M12 Motorway

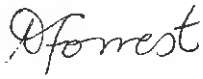
Sustainability Strategy

June 2023 | Version: D

Document control

File Name	M12 - Sustainability Strategy
Title	M12 Motorway Sustainability Strategy
Document Number (Objective)	fa11415671

Approval and authorisation

Plan reviewed by:	Plan reviewed by:
Sheila Anderson Senior Manager Environment and Sustainability	Deanne Forrest TfNSW Project Director, M12
Date 09/06/2023	Date 9/6/2023
Signed 	Signed 

Revision history

Revision	Date	Description
A	22/03/2022	Draft for internal review
B	11/04/2022	Updated following internal review
C	10/05/2022	Updated following internal review
D	09/06/2023	Updated following annual review

Contents

1 Introduction

1.1 Background

Transport for New South Wales (Transport) is planning to construct and operate the M12 Motorway (the Project) to provide direct access between the Western Sydney International Airport (WSIA) at Badgerys Creek and Sydney's motorway network. The M12 Motorway will run between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham for about 16 kilometres (km) and is expected to be opened to traffic prior to opening of the WSIA.

The Project will be constructed in separate stages under separate contracts:

- M12 West – between The Northern Road, Luddenham and about 250 metres east of Badgerys Creek
- M12 Central – between about 500 metres west of South Creek and the Western Sydney Parklands at Cecil Road, Cecil Park
- M12 Central temporary roundabout installation
- M12 East as part of the M7/M12 Integration project:
    - Elizabeth Drive connections (EDC) – a connection between the M12 Motorway and Elizabeth Drive at Cecil Park
    - M7/M12 interchange – a grade separated motorway to motorway connection between the M7 Motorway and M12 Motorway.

The Project is subject to an approval under Division 5.2 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as Critical State Significant Infrastructure (CSSI) (SSI-9364). The Project is also a controlled action under Section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), requiring a separate approval from the Australian Minister for the Environment.

An Environmental Impact Statement (EIS) was prepared to describe and assess the Project and recommend management measures to address impacts. The EIS was exhibited by the NSW Department of Planning, Industry and Environment (DPE) for 34 days from 16 October 2019 to 18 November 2019 to give the community and stakeholders the opportunity to provide comment.

In accordance with Section 5.17 of the EP&A Act, the Secretary requested Transport to provide a response to submissions on 29 November 2019 to address the identified issues. Due to design developments since the exhibition of the EIS, an Amendment Report was developed to assess the impacts of these amendments. The Amendment Report was exhibited by DPE for 14 days from 21 October 2020 to 4 November 2020. Following exhibition of the Amendment Report, an Amendment Report Submissions Report (ARSR) was developed December 2020 to address the identified issues followed by the ARSR – Amendment in March 2021 which addressed biodiversity matters only.

The Project must be carried out generally in accordance with the EIS, Submissions Report, Amendment Report, and the Amendment Report-Submissions Report (ARSR) in accordance with NSW Condition of Approval (CoA) A1. In addition to these documents, Consistency Assessments have been approved for project changes occurring during detailed design and construction. These documents are collectively referred to as the Environmental Assessment Documentation. The CSSI must also be carried out in accordance with all procedures,

commitments, preventative actions, performance outcomes and mitigation measures set out in the Environmental Assessment Documentation as required by NSW CoA A2.

Approval for the Project under the EP&A Act was granted by the Minister for Planning on 23 April 2021. Approval for the Project under the EPBC Act was granted by the Federal Minister for the Environment on 3 June 2021. The project must be carried out in accordance with the terms of the NSW and Federal Approvals.

A detailed description of the Project is provided in Section 2. Construction of the Project will be undertaken in three stages. Further detail of the proposed Project staging is provided in the Project Staging Report, which has been prepared in accordance with NSW Condition of Approval (CoA) A13.

1.2 Purpose of this Sustainability Strategy

This Sustainability Strategy is a high-level document outlining how the M12 Motorway Project (the Project) aims to contribute to sustainability outcomes at Transport. It also outlines how the project will achieve a minimum 'Excellent' Design and As-Built rating under the Infrastructure Sustainability Council (ISC) rating tool in accordance with the NSW Condition of Approval (CoA) SSI 9364.

In accordance with Condition E92 this Sustainability Strategy will be provided to the Planning Secretary for information prior to commencement of Construction and will be implemented throughout Construction and Operation.

The Sustainability Strategy demonstrates a commitment to:

- Infrastructure sustainability – strategic focus areas and objectives are implemented in design, construction and operation of the Project.
- Policy – there are many drivers for sustainability in the NSW Government's sustainability strategies and policy frameworks which the Project aims to address through delivery. The Sustainability Strategy sits under an umbrella of Transports policies which relate to the development of sustainability principles and objectives adopted during the planning phases of the Project.
- Accountability – sustainability management measures are in place including a commitment to robust monitoring evaluation process which aims to deliver the sustainability objectives during design, construction and operation of the Project.
- Flexibility – the Sustainability Strategy will be adhered to regardless of the procurement and contract type and will be updated at key milestones.

Stage specific Sustainability Management Plans will also be utilised on the project. Refer to Section 2.3 for an overview of stages and Figure 4-1 for how the Sustainability Strategy relates to other project sustainability documentation.

1.2.1 Conditions of Approval

Table 1-1 SSI 9364 Condition of Approval sustainability requirements

No.	Requirement	Reference
E91	A Sustainability Strategy must be prepared to achieve a minimum excellent 'Design' and 'As built' rating under the Infrastructure Sustainability Council of Australia Infrastructure rating tool.	This Sustainability Strategy
E92	The Sustainability Strategy must be submitted to the Planning Secretary for information before the commencement of construction and must be implemented throughout construction and operation.	Section 1.2

1.2.2 Revised Environmental Management Measures

There are no primary Revised Environmental Management Measures (REMM) presented in the Environmental Assessment Documentation relevant to the development of this Sustainability Strategy.

2 Project Description

2.1 Project Overview

Transport is delivering the M12 Motorway between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham (the Project), over a distance of about 16 km.

The Project will provide the main access from the WSIA at Badgerys Creek to Sydney's motorway network and is expected to be opened to traffic before the opening of the WSIA. The Project is expected to open by mid-2026.

An EIS was prepared to assess the potential impacts of the Project and recommended management measures to appropriately address those impacts. An Amendment Report was prepared to assess changes to the design developed after the public exhibition of the EIS. The Project, as described in the ARSR, includes the following:

- A new dual-carriageway motorway between the M7 Motorway and The Northern Road with two lanes in each direction with a central median allowing future expansion to six lanes
- Motorway access via three interchanges/intersections:
    - A motorway-to-motorway interchange at the M7 Motorway and associated works (extending about 4 km within the existing M7 Motorway corridor) with connection between the M12 Motorway and Elizabeth Drive
    - A grade-separated interchange referred to as the WSIA interchange, including a dual-carriageway four-lane airport access road (two lanes in each direction for about 1.5 km) connecting with the Western Sydney International Airport Main Access Road
    - A signalised intersection at The Northern Road with provision for grade separation in the future
- Bridge structures across Ropes Creek, Kemps Creek, South Creek, Badgerys Creek and Cosgroves Creek
- A bridge structure across the M12 Motorway into the Western Sydney Parklands to maintain access to the existing water tower and mobile telephone/other service towers on the ridgeline in the vicinity of Cecil Hills, to the west of the M7 Motorway
- Bridge structures at interchanges and at Clifton Avenue, Elizabeth Drive, Luddenham Road and other local roads to maintain local access and connectivity
- Inclusion of active transport (pedestrian and cyclist) facilities through provision of pedestrian bridges and an off-road shared user path, including connections to existing and future shared user path networks
- Modifications to the local road network, as required, to facilitate connections across and around the M12 Motorway, including:
    - Realignment of Elizabeth Drive at the WSIA, with Elizabeth Drive bridging over the airport access road and the future passenger rail line to the airport
    - Two new signalised intersections from Elizabeth Drive into the WSIA, with provisions for future connection to potential developments to the north

    - Widening of Elizabeth Drive under the M7 Motorway and approaches
    - Realignment of Clifton Avenue over the M12 Motorway, with associated adjustments to nearby property access
    - Relocation of the Salisbury Avenue cul-de-sac, on the southern side of the M12 Motorway
    - Realignment of Wallgrove Road north of its intersection with Elizabeth Drive to accommodate the M7 Motorway northbound entry ramp
    - Realignment of Wallgrove Road to connect to Cecil Road, including a connection between Elizabeth Drive and Wallgrove Road via Cecil Road with a signalised intersection with Elizabeth Drive
- Adjustment, protection or relocation of existing utilities
- Ancillary facilities to support motorway operations, smart motorways operation in the future and the existing M7 Motorway operation, including gantries, electronic signage and ramp metering
- Other roadside furniture including safety barriers, signage and street lighting
- Adjustments of waterways, where required, including Kemps Creek, South Creek and Badgerys Creek
- Permanent water quality management measures including swales and basins
- Establishment and use of temporary ancillary facilities, temporary construction sedimentation basins, access tracks and haul roads during construction
- Permanent and temporary property adjustments and property access refinements as required.

A detailed description of the Project is provided in Chapter 5 of the EIS. A detailed breakdown of construction activities are outlined in Section 2.4 of the Overarching Construction Environmental Management Plan (OCEMP).

2.2 Project program

Work on-site for the M12 Motorway will take approximately five years, with Early Works (including utility relocation work) and Low Impact Works (including archaeological investigations) having commenced from November 2021. Main construction of the M12 West and M12 Central packages commenced in August 2022 and all packages are expected to be completed by mid-2026. The Project program is as follows:

- West package schedule: Award of Construction contract April 2022. Main construction commenced August 2022
- Central package schedule: Award of Construction contract in April 2022. Main construction commenced August 2022
- East package as part of the M7/M12 Integration project (EDC and M7/M12 interchange) schedule: Construction anticipated to commence in second half of 2023 (H2 2023)

An indicative construction sequence, indicative duration of construction activities and the indicative construction program for the Project is outlined in Section 2.2 of the OCEMP and Section 2.3 of the Staging Report.

2.3 Staging

The Project will be delivered in three stages, with each stage delivered in a separate construction package that will include all activities needed to complete the stage, including utility adjustments, road construction, bridge construction, traffic management, intelligent transport systems, lighting and finishing work. Each stage is split as detailed in the following sections; some overlap may occur where the respective sections meet. Refer to Section 2.3 of the OCEMP for an indicative staging plan.

Refer to Section 5.2.5 for the staging of IS Rating packages for the Project.

2.3.1 M12 West

The M12 West package is six kilometres long and runs from The Northern Road at Luddenham to approximately 250 metres east of Badgerys Creek and features a grade separated interchange with the Airport Access Road connecting the M12 Motorway to the WSIA.

The M12 West package will provide a dual carriageway with a narrow median and safety barriers running along the entire length and designed to integrate with the future Western Sydney Orbital (OSO) project. The OSO eastbound carriageway will be built to the north of the M12 Motorway alignment and the M12 Motorway carriageway would become the westbound carriageway for OSO. Emergency stopping bays and emergency crossovers will be provided at regular intervals.

The M12 West package also consists of:

- The Airport Access Road (1.5 km)
- Multiple bridges
- Active transport (pedestrian and cyclist) facilities through the provision of a shared user path, including connections to existing paths
- A connection to the signalised at grade intersection at The Northern Road with provision for grade separation in the future as part of the future OSO.
- A realignment and duplication of approximately 1500 metres of Elizabeth Drive with a new bridge over the Airport Access Road and Metro Rail corridor, a four-way signalised intersection east of Airport Access Road, and a left-in/left-out intersection west of Airport Access Road, providing access to the WSIA and to the property to the north.
- A signalised single point interchange with north facing ramps from Elizabeth Drive to M12 Motorway and south facing ramps from Elizabeth Drive to Airport Access Road.

2.3.2 M12 Central

Construction of this package of the Project involves building 7.5 km of motorway from 250 metres east of Badgerys Creek to the Water Tower Access Road within Western Sydney Parklands (near Duff Road).

The M12 Central package will provide a dual carriageway with a wide median to allow for future widening to six lanes. Safety barriers will be provided along the length of the package. Emergency stopping bays and emergency crossovers will be provided at regular intervals.

A shared user path with lighting will provide an active transport link along the motorway and eastward to the M7.

The M12 Central package includes multiple bridges. Retaining walls will be provided around Range Road to help limit the impact of the motorway on Range Road. The M12 Central package requires adjustments to local roads including Clifton Avenue and Salisbury Road. This package also requires relocation of utility services including electricity, water and telecommunications. Urban design features of the package include Aboriginal artwork on bridges, rest areas on shared user paths, interpretive signage and landscape planting.

2.3.3 M12 East

The M12 East package involves two sections of work as described below. This package will be constructed as part of the M7/M12 Integration project which also includes widening of the M7 Motorway:

2.3.3.1 Elizabeth Drive Connections

Construction of this package will involve the upgrade of a two km section of Elizabeth Drive from Duff Road to 300 metres east of the M7 Motorway which includes:

- The realignment of Wallgrove Road through properties to the existing Cecil Road and Elizabeth Drive intersection
- The realignment of Cecil Road to connect it to the new Wallgrove Road
- Upgrading about 700 metres of Elizabeth Drive from two to three lanes in both directions from Elizabeth Drive/M7 Motorway southbound entry and exit ramp intersection to new Wallgrove Road/Elizabeth Drive intersection with provisions for three lanes on the remaining sections.

Wallgrove Road will be realigned to make room for the construction of the Elizabeth Drive connection. This will also require decommissioning a section of the existing Wallgrove Road approximately 500 metres from where it currently intersects with Elizabeth Drive. The new Wallgrove Road will connect to and replace the existing Cecil Road and Elizabeth Drive intersection and Cecil Road will be realigned to connect back into the realigned Wallgrove Road.

The package will require relocation of utility services including electricity, water and telecommunications.

2.3.3.2 M12/M7 Interchange

The M7/M12 interchange provides a grade separated motorway to motorway connection between the M7 Motorway and M12 Motorway. Located in Cecil Park, this package involves:

- Provision of four connections at the grade separated interchange including:
    - Connection from M7 southbound onto M12 westbound
    - Connection from M7 northbound onto M12 westbound
    - Connection from M12 eastbound onto M7 southbound
    - Connection from M12 eastbound onto M7 northbound
- Interchange tie-in extending about four kilometres into the M7 Motorway corridor.

2.4 Operations

During Operation, the M12 Motorway alignment, except for the M7/M12 interchange, will be managed by a stewardship contractor on behalf of Transport. The M7/M12 interchange will be maintained and operated by WSO Co Pty Ltd. The stewardship contractor and WSO Co will implement an Operational Environmental Management Plan (OEMP) or Environmental Management System, in accordance with the relevant Conditions of Approval.

3 Policy Framework

This section outlines the sustainability principles that inform the Project and its sustainability performance criteria.

3.1 Key Strategic and Regulatory Drivers

There are many key strategic and regulatory drivers which Transport for NSW should consider when developing sustainable infrastructure.

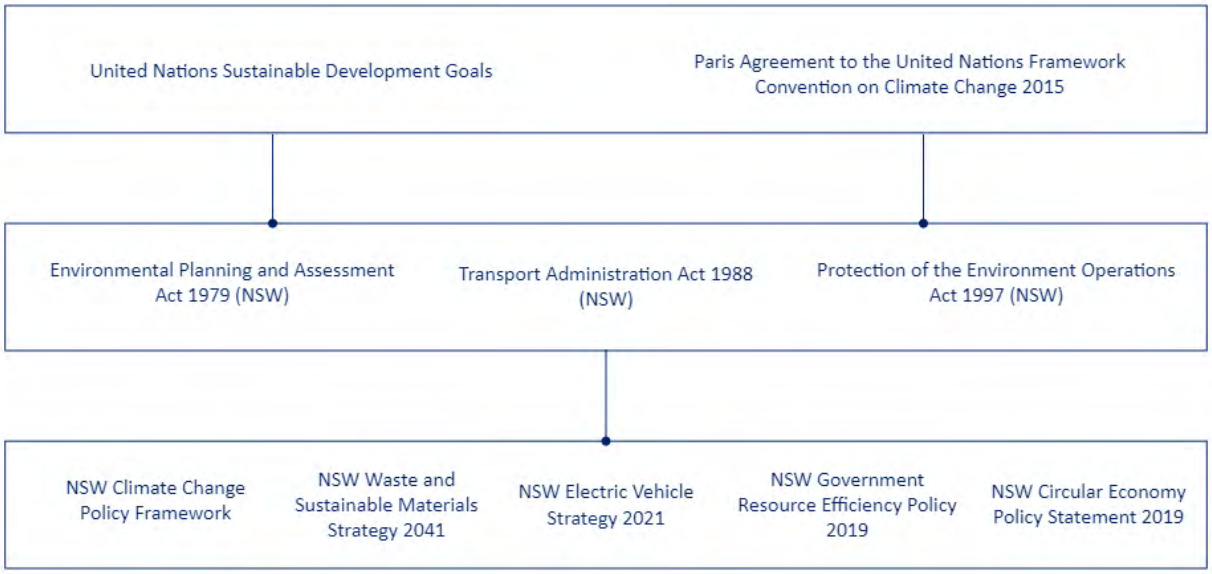


Figure 3-1 Key sustainability drivers for Transport for NSW

3.2 Sustainability at Transport

Transport has developed a range of tools to address the key drivers outlined in Section 3.1. This section outlines the tools most applicable to the M12 Motorway.

More information on Sustainability at Transport can be found at https://caportal.com.au/tfnsw/sustainability

3.2.1 Environment and Sustainability Policy

Transport Environment and Sustainability Policy gives a collective and coordinated approach to deliver the NSW Government's environmental and sustainability agenda across the transport network. The framework outlines the commitment of Transport and key transport agencies to deliver transport projects and services in a manner that balances economic, environmental and social issues.

The Policy is based around nine environment and sustainability themes: Leadership, Environmental protection, Energy and carbon, Resilience, Sustainable procurement, Whole of life, Social, Awareness and Communication.

3.2.2 Environmental Sustainability Strategy 2019-2023 (RMS)

The 2019-2023 Environment Sustainability Strategy outlines 10 focus areas aimed to address the most important sustainability aspects associated with the delivery of road projects. These focus areas are outlined in Figure 3-2.

Figure 3-2 10 focus areas of RMS Environmental Sustainability Strategy 2019-2023

Although this strategy was developed prior to the transition of RMS into Transport, it was determined the 2019-2023 Sustainability Strategy (RMS) was the most appropriate strategy to guide the sustainability outcomes of the Project during the design phase due to its strong focus on road infrastructure assets. This Strategy has since been replaced with a new Transport Sustainability Plan, discussed in Section 3.2.3

3.2.3 Transport Sustainability Plan

As part of the Transport Sustainability Plan, Transport has developed eight sustainability focus areas which address the most important activities of Transport, each supported by sustainability goals, where Transport will concentrate our attention and resources, as shown in Figure 3-3. These focus areas were developed as part of the 2021 Sustainability Plan.

M12 Motorway has developed project key focus areas, objectives, initiatives and target themes to align with the Transport Sustainability Plan. See Section 4.2 for further detail.

Figure 3-3 Sustainability at Transport Key Focus Areas

4 Our Commitment to Sustainability

4.1 Commitment Statement

Transport is committed to delivering the M12 Motorway Project in a manner that achieves excellent economic, environmental and social outcomes as part of a sustainable transport system for NSW, and will demonstrate this by achieving a minimum 'Excellent' IS Rating for each delivery package of the Project (to align with 2.3 Staging).

4.2 Key Focus Areas, Objectives, Initiatives and Target Themes

The Project has developed key focus areas, objectives, initiatives and target themes. Table 4-1 outlines these key focus areas, objectives, initiatives and how they relate to the policy framework outlined in Section 3.

Addressing sustainability requirements will be an ongoing process throughout the life cycle of the Project. Sustainability initiatives identified in Table 4-1 will be pursued by Transport and/or appointed designers and contractors, where relevant, to meet the project objectives and address key focus areas.

Package specific targets will also be developed to address the key focus areas and objectives. Target themes are to be considered when developing package specific sustainability targets which will be outlined within package specific sustainability documentation including Sustainability Management Plans and Specifications.

Table 4-1 M12 Key Focus Areas, Objectives, Initiatives and Target Themes

Relevant Transport Focus Areas	Transport Objectives	M12 Key Focus Areas	M12 Objectives	M12 Initiatives	M12 Target Themes
• *Respond to Climate Change*	• *Net zero emissions by 2050* • *Consider climate change risks in all decisions*	• *Energy and carbon management*	• *Minimise energy use and reduce carbon emissions without compromising the delivery of services to our customers.*	• *Educating and raising awareness in employees, contractors and our supply chain regarding the need for increased energy efficiency and reductions in carbon emissions.* • *Investigating opportunities to use renewable energy during Construction, particularly temporary lighting*	• *Construction greenhouse gas emissions* • *Operational greenhouse gas emissions* • *Embodied energy within construction material*
		• *Climate change resilience*	• *Design and construct transport infrastructure to be resilient or adaptable to climate change impacts.*	• *Minimising the carbon impacts associated with vegetation clearance by reducing project footprints where possible.*	• *Climate change risk mitigation and/or adaption measures*
• *Protect and enhance biodiversity*	• *No net loss of biodiversity*	• *Biodiversity*	• *Improve outcomes for biodiversity by avoiding, mitigating or offsetting the potential impacts of the project on plants, animals and their environments and contribute to the enhancement of biodiversity values.*	• *Minimising impacts by applying best practice approaches to unavoidable habitat loss (e.g., following pre-clearing processes, establishing exclusion zones and careful management of weeds and pathogens).* • *Avoiding the spread of weeds, pests and diseases outside of our sites through appropriate management of mulch and vegetation wastes generated, reused or removed from our sites.*	• *Ecological value*
• *Improve environmental outcomes*	• *Develop a circular economy for Transport by designing waste and pollution out and keeping products and materials in use* • *Reduce environmental impacts of projects and operations*	• *Resource use and waste management*	• *Minimise the use of non-renewable resources and minimise the quantity of waste disposed to landfill.*	• *Identifying where there is potential to recover and reuse materials on site.* • *Substituting non-renewable materials with recycled or reused materials where they are fit for purpose, cost effective and affordable.* • *Managing waste to minimise transport related risks and impacts by using local disposal facilities where feasible and appropriate* • *Maximising the use of non-potable water in preference to potable water where feasible.*	• *Resource recovery of virgin excavated natural material (VENM) and a range of other materials* • *Reuse of topsoil* • *Diversion of office waste from landfill* • *Water use during construction* • *Water use during operation*
		• *Pollution control*	• *Minimise noise, water and land pollution generated by the project.*	• *Fostering a proactive reporting culture that promotes transparency in managing and reporting incidents internally and with regulators.*	• *Noise and vibration* • *Water quality* • *Contamination*
		• *Air quality*	• *Minimise air quality impacts associated with the project and support initiatives that aim to reduce transport related air emissions.*	• *Actively monitoring and minimising non-road diesel emissions from our activities.* • *Ensuring non-road diesel plant and equipment used in our activities comply with relevant EU or US EPA emissions standards.*	• *Construction air quality*
• *Procure responsibly*	• *All suppliers meet the standards in the Transport Supplier Sustainability Charter* • *Social and environmental outcomes included in all procurement decisions* • *Go beyond minimum compliance targets and Aboriginal Procurement Policy*	• *Sustainable procurement*	• *Procure goods, services, materials and works that over their lifecycle deliver value for money and contribute to the environmental, social and economic wellbeing of the community.* • *Maximise employment and training opportunities for young people, Aboriginal and Torres Strait*	• *Where possible, procuring from small and medium-sized enterprises, Aboriginal businesses and Australian disability enterprises by including such requirements in procurement strategies and policies.* • *Where possible, supporting local suppliers to minimise haulage distances of construction materials when feasible.*	• *Apprenticeships* • *Training and development* • *Workforce participation*

Relevant Transport Focus Areas	Transport Objectives	M12 Key Focus Areas	M12 Objectives	M12 Initiatives	M12 Target Themes
• *Align spend and impact*	• *All decisions consider value created from sustainability alongside financial analysis* • *Reduce whole of life costs for the transport network*		*Islanders, disadvantaged groups, long-term unemployed and people who live along the project's alignment.*		
• *Partner with communities*	• *Always leave a positive legacy for communities as a result of projects* • *Enable, apply and report on community engagement*	• *Liveable communities*	• *Provide high quality urban design outcomes that contribute to the sustainability and liveability of communities in NSW.* • *Meet the reasonable needs and desires of the community for involvement, communication, and information*	• *Independent panel review of Urban Design and Landscape Plan* • *Interactive web portals to convey significant project information (EIS, Place Design & Landscape Plan)*	• *Community benefit initiatives* • *Crime prevention through environmental design (CPTED)* • *Public open space*
• *Respect culture and heritage*	• *Aboriginal culture and non-Aboriginal heritage is integrated and preserved* • *Acknowledge and incorporate culture through stories, examples, and best practice*	• *Heritage*	• *Manage and conserve cultural heritage values according to its heritage significance and contribute to the awareness of the past.*	• *Where possible, seek to enhance heritage values through engagement, awareness and public art.* • *Aboriginal cultural education training during Construction*	• *Heritage values*

4.3 Implementation

Sustainability objectives and requirements are guided by NSW Government and Transport Policies and environmental approvals & management measures. Transport is responsible for the overall sustainability performance of the project. The Transport Project Senior Management Team have overall responsibility for the sustainability performance of the Project and driving overall project sustainability initiatives. Transport will facilitate the achievement of an 'Excellent' IS Rating for each stage of the Project, based on IS Project Ratings prepared by others, which will lead to an overall average 'Excellent' rating for the Project.

Transport will include sustainability requirements within Principal supplied documentation. Detailed designers and construction contractors will be required to develop package specific plans to respond to these requirements and are responsible for undertaking IS Project Ratings, as outlined in Section 5.2.6, and meeting package specific sustainability goals.

Figure 4-1 outlines the approach to integrating sustainability objectives and requirements into the delivery of the Project.

Figure 4-1 M12 Motorway Sustainability Strategy Implementation

4.4 Monitoring and evaluation

Where there is a change to the Transport Environment and Sustainability Framework, this Sustainability Strategy will be reviewed annually to consider relevance of changes to the project.

Package specific Sustainability Management Plans will outline governance structures, processes and systems that ensure integration of sustainability key focus areas, objectives, targets and initiatives during the detailed design and construction phases of the Project.

Monitoring and evaluation requirements are developed within Principal supplied documentation and will be addressed within package specific sustainability management plans. As a minimum, monitoring and evaluation measures will include sustainability inspections, internal audits, independent audits, quarterly reporting and monitoring against sustainability targets.

5 Infrastructure Sustainability Rating Scheme

5.1 Infrastructure Sustainability Council

Infrastructure Sustainability Council (ISC) is a member-based, purpose-led peak industry body for advancing sustainability outcomes in infrastructure. ISC specialises in the facilitation and development of industry-led, performance-based integrated governance and reporting frameworks, decision tools and rating tools. ISC have established and administrate an Infrastructure Sustainability Rating which has been widely applied to infrastructure projects in NSW.

5.2 IS Ratings

5.2.1 Rating Tools

The ISC IS Rating tools evaluate sustainability across the planning, design, construction and operational phases of infrastructure programs, projects, networks and assets. Infrastructure sustainability evaluates the performance against the quadruple bottom line (governance, economic, environmental and social) of infrastructure development.

Each rating tool comprises a number of sustainability Themes, sorted into Categories and further broken down into Credits. Points are awarded based on performance against each of these Credits.

There are currently two rating tools available for new projects; Version 1.2 and Version 2.1. Both rating tools have the same objective, however differ mainly in a different grouping of Themes and Categories. Version 2.1 also includes an 'Economic' theme and 'Workforce Sustainability' category. Other differences between the rating tools are detailed within the Technical Manual. Table 5-1 outlines the framework of each rating tool.

Table 5-1 IS Rating Tool Themes and Categories

Version 1.2		Version 2.1	
Themes	**Categories**	**Themes**	**Categories**
• *Management and Governance*	• *Management Systems* • *Procurement and Purchasing* • *Climate Change Adaption*	• *Governance*	• *Place* • *Leadership and Management* • *Sustainable Procurement* • *Resilience* • *Innovation*
	• *n/a*	• *Economic*	• *Options Assessment* • *Benefits*
• *Using Resources*	• *Energy and Carbon* • *Water* • *Materials*	• *Environment*	• *Energy and Carbon* • *Environmental Impacts*

Version 1.2		Version 2.1	
Themes	**Categories**	**Themes**	**Categories**
• *Emissions, Pollution and Waste*	• *Discharges to Air, Land and Water* • *Land* • *Waste*		• *Resource Efficiency and Management* • *Water* • *Ecology*
• *Ecology*	• *Ecology*		
• *People and Place*	• *Community Health, Wellbeing and Safety* • *Heritage* • *Stakeholder Participation*	• *Social*	• *Stakeholder Engagement* • *Legacy* • *Heritage* • *Workforce Sustainability*
• *Innovation*	• *Innovation*	• *Refer to 'Governance' for innovation category*	

Assessment of sustainability on the M12 Motorway project was initially undertaken as part of the Concept Design and EIS phase of the project in response to a SEARs requirement. The Version 2.1 rating tool was not available at that time and Version 1.2 was deemed most appropriate to assess the project and to guide the sustainability requirements of the detailed design phase of M12 West and M12 Central. As such, the project will continue to use the Version 1.2 rating tool for all current and future stages of the project.

Although the project is proceeding with the Version 1.2 rating tool, this tool allows for certain credits from the Version 2.1 rating tool and its predecessor, Version 2.0, to be trialled to achieve innovation points in accordance with ISC Innovation Challenge criteria. The decision to trial Version 2.0 and/or Version 2.1 credits will be undertaken at a package specific level.

5.2.2 Rating Level

The Rating Level is based on a weighted sum of scores obtained for each credit plus up to 10 bonus points for the innovation category. The total individual points available is 110, however bonus points will only be awarded for innovations up to a maximum total score of 100 points. The Rating Levels differ based on which IS Rating tool is utilised. Table 5-2 outlines the Rating Levels applicable under both the Version 1.2 and Version 2.1 Rating Tools.

The M12 Motorway is committed to obtaining an 'Excellent' Design and As-Built Rating in accordance with CoA Condition E91.

Table 5-2 IS Rating Tool Rating Levels

Version 1.2		Version 2.1	
Score	**Rating Level**	**Score**	**Rating Level**
• *75 to 100*	• *Leading*	• *95 to 100*	• *Diamond*
		• *80 to 94.9*	• *Platinum*
• *50 to <75*	• *Excellent*	• *60 to 79.9*	• *Gold*

Version 1.2		Version 2.1	
Score	Rating Level	Score	Rating Level
• *25 to <50*	• *Commended*	• *40 to 59.9*	• *Silver*
		• *20 to 39.9*	• *Bronze*
• *<25*	• *No Rating awarded*	• *<19.9*	• *No Rating awarded*

5.2.3 Project Ratings

5.2.3.1 Project Rating

A Project Rating may be undertaken for a succinct package of works or for an entire project. For the M12 Motorway project, separate Project Ratings are being undertaken for the M12 West, M12 Central and M12 East packages. The M12 East package is being delivered as part of the M7/M12 Interchange project and will have a combined IS rating with the M7 Widening project. Refer to Section 5.2.5 for further detail.

A project rating for M12 will typically include a Design Rating (interim rating) and an As-Built Rating.

5.2.4 Rating Type

The IS Rating tools assess the sustainable outcomes of projects at the end of significant milestones. General project phases and relevant Rating Types are outlined in Figure 5-1. Rating Types relevant to the M12 Motorway project are discussed further in Section 5.2.4.1 and Section 5.2.4.2.

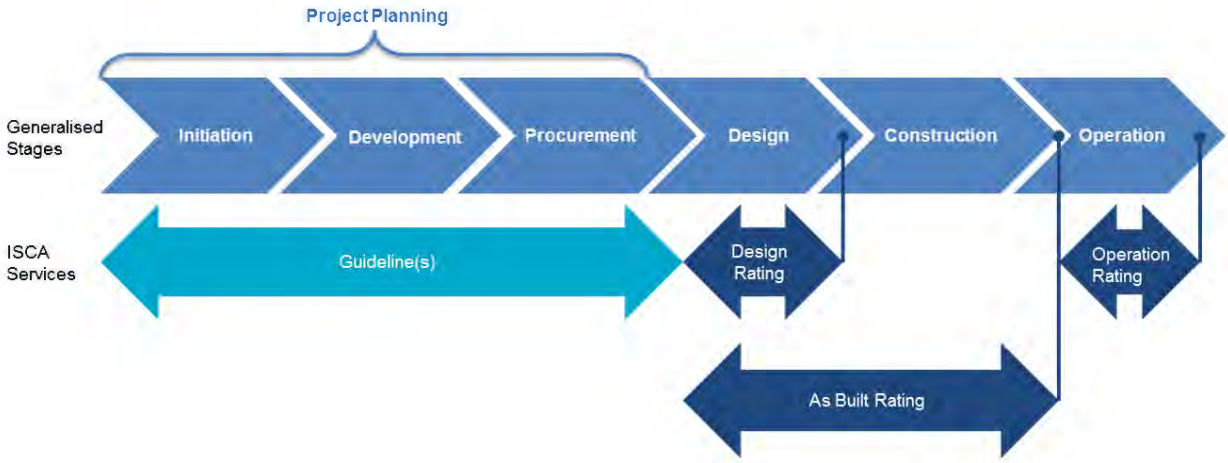


Figure 5-1 Infrastructure stages and Infrastructure Sustainability rating type (ISC Technical Manual v1.2:16)

5.2.4.1 Design Rating

May be awarded based on the inclusion of design elements and construction requirements for sustainability in the project documentation. The rating may be awarded after completion of design. This is an 'interim' rating and must be replaced by an As Built rating after construction. (ISC Technical Manual v1.2:15).

5.2.4.2 As-Built Rating

May be awarded based on the inclusion of design elements and construction requirements for sustainability in the project documentation along with the measured sustainability performance during construction and built into the infrastructure asset. The rating may be awarded after practical completion of the project. This rating supersedes the Design rating. (ISC Technical Manual v1.2:15).

5.2.5 M12 Motorway IS Ratings Structure

An IS Rating structure for the M12 Motorway project is outlined in Figure 5-2. The implementation of this structure is further detailed in Section 5.2.6. The structure is based on existing ratings pathway for M12 West and Central and with an updated pathway for M12 East which will be delivered as part of the M7/M12 Integration project rating.

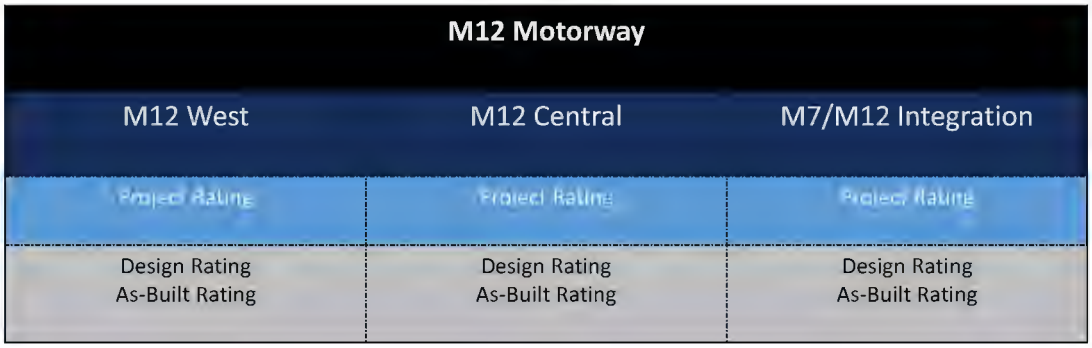


Figure 5-2 M12 Motorway IS Rating Structure

5.2.6 M12 Motorway IS Rating Timing

Table 5-3 outlines indicative timing and responsibility for obtaining the M12 Motorway IS Ratings. The timing of IS Ratings is directly related to timing of design and construction of the project.

Table 5-3 M12 Motorway IS Rating indicative timing and responsibility

Project / Package	Project Rating	Rating Type	Responsibility	Indicative Timing
• *M12 West*	• *Project Rating*	• *Design*	• *Detailed Designer*	• *Awarded September 2022*
		• *As-Built*	• *Construction Contractor*	• *H1 2026*
• *M12 Central*	• *Project Rating*	• *Design*	• *Detailed Designer*	• *Awarded March 2023*
		• *As-Built*	• *Construction Contractor*	• *H1 2026*
	• *Project Rating*	• *Design*	• *D&C Contractor*	• *H1 2024*

Project / Package	Project Rating	Rating Type	Responsibility	Indicative Timing
• *M12 East (part of the M7/M12 Integration project)*		• *As-Built*	• *D&C Contractor*	• *H2 2026*