status |
|---|---|---|---|
| 27/02/2019 | Lendlease Engineering (LLE) (CEMP Waste Management Sub Plan and Noise & Vibration Management Sub-Plan) | Int | Closed |
| 29/05/2019 | Independent Environmental Audit – CEMP Non- Aboriginal Heritage Management Sub Plan and Flora and Fauna Management Sub Plan | Ext | Closed |
| 8/11/2019 | LLE Environmental Management System (EMS) | Ext | Closed |
| 16/12/2019 | ER Spoil Audit | Ext | Closed |
| 24/04/2020 | Environmental Work Method Statement (EWMS) - HV Grouting | Int | Closed |
| 5/05/2020 | Independent Environmental Audit – CEMP Traffic, Transport and Access Management Sub Plan | Ext | Closed |
| 26/10/2020 | ISO 14001 EMS Audit | Ext | Closed |
| 17/05/2021 | Independent Environmental Audit – CEMP Noise and Vibration Management Sub-Plan | Ext | Closed |
| 18/05/2021 | Acciona EMS Audit | Ext | Closed |

| Date | Audit | Internal/External | Status |
|---|---|---|---|
| 22/05/2022 | Independent Environmental Audit – CEMP Noise and Vibration and Soil and Surface Water Management Sub-Plan | Ext | Closed |

### 4.1.5 Complaints

To date, the Project has received a total of 578 complaints. In accordance with CoA A33 (b), the 6 Monthly CCRs have reported the number of complaints received throughout construction on a periodic basis.

All complaints are managed and investigated in accordance with B8 and will continue to be managed for a minimum of 12 months following completion of construction. Complaints are provided to the ER daily in accordance with A22(a).

Actions taken to manage complaints include but are not limited to:

- Provide specific notification to impacted residents including details about duration and approval of work activities
- Providing additional regular weekly updates on work progress
- Toolboxing workers on noise mitigation measures and project expectations
- Implementing additional dust mitigation measures such as increased frequency of water cart use and asking operators to turn off vehicles/plant when not in use
- Advising nearby projects of complaints related to their work
- Offering meetings and where accepted meeting with residents to further explain work activities, timelines, approvals, and mitigation measures.

Refer to Figure 4-5 for breakdown of total complaints by category.

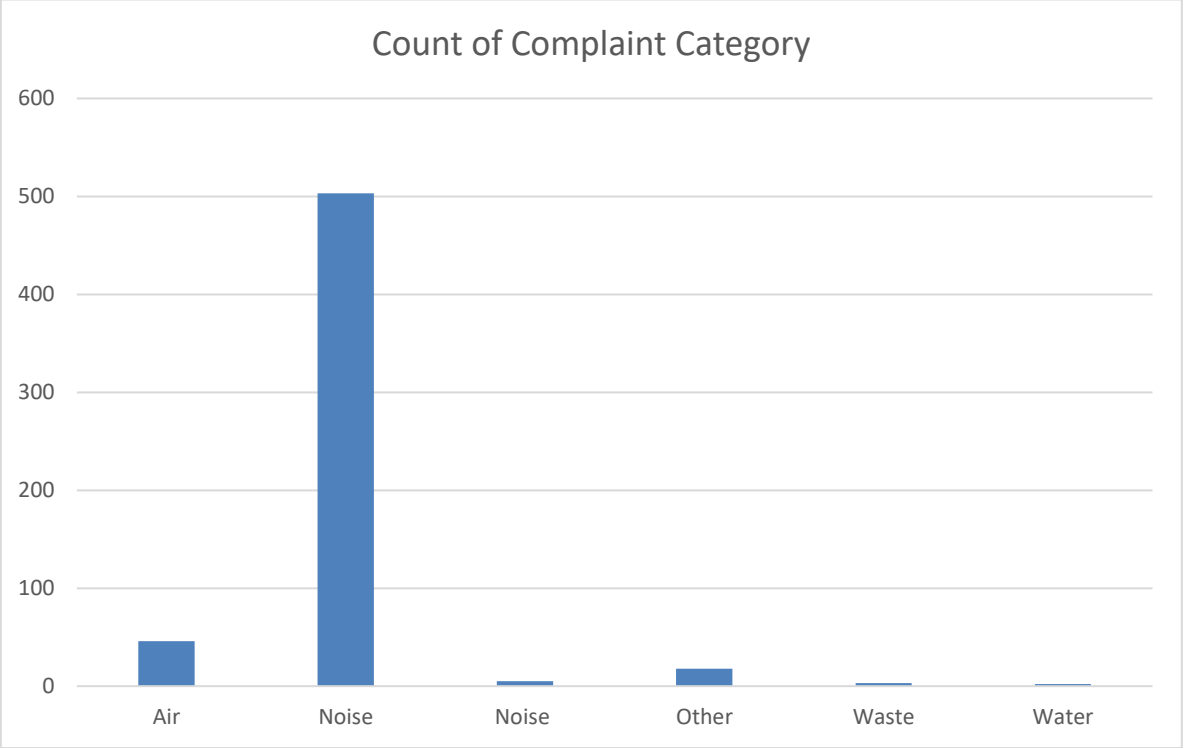


**Figure 4-5 Project complaint count by category**

## 4.2 Pre- operation compliance status

The Project's compliance status against each CoA in relation to its readiness prior to operation is provided in Appendix A – Conditions of Approval Pre- Operation Compliance Table.

In the circumstance where conditions have not met the 'pre-operation' timeframe, in accordance with CoA A8, written request to the Secretary to seek an alternative timeframe has been submitted.

The pre-operation status as detailed in Appendix A are categorised as per the definitions detailed in Table 4-2 below:

**Table 4-2 Compliance status definition**

| Status | Definition |
|---|---|
| Compliant - Open | Condition required to be completed prior to commencement of operation.<br>Compliance against the CoA has been tracked as compliant and will be closed prior to the commencement of operation. |
| Compliant - Closed | Compliance against the CoA has been achieved. |
| Compliant – remains open throughout operation | Compliance against the CoA has been tracked as compliant. Condition will remain open throughout operation. |

| Status | Definition |
|---|---|
| Compliant – remains open until completion of construction | Compliance against the CoA has been tracked as compliant.<br>Condition will remain open until all construction work for the project has been completed. |
| Compliant – remains open post completion of construction | Compliance against the CoA has been tracked as compliant.<br>Condition has a specified time frame of 'post- construction'. Condition will be achieved following completion of construction. |
| Non - Compliant | Compliance against the CoA has not been met in accordance with its intention. |

# 5 Operational Environmental Management and Monitoring

As per Part D of the CoAs - *Operation Environment Management* - once the project reaches opening, all approved Operational Environmental Management Plans and Monitoring Programs will become live.

The following operational environmental management plan, sub plans and monitoring programs have been prepared for operation:

- Operational Environmental Management Plan
- Operational Groundwater Management Plan and Monitoring Program
- Operational Surface Water Quality Management Plan and Monitoring Program
- Operational Air Quality Management Plan.

All environmental monitoring required under the operational management document suite will commence on the first day of operation.

Notwithstanding, to ensure all requirements and monitoring under the construction management plans and that stipulated in the CoAs are met, the Project will continue to undertake construction monitoring until construction completion. As such, the Project will be required to submit additional CCRs to the Secretary in accordance with CoA A33.

# Appendix A Conditions of Approval - Compliance Table

*Appendix not available on website version