Roads and Maritime Services/Sydney Airport Corporation Limited

Sydney Gateway Road Project

Environmental Impact Statement/ Preliminary Draft Major Development Plan

Chapter 28 Project justification and conclusion

November 2019

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28. Project justification and conclusion

28.1 Summary description of the project for which approval is sought

Roads and Maritime and Sydney Airport Corporation are proposing new direct high capacity road connections linking the Sydney motorway network at St Peters interchange with Sydney Airport's domestic and international terminals and beyond.

The project comprises new and upgraded sections of road connecting to the airport terminals. It would also include four new bridges over Alexandra Canal and other operational infrastructure and road connections. The new connections and increased road capacity would help improve traffic flow to and from Sydney Airport and towards Port Botany, making the movement of people and goods easier, safer and faster.

28.1.1 Approval requirements

The project is subject to approval under NSW and Commonwealth legislation. Parts of the project located on Commonwealth-owned land leased to Sydney Airport Corporation (Sydney Airport land) are subject to the *Airports Act 1996* (Cth). In accordance with the Airports Act, these parts of the project are major airport development. A major development plan (MDP), approved by the Australian Minister for Infrastructure, Transport and Regional Development, is required before a major airport development can be undertaken at a leased airport.

Parts of the project located on other land have been declared State significant infrastructure in accordance with the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) and *State Environmental Planning Policy (State and Regional Development) 2011*. As State significant infrastructure, these parts of the project need approval from the NSW Minister for Planning and Public Spaces. An environmental impact statement (EIS) is required to support the application for approval for State significant infrastructure under the EP&A Act).

This combined EIS/preliminary draft MDP considers the potential impacts of the project. It has been prepared to support an application for approval of the project as State significant infrastructure in accordance with the requirements of Division 5.2 of the EP&A Act (for those parts of the project subject to the EP&A Act), and as a major airport development under Section 90 of the Airports Act (for those parts of the project located on Commonwealth-owned land).

This EIS/preliminary draft MDP:

- Addresses the environmental assessment requirements of the Secretary of the Department of Planning, Industry and Environment (the SEARs), issued on 15 February 2019
- Addresses the MDP requirements defined by section 91 of the Airports Act.

28.1.2 Location

The project is located about eight kilometres south of the Sydney central business district, in the suburbs of Tempe, St Peters and Mascot. It is located in the Inner West, City of Sydney and Bayside local government areas.

The northern extent of the project site (the area that would be directly disturbed by construction and operation of the project) is located at St Peters interchange, which is currently being constructed as part of the New M5 project. The project site extends to the south-west in Tempe and crosses Alexandra Canal. The western extent of the project site is located near the entrance to Terminal 1 on Airport Drive. The project site also crosses Alexandra Canal further to the north and extends to the east in Mascot. The eastern extent of the project site is located at the entrance to Terminals 2/3.

The majority of the project site is owned by the Australian Government and is leased to Sydney Airport Corporation. Other land is owned by the NSW and local governments (including Inner West Council) and private landowners (including Sydney Airport Corporation).

The project site is shown on Figure 2.1 to Figure 2.5.

28.1.3 Objectives

The objectives of the project are to:

- Improve connectivity to Sydney Airport terminals by providing high capacity direct road connections that cater for forecast growth in passenger and air freight volumes
- Support the efficient distribution of freight to and from Sydney Airport and Port Botany to logistic centres in Western Sydney
- Improve the liveability of Mascot town centre by reducing congestion and heavy vehicle movements on the local road network.

28.1.4 Key design features

The project provides a number of linked road connections to facilitate the movement of traffic between the Sydney motorway network, Terminal 1 and Terminals 2/3. The project would connect Terminal 1 and Terminals 2/3 with each other and with the Sydney motorway network (ie New M5 and M4-M5 Link at St Peters interchange) via St Peters interchange. The project would also facilitate the movement of traffic towards Port Botany via General Holmes Drive. It would provide three main routes for traffic:

- Between the Sydney motorway network and Terminal 1, and towards the M5 motorway and the Princes Highway
- Between the Sydney motorway network and Terminals 2/3, and towards General Holmes Drive, Port Botany and Southern Cross Drive
- Between Terminal 1 and Terminals 2/3.

The project also provides access to Sydney Airport land on both sides of Alexandra Canal and the Botany Rail Line.

The key features of the project include:

- Road links to provide access between the Sydney motorway network and Sydney Airport's terminals, consisting of the following components:
  - St Peters interchange connection – a new elevated section of road extending from St Peters interchange to the Botany Rail Line, including an overpass over Canal Road
  - Terminal 1 connection – a new section of road connecting Terminal 1 with the St Peters interchange connection, including a bridge over Alexandra Canal and an overpass over the Botany Rail Line
  - Qantas Drive upgrade and extension – widening and upgrading Qantas Drive to connect Terminals 2/3 with the St Peters interchange connection, including a high-level bridge over Alexandra Canal
  - Terminal links – two new sections of road connecting Terminal 1 and Terminals 2/3, including a bridge over Alexandra Canal
  - Terminals 2/3 access – a new elevated viaduct and overpass connecting Terminals 2/3 with the upgraded Qantas Drive

- Road links to provide access to Sydney Airport land:
  - A new section of road and an overpass connecting Sydney Airport's northern lands on either side of the Botany Rail line (the northern lands access)
  - A new section of road, including a signalised intersection with the Terminal 1 connection and a bridge, connecting Sydney Airport's existing and proposed freight facilities on either side of Alexandra Canal (the freight terminal access)
- An active transport link, about 1.3 kilometres long and located along the western side of Alexandra Canal, to maintain connections between Sydney Airport, Mascot and the Sydney central business district
- Intersection upgrades or modifications
- Provision of operational ancillary infrastructure, including maintenance bays, new and upgraded drainage infrastructure, signage and lighting, retaining walls, noise barriers, flood mitigation basin, utility works and landscaping.

The key features of the project are shown on Figure 7.2 to Figure 7.7. The parts of the project located on Sydney Airport land are shown on Figure 1.3 and in more detail on Figure 7.3 to Figure 7.7.

Operational footprint

The operational footprint forms part of the overall project site. It consists of land that would be occupied by permanent project infrastructure. The total operational footprint has an area of about 36 hectares and includes about 21 hectares of Sydney Airport land. The operational footprint is shown on Figure 7.3 to 7.7.

28.1.5 Construction overview

A conceptual construction methodology was developed based on the concept design and used as a basis for the environmental impact assessment. Detailed construction planning, including programming, work methodologies, staging and work sequencing, would be undertaken once a construction contractor(s) have been engaged.

Timing and work phases

Construction of the project would involve four main phases of work. The indicative construction activities within each phase are outlined in Table 28.1.

Table 28.1 Indicative construction activities

Phase	Key activities
Enabling works	■ Utility works, including the protection, adjustment and augmentation of utilities within the project site ■ Adjustments to existing transport networks, including active transport links and intersections, to ensure that existing networks are able to operate during construction.
Site establishment	■ Installing site fencing, hoarding and signage ■ Installing site environment management controls and temporary road, pedestrian and cyclist diversions ■ Adjusting the Sydney Airport airside fence and other security fences ■ Establishing work areas, construction compounds and site access ■ Clearing/trimming of vegetation ■ Providing services (including power and water) to construction compounds and work areas.

Phase	Key activities
Main construction works	■ Removal (or partial removal) of buildings and structures in the project site ■ Earthworks ■ Road construction and widening ■ Bridge and overpass construction ■ Constructing retaining walls and drainage.
Finishing and post-construction rehabilitation	■ Erecting directional and other signage, and roadside furniture such as street lighting ■ Landscaping and revegetation ■ Site demobilisation ■ Removing site fencing and construction compounds ■ Rehabilitating work and construction compound areas.

It is anticipated that construction would start in mid-2020 and take about three and a half years to complete. Detailed construction planning would be confirmed once a construction contractor(s) have been engaged.

The project would include work undertaken during recommended standard hours as defined by the Interim Construction Noise Guideline (DECC, 2009):

- Monday to Friday: 7am to 6pm
- Saturday: 8am to 1pm
- Sundays and public holidays: no work.

It would also include work outside these hours (out-of-hours work) to minimise the potential for aviation and rail safety hazards, and maintain the operational integrity of the road network and to Sydney Airport.

Construction footprint

The construction footprint includes the land needed to construct the proposed roadways, bridges and ancillary infrastructure and land required for the proposed construction compounds. Utility works to support the project would generally occur within the construction footprint; however, some works (such as connections to existing infrastructure) may be required outside the footprint. The construction footprint, which is shown on Figure 8.2 to Figure 8.6, has an area of about 69.1 hectares, including about 37.3 hectares of Sydney Airport land.

Compounds, access and resources

Construction would be supported by five construction compounds located to support the main construction works. Construction compounds would include site offices, staff amenities, storage and laydown areas, workshops and workforce parking areas.

Materials would be transported to and from work areas via construction haul routes, which have been selected to convey vehicles directly to the nearest arterial road.

The construction workforce requirements would vary over the construction period based on the activities underway and the number of active work areas. The workforce is expected to peak at about 1,000 workers for a period of about 13 months, indicatively from the fourth quarter of 2021. Either side of this peak, workforce numbers are expected to reduce to about two thirds.

28.2 Justification of the project

The SEARs and clause 7(1)(f) of Schedule 2 of the EP&A Regulation require an EIS to provide *'the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)*".

The following sections provides a summary of the biophysical, economic and social considerations of the project justification.

28.2.1 Biophysical considerations

Detailed environmental investigations have been carried out as described in Chapters 9 to 26 to:

- Understand the existing environment
- Inform project development and route selection
- Inform project design
- Undertake environmental impact assessment
- Identify appropriate measures to avoid and minimise residual environmental and social impacts.

To provide a high level of certainty in understanding the environment and identifying potential impacts, all investigations were undertaken by technical specialists experienced in impact assessment using best practice methodologies in accordance with relevant requirement statutory requirements and guidelines, including the SEARs and the MDP requirements specified by the Airports Act. This included consideration of the potential for cumulative impacts during both construction and operation. Details of the investigations undertaken, methodologies applied, and results achieved, are described in Part B of this document.

The results of environmental investigations and consideration of the environmental risk analysis were used to ensure that potential impacts are avoided, where feasible, through route selection and project design. The key potential impacts of the project, based on the design and construction methodology described in Chapters 7 (Project description) and 8 (Construction), are summarised in section 28.1.

Ways to further reduce and minimise unavoidable potential impacts on the environment have also been considered. Mitigation and management measures to minimise any outstanding impacts are identified in this document. These measures, and the proposed approach to environmental management during construction and operation, are provided in Chapter 27 (Approach to environmental mitigation and management).

28.2.2 Economic and social considerations

Sydney Airport and Port Botany are among the busiest and most important air and sea freight terminals in Australia. The area around Sydney Airport and Port Botany has high concentrations of airport and port related businesses that are important to the economy. The Sydney Airport and Port Botany area is the largest employment area in Sydney after the Sydney central business district. As a result, high volumes of traffic access Sydney Airport and Port Botany from all over Sydney and NSW. The location of this area, around eight kilometres from Australia's most important central business district, offers the airport and port significant advantages. However, this location is also a key challenge.

The roads around Sydney Airport and Port Botany are becoming increasingly congested due to the increasing numbers of passenger, freight and commuter vehicles. The existing roads surrounding Sydney Airport and Port Botany are already operating near capacity. Botany Road is one of the main access roads to the Port Botany area and is an alternative route between Sydney's central business district and Sydney Airport. The amenity of Mascot's town centre and surrounding residential areas is substantially affected by traffic accessing Sydney Airport and Port Botany.

Over the next 20 years, container freight, air freight, air travel and general traffic in and around the Sydney Airport and Port Botany area are expected to grow significantly. This will put more pressure on roads and other infrastructure and impact local communities. Access to Sydney Airport's terminals and freight facilities needs sufficient capacity to safely and efficiently meet the predicted demands for vehicle movements and forecast growth in passenger numbers and freight transport.

The project would meet these needs. It would provide direct high capacity road connections linking the Sydney motorway network at St Peters interchange with Sydney Airport's domestic and international terminals.

The need for the project is recognised by the *Sydney Airport Master Plan 2039* (the Master Plan). One of the objectives of the Master Plan is to 'improve ground access to, from and past the airport'. The needs defined by the plan, which would be met by the project, include access improvements to Sydney Airport terminals, and to Sydney Airport's northern lands for the planned aviation support precinct (including freight and logistics facilities).

The project is consistent with future planning for ground transport as described by the Master Plan, and meets Sydney Airport's development, growth and infrastructure needs as defined in these plans.

The potential for social and economic impacts have been assessed by this document. The key potential impacts of the project are summarised in section 27.1. Measures to mitigate and manage these impacts are detailed in section 27.3.

The justification for the project has been considered within the context of the project objectives, impacts and benefits over the project design life. With implementation of proposed management and mitigation measures, the potential environmental impacts of the project are considered acceptable.

The project would deliver transport and economic benefits for current and future generations over its design life. The project would meet an identified strategic transport need, identified in NSW strategic plans and policies, and in the Master Plan. It is also consistent with the identified project objectives and the objectives of the Master Plan. It will deliver long term transport, economic and social benefits, taking into account biophysical, economic and social considerations, and the principles of ecologically sustainable development.

In summary, the project is considered to be justified for the following reasons:

- The project satisfies the project objectives and meets the identified needs and demands, as summarised in Chapter 5 (Strategic context and project need)
- Potential environmental and socio-economic impacts have been avoided and minimised as far as is reasonable and feasible
- Appropriate consideration has been given to the potential for biophysical, economic and social impacts
- The project would deliver long term transport, economic and social benefits to current and future generations.

28.2.3 Principles of ecologically sustainable development

The following sections provide reasons justifying carrying out the project with regard to the principles of ecologically sustainable development (as defined by clause 7(4) of Schedule 2 of the EP&A Regulation):

- The precautionary principle
- Intergenerational equity
- Conservation of biological diversity and ecological integrity
- Improved valuation and pricing of environmental resources.

Precautionary principle

The precautionary principle is defined as '*…if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'.*

This EIS/preliminary draft MDP has been prepared using a conservative and precautionary approach, including investigating and considering potential worst-case outcomes where relevant. The purpose of this is to ensure that all potential environmental and social impacts are considered, and complete and adequate consideration is given to avoiding, minimising and mitigating impacts that could cause temporary or permanent environmental degradation or adverse social impacts.

Assessment of the potential impacts of the project has been undertaken in a way that is consistent with the precautionary principle and with accepted scientific and assessment methodologies, taking into account

statutory and agency requirements. Assessments have applied a conservative approach with regard to consideration and modelling of project construction and operational arrangements.

The project has been designed to avoid impacts where possible, and to reflect the findings of the assessments undertaken. Mitigation and management measures have been proposed to minimise potential impacts, and these management measures would be implemented during construction and operation.

Lack of full scientific certainty has not been used as a reason to postpone or avoid identification and adoption of design or management measures to avoid or minimise environmental degradation. No threat of serious or irreversible damage to the environment arising from the project has been identified.

Inter-generational equity

The principle of inter-generational equity is defined by clause 7(4)(b) of Schedule 2 of the EP&A Regulation as '…*the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.'*

Project objectives include supporting future economic growth by improving access to Sydney Airport, Port Botany, and surrounding commercial areas, and enhancing amenity by reducing existing road congestion and reducing traffic impacts in surrounding areas.

While there would be some environmental impacts, economic expenditure and use of materials to construct and operate the project, the net benefit to human health and the environment over the project's design life would be positive. Importantly, this would include reduced emissions from stationary and slow moving vehicles, reduced stress to vehicle drivers and passengers, and improved amenity in residential and suburban streets.

Construction in a populated area cannot be achieved without some degree of environmental and social disturbance. However, the area affected and the extent of these impacts are considered to be relatively small and justified by the economic, social, environmental and health benefits over the project life. They are also considered justified by the improved access and reduction in vehicle congestion in this important area of Sydney.

No residual or outstanding impacts that will adversely affect the health, diversity and productivity of the environment available for the enjoyment and benefit of future generations have been identified.

Conservation of biological diversity and ecological integrity

The principle of conservation of biological diversity and ecological integrity is defined by clause 7(4)(c) of Schedule 2 of the EP&A Regulation as '…*conservation of biological diversity and ecological integrity should be a fundamental consideration.'*

The project is located in an environment that has been highly modified, but it still contains biodiversity and ecology that is valuable to this area. Key areas of ecological importance include Tempe Wetlands, Alexandra Canal and its riparian and shore bank zone, and wetlands at Sydney Airport. The fact that there are limited areas with high ecological integrity makes it even more important to ensure that the ecological and biodiversity values of these areas are protected and conserved.

Conservation of biological diversity and ecological integrity has been an important consideration in project planning, design development and construction planning. The alignment and project design has been developed to avoid or minimise impact on areas of high ecological value.

A biodiversity assessment was undertaken in accordance with the *Biodiversity Assessment Method* (OEH, 2017) to identify potential adverse impacts on biodiversity as described in Chapter 22 (Biodiversity). Detailed assessments have been carried out to identify biodiversity impacts and a range of mitigation measures have been identified for implementation. A robust method is proposed to set discharge criteria for construction water to protect the environmental values in Alexandra Canal and Mill Stream.

The assessment concluded that the project would not significantly impact any listed ecological communities or species, and impacts on biological diversity and ecological integrity have been assessed as minor.

Improved valuation and pricing of environmental resources

The principle of improved valuation and pricing of environmental resources is defined by clause 7(4)(d) of Schedule 2 of the EP&A Regulation as '*…that environmental factors should be included in the valuation of assets and services.'*

An economic appraisal of the project was undertaken using established methodologies that assign value to environmental factors and externalities. Environmental factors that can be assigned a monetary value include air pollution, greenhouse gas emissions, noise pollution, water runoff, nature and landscape, and urban separation. Broad average valuations are typically adopted in project assessment.

The value of the environment is also inherently considered in the development of a project design that avoids and minimises impacts. The extra cost of alignments, designs, project elements, management measures and impact offset or mitigation packages, are selected to avoid and minimise environmental and/or social impacts, are included in the total estimated project cost. Examples include the extra cost of alignment and ground treatments to minimise excavation into the former Tempe landfill, bridge designs that avoid the need for piers in Alexandra Canal and pass over the desalination pipeline, and noise barriers. These costs, plus the cost of implementing management and mitigation measures, increases the overall capital and operating costs of the project.

The costs of reducing overall waste generated, minimising noise, protecting air quality, biodiversity and heritage, and of ensuring sustainability in procurement and other environment protection measures, are all incorporated into the overall project cost. This is one way of demonstrating that environmental resources have been assigned an appropriate monetary valuation.

28.3 Concluding statement

The project alignment, concept design and construction methodology has been developed to avoid and minimise impacts on the local and regional environment, and impacts on the local community and local businesses as far as possible. Measures to minimise the identified potential impacts would continue to be implemented through the detailed design and construction planning phases, taking into account the input of stakeholders and the local community.

The project is considered to best meet the nominated project objectives when compared to all other alternatives considered. It would:

- Provide high capacity road connections to Sydney Airport terminals catering to an estimated 60,000 vehicles per day in 2036
- Support the efficient distribution of freight to and from Sydney Airport, Port Botany and logistic centres in Western Sydney via Sydney's motorway network
- Improve the liveability of Mascot town centre by reducing traffic congestion and heavy vehicle movements on local roads.

The project would ease congestion on the road network serving Sydney Airport and Port Botany, enhance network capacity, improve access for passengers and freight, and remove heavy vehicle traffic from Mascot's local streets, by providing new direct connections to the Sydney motorway network.

This EIS/preliminary draft MDP has been prepared in accordance with the requirements of the EP&A Act and Airports Act. It addresses the SEARs for the project, MDP requirements and requirements under the regulations to the EP&A Act and Airports Act. It also addresses relevant requirements of EPBC Act in relation to the potential for significant impacts on Commonwealth land. Issues raised by stakeholders and the community during project development have also been considered.

A project of this scale and location in a heavily urbanised environment would inevitably have some impacts on the local environment and community, particularly during construction. Adverse impacts have been avoided and minimised through design and construction planning and identification of management and mitigation measures. Potential impacts, management and mitigation measures are described in this EIS/preliminary draft MDP and will be implemented during project delivery.

Key environmental issues have been examined throughout the design development process. Consultation has been carried out with affected stakeholders to identify key potential impacts at an early stage, and where possible, impacts have been avoided or appropriate mitigation measures developed. This has resulted in a number of design changes that have mitigated many of the potential significant impacts. Provided the measures and commitments specified in the EIS/preliminary draft MDP are applied and effectively implemented during the design, construction and operational phases, the identified environmental impacts are considered to be acceptable and manageable. It is therefore in the public interest that the project proceeds.