



Australian Government



**Sydney Metro –
Western Sydney Airport**

Chapter 25

Environmental management and mitigation

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25 Environmental management and mitigation

This chapter describes the environmental management approach and framework for the project during construction and operation. The environmental management approach and framework has been developed to be consistent with the regulatory requirements for the on-airport and off-airport environment, including the existing environmental management framework established under the Airport Plan.

The chapter also identifies the process for inspections, monitoring, auditing and reporting of environmental compliance.

25.1 Overview

The key legislation that will govern environmental management for the off-airport and on-airport works is as follows:

- *Environmental Planning and Assessment Act 1979* (NSW) (EPA&A Act)
- *Protection of the Environment Operations Act 1997* (NSW)
- *Airports Act 1996* (Cth) (Airports Act)
- Airports (Environment Protection) Regulations 1997 (Cth)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

A range of other legislation is also applicable, as identified in Section 2 of the Construction Environmental Management Framework (CEMF) (Appendix F).

The project would need to be delivered in accordance with any conditions of approval issued under the EP&A Act, EPBC Act and Airports Act, as well as any other permits or licences required.

Environmental management associated with construction of Western Sydney International has been established through the following documents:

- *Western Sydney Airport - Airport Plan* (Airport Plan) (Department of Infrastructure and Regional Development, 2016a)
- *Western Sydney Airport Environmental Impact Statement* (Department of Infrastructure and Regional Development, 2016b)
- *Western Sydney Airport Stage 1 Construction Plan* (Airport Construction Plan) (Western Sydney Airport, 2019)
- *Western Sydney Airport Community and Stakeholder Engagement Plan* (CSEP) (Western Sydney Airport, 2019a)
- Western Sydney Airport construction environmental management plans (Western Sydney Airport, 2019b-k)
- *Western Sydney Airport Sustainability Plan* (Western Sydney Airport, 2020).

Consistency with the environmental management provisions of these documents, including any variation to the Airport Plan, will be an essential aspect of the project's environmental management strategy for the on-airport works. As part of the variation to the Airport Plan, it is anticipated that there would be a condition requiring the preparation of a construction plan for the project to outline the construction program, methodology and staging of the on-airport works (referred to as a Construction (Rail) Plan).

Environmental management requirements for the off-airport works would be confirmed through the critical State significant infrastructure (CSSI) conditions of approval of the project. If approved, the anticipated conditions of approval will likely include a requirement for the preparation of a Staging Report for the project.

The proposed approach to environmental management is to prepare an overarching, integrated environmental management strategy for the whole of the project that addresses both the on-airport and off-airport environmental management regimes. The management strategy would be consistent with the on-airport regime detailed in the above documents but would be a standalone environmental management regime. This approach is required given construction contractors may carry out work both in the on-airport and off-airport environments, including the delivery of construction packages that cross the airport boundary.

The primary document that would achieve this approach during construction is the CEMF (refer to Appendix F). The CEMF provides a whole-of-project approach to construction environmental management and includes a range of requirements including the preparation of specific environmental management plans to implement the framework. The CEMF has been prepared to be consistent with the Sydney Metro project framework and the environmental management framework at Western Sydney International (see Section 25.2 for further information).

For the construction and operation of the project, an Airport and Rail Integration Deed would be established between Sydney Metro, Transport for NSW, Western Sydney Airport and the Commonwealth, in relation to the on-airport section of the project. The deed would represent an agreement between the parties that would establish a regime where Sydney Metro would be responsible for the ongoing construction and operational environmental management of the project (including the on-airport component of the project), constructing the project under licence and operating it under an easement.

An operational environmental management plan or system would be developed for the whole project and, for the on-airport components, would be consistent with the Airport and Rail Integration Deed (see Section 25.3 for further information).

25.2 Proposed construction environmental management approach

Sydney Metro carries out the construction of its projects in accordance with a range of management frameworks and strategies. The approach to environmental management during construction of the project is illustrated in Figure 25-1.

The overarching approach to construction environmental management is guided by the following:

- Planning approval documentation (see Section 25.2.1) including:
 - CEMF
 - Construction Traffic Management Framework (CTMF)
 - Construction Noise and Vibration Standard (CNVS)
 - Overarching Community Communications Strategy (OCCS)
 - performance outcomes
 - mitigation measures
- Construction (Rail) Plan/Staging Report (see Section 25.2.2)
- Construction Environmental Management Plans (CEMPs) and sub-plans, including CEMPs for on-airport rail works consistent with the existing Western Sydney Airport CEMPs (see Section 25.2.3)
- Sustainability Management Plans (SMPs) (see Section 25.2.4)
- performance and compliance reporting (see Section 25.2.5).

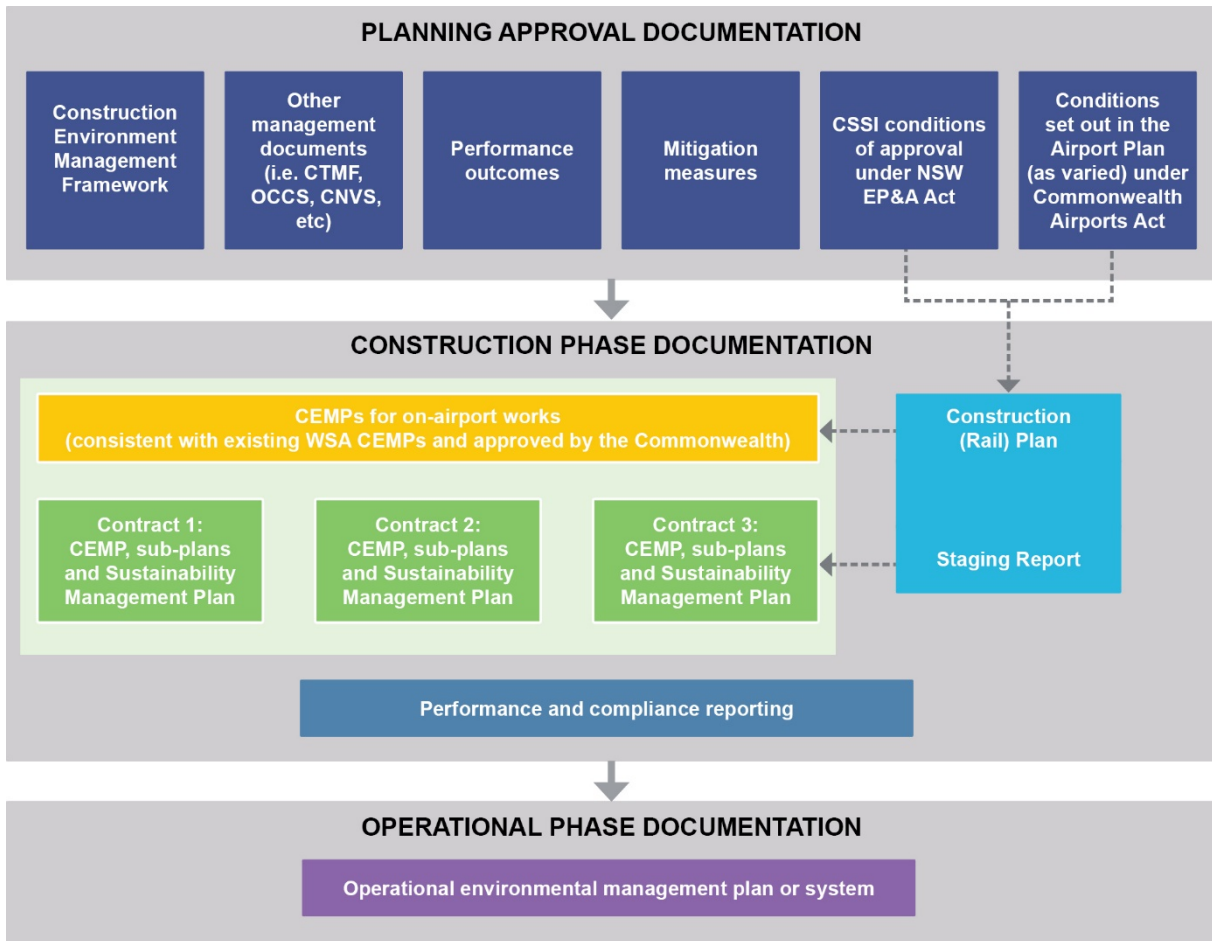


Figure 25-1 Construction environmental management approach

25.2.1 Planning approval documentation

The frameworks and strategies described below have been prepared for the project and have been appended to the Environmental Impact Statement to outline how environmental impacts would be managed during construction. The key documents include:

- OCCS (Appendix C)
- CEMF (Appendix F)
- CTMF (Appendix G)
- CNVS (Appendix H).

In addition, the Environmental Impact Statement has identified performance outcomes and mitigation measures to minimise and manage the environmental impacts of the project (see Section 27.5 of Chapter 27 (Synthesis) for a compilation of these outcomes and measures).

Construction Environmental Management Framework

The CEMF describes the approach to environmental management during construction. The framework provides the basis for environmental management and informs the development of CEMPs (by the construction contractors for off-airport works and by Sydney Metro for on-airport works) which would be developed prior to construction. The framework identifies the environmental, stakeholder and community management systems and processes that would be applied during construction. Specifically, it lists the requirements to be addressed by the construction contractors and Sydney Metro in developing the CEMPs, sub-plans and other supporting documentation for each specific environmental aspect. The CEMF also identifies protocols for environmental monitoring, inspections, auditing and reporting.

The CEMF comprises a consolidated document to be implemented for the construction of on-airport and off-airport works.

Overarching Community Communications Strategy

The OCCS will guide the approach to stakeholder and community consultation to be adopted during construction. The OCCS:

- identifies relevant communities, stakeholders or organisations to be consulted during construction
- identifies procedures for the regular distribution of information
- identifies procedures for the community to provide feedback and to resolve issues.

The OCCS comprises a consolidated document to be implemented for the construction of on-airport and off-airport works. For the on-airport works, the OCCS would be implemented in coordination with Western Sydney Airport.

Construction Noise and Vibration Standard

The CNVS defines how construction noise and vibration impacts will be managed for Sydney Metro projects, in accordance with the *Interim Construction Noise Guideline* (Department of Environment & Climate Change NSW, 2009).

The standard identifies the requirements and methodology to develop Construction Noise and Vibration Impact Statements. These would be prepared prior to specific construction activities, based on a more detailed understanding of construction methods, including the size and type of construction equipment.

The standard is based on the following strategic objectives:

- a risk-based approach to implementing a hierarchy of controls at each stage of the project lifecycle to minimise potential impacts
- active collaboration with internal and external stakeholders in building the approach to reducing potential noise and vibration impacts at each stage of the project lifecycle
- development of a clear understanding of potential noise and vibration impacts and the application of best-practice management techniques
- community engagement that is sensitive to the needs and expectations of local communities and businesses
- commitment to the continual improvement of noise and vibration management.

Given there are no sensitive receivers on the airport site, but on-airport works may affect sensitive receivers located off-airport, the CNVS would be implemented for the construction of on-airport and off-airport works.

Construction Traffic Management Framework

The CTMF provides the overall strategy and approach for construction traffic management for Sydney Metro projects.

The CTMF outlines construction contractor requirements and establishes traffic management processes and acceptable criteria to be considered and followed in managing roads and footpaths adjacent to construction worksites.

Site-specific Construction Traffic Management Plans and Traffic Control Plans would be prepared by construction contractors based on the CTMF as well as relevant mitigation measures, CSSI conditions of approval and requirements of the Airport Plan (as varied).

The CTMF would apply to the construction of on-airport and off-airport works.

25.2.2 Construction (Rail) Plan/Staging Report

It is anticipated that a combined Construction (Rail) Plan/Staging Report would be prepared for on-airport and off-airport construction activities to demonstrate the consistency of the construction of the project with the regulatory requirements outlined in Section 25.1.

The plan/report would:

- identify the requirements of the CEMF, performance outcomes, mitigation measures, project CSSI conditions of approval and Airport Plan (as varied)
- identify what requirements are applicable to each stage of the project.

The Construction (Rail) Plan/Staging Report would not identify new measures to be applied to the construction of the project; rather, it would clearly document how regulatory requirements would be satisfied by Sydney Metro and its construction contractors through the application of the CEMF and other relevant plans and strategies during the proposed construction stages.

The content of the document would generally include:

- an overview of how the project would be constructed including the construction staging, program, details of the areas where the construction activities will occur, and methodology and the delivery strategy
- applicability of the Airport Plan conditions (as varied) to each construction stage and contract package
- applicability of the CSSI conditions of approval to each construction stage and contract package
- applicability of the requirements in the CEMF to each construction stage and contract package
- applicability of performance outcomes and mitigation measures to each construction stage and contract package.

25.2.3 Construction Environmental Management Plans and sub-plans

Sydney Metro would prepare CEMPs for the on-airport rail works, consistent with the existing CEMPs for Western Sydney International, for approval by the Commonwealth. The CEMPs for the on-airport rail works prepared by Sydney Metro would apply to the on-airport environment and would address the relevant requirements of the Airport Plan.

CEMPs would then be prepared by the construction contractors for the project as they relate to their scope of work. The CEMPs would apply to the on-airport and off-airport environment depending on the scope of works to be completed by the contractors and where on-airport works are involved, the contractor's CEMPs would reference the approved CEMPs for on-airport rail works recognising that Sydney Metro will be responsible for the implementation of the approved CEMPs on the airport site. The off-airport CEMPs would address the relevant requirements of the planning approval document (including the CEMF, performance outcomes, mitigation measures and any conditions of approval) and the Construction (Rail) Plan/Staging Report.

Each CEMP would include relevant sub-plans for the management of specific potential environmental impacts in relation to specific environmental issues such as air quality and biodiversity. The requirements for the preparation of the sub-plans are detailed in the CEMF and the need for a sub-plan for each construction stage and contract package would be identified in the Construction (Rail) Plan/Staging Report.

25.2.4 Sustainability Management Plan

Construction contractors, on behalf of Sydney Metro, would develop and implement a SMP for construction works. The SMP would address the relevant requirements of the Sydney Metro Environment and Sustainability Policy and the Sydney Metro Sustainability Plan. Further requirements for the SMP are outlined in the CEMF.

The SMP would also be consistent with the Western Sydney Airport Sustainability Plan in relation to the construction of the on airport works.

25.2.5 Construction performance and compliance reporting

Section 3 of the CEMF includes a range of requirements for the recording and reporting of environmental non-compliances for construction contractors. In accordance with the CEMF, Sydney Metro would include in its CEMPs a range of specific construction performance and compliance reporting requirements to ensure the CSSI conditions of approval (including that the project shall be constructed in accordance with the Environmental Impact Statement), the conditions of approval in the Airport Plan (as varied) and the performance outcomes are met and that the mitigation measures and the CEMPs and sub-plans are being implemented.

25.3 Proposed operational environmental management approach

The approach to environmental management during operation involves:

- project design – measures which are inherent in the design of the project to avoid and minimise impacts. Further detail on these aspects of the project is provided in Chapter 7 (Project description – operation)
- operational performance outcomes and mitigation measures for the project (see Section 27.5 of Chapter 27 (Synthesis))
- operational environmental management – the approach to environmental management during operation would be defined in a project operational environmental management plan or system.

25.3.1 Operational environmental management plan or system

Environmental performance during operation of the project would be managed by the implementation of an operational environmental management plan or system. As described in Section 25.1, the plan or system would be prepared to be consistent with the Airport and Rail Integration Deed for the project, the Airport Plan (as varied) and the CSSI conditions of approval and would apply consistently to the on-airport and off-airport components of the project.

The plan would detail how the performance outcomes and mitigation measures would be implemented and achieved during operation, and would specify the environmental management practices and procedures to be followed. The plan would include the following:

- a description of activities to be undertaken during operation
- statutory and other obligations, including approvals, consultations and agreements required from authorities and other stakeholders
- overall environmental policies, guidelines and principles to be applied to operation
- a description of the roles and responsibilities, including relevant training and induction to ensure that employees are aware of their environmental and compliance obligations
- an environmental risk analysis to identify the key environmental performance issues associated with the operation phase
- details of how environmental performance would be managed and monitored.