Appendix G

Infrastructure Sustainability Management Plan (ISMP) – (Planning / Design / Construction)

Project Name @ Type here

[Additional info e.g. Date, Author etc]

January 2022

**Document Guidance**

|  |
| --- |
| * Sections of this document written in italic text and highlighted grey are examples of required information. These can be used as they are written and/or amended to suit your project. Once you have reviewed the text to be kept remove italics and grey text highlight colour.   + Note: Titles of documents in italics are to remain untouched. * Other sections highlighted with form field boxes (Example) are to be reviewed and replaced. |

This template can be used as a basis to develop an Infrastructure Sustainability Management Plan (ISMP) for an infrastructure project Planning, Design or Construction project phases.

The purpose of an ISMP is to:

* Be built incrementally and implemented over the project phases and integrated with other significant project development activities / contracts.
* Provide context and direction for sustainability assessments to achieve at least an excellent rating under the Infrastructure Sustainability Council (ISC) Rating Tool ISv1.2.
* Inform the Department of Transport and Main Roads of specific sustainability initiatives to be embedded into a project, and
* Become a resource for tenders.

Transport and Main Roads encourages ‘best efforts’ and recognises various achievements and outcomes that have the intent to meet an IS credit. Projects are incentivised to achieve optimum project outcomes through use of the IS rating tool.

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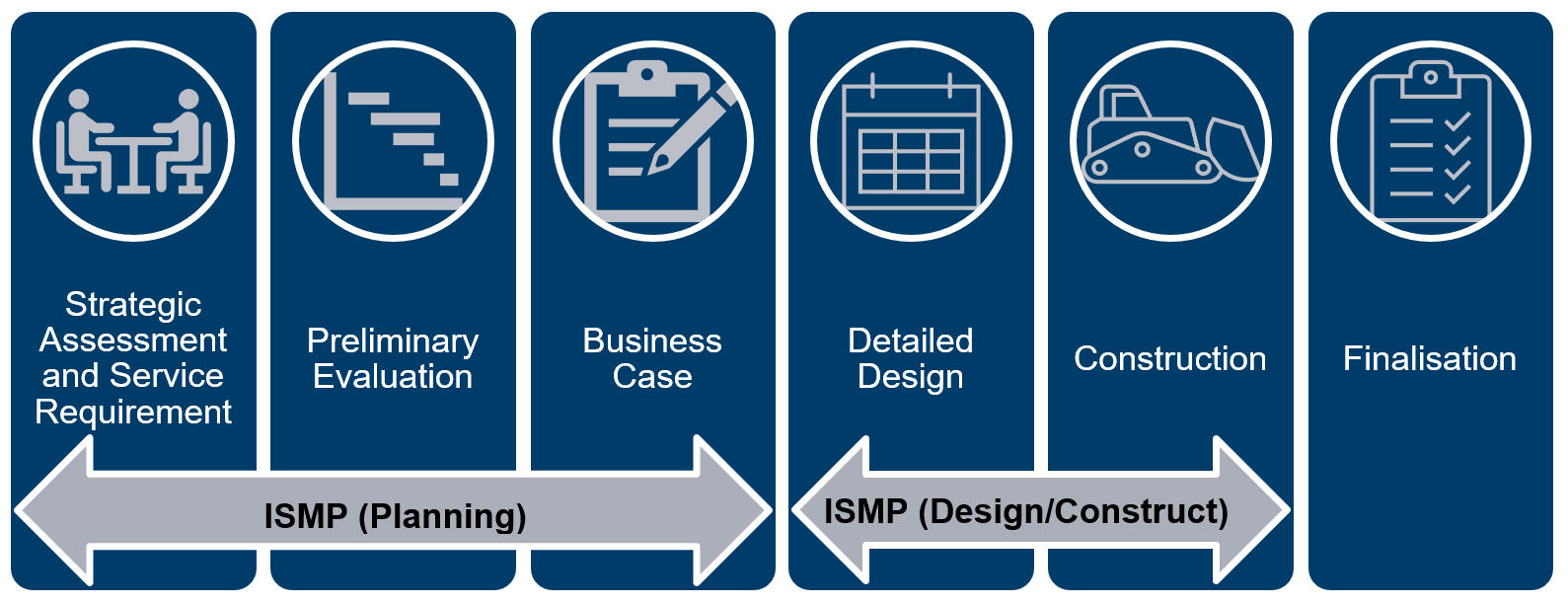
# Introduction

## Purpose of the Infrastructure Sustainability Management Plan

|  |
| --- |
| Describe the purpose of the ISMP and what project it applies to.  Outline where the ISMP applies to in the project lifecycle, such as the business case phase, as per Figure 1.1. |

The purpose of this Infrastructure Sustainability Management Plan (ISMP) is to facilitate the integration, management and implementation of sustainability measures during … The ISMP is an internal Transport and Main Roads tool to guide the project team to identify and apply sustainability deliverables, timeframes, roles and responsibilities.

Figure 1.1 – ISMP (X) project application



## Project description

|  |
| --- |
| Describe the project for which the ISMP applies. Describe aspects such as location(s), chainages, reasoning for undertaking works, benefits from completion and so on. Include a plan / map of the project. |

Figure 1.2 – Project Name Location / Alignment

Insert figure

## Timeframes and key milestones

|  |
| --- |
| Describe the various stages of the project. Outline previous, current and forthcoming project stages and/or milestones in Table 1 below, accompanied by description and status. |

Table 1.3 – Project Name Project Timing

|  |  |  |  |
| --- | --- | --- | --- |
| Project stage | Timing | Description | Status |
| Strategic Assessment of Service Requirement | 2018-2019 | Key issues and options to meet the service requirement have been analysed | Complete |
| Preliminary evaluation | 2020 | Preliminary evaluation completed and submitted | Complete |
| Detailed business case | 2021 | Commencement of the detailed business case | Underway |
| [...] | [...] | [...] | [...] |
| [...] | [...] | [...] | [...] |

# Definitions of terms

|  |  |
| --- | --- |
| Term | Definition |
| The Client or the Principal | Transport and Main Roads |
| Project or XXXXX | XXXXX |
| BAU | Business as usual |
| BC | Business Case |
| BCDF | Business Case Development Framework |
| CPTED | Crime Prevention Through Environmental Design |
| EPD | Environmental Product Disclosure |
| Functional Specification | C75XXS Functional Specification CN-XXXXX |
| ISAP | Infrastructure Sustainability Accredited Professionals |
| ISMP(X) | Infrastructure Sustainability Management Plan (Planning / Design / Construction) |
| ITS | Intelligent Traffic Systems |
| ISC | Infrastructure Sustainability Council |
| ISv1.2 | Infrastructure Sustainability (IS) Rating Scheme Technical Manual Version 1.2 (v1.2) |
| ISv2.1 | Infrastructure Sustainability (IS) Rating Scheme Technical Manual Version 2.1 (v2.1) |
| MCA | Multi-Criteria Analysis |
| NLTN | National Land Transport Network |
| PE | Preliminary Evaluation |
| State | State of Queensland |
| SQP | Suitably Qualified Professional |
| WSUD | Water Sensitive Urban Design |

# Scope of the ISMP

|  |
| --- |
| Describe the extent of the infrastructure sustainability assessment, and include any relevant information that might influence the IS rating scope and boundary. i.e. packages of works, works included or excluded. Example below. |

The scope of the infrastructure sustainability assessment for (Project Stage) includes consideration and assessment of the sustainability aspects for:

* The whole of life benefits and impacts of the asset, including design, procurement, construction and operation, and
* The whole of life costs of the asset (not just the capital cost of construction).

## Interface with other Management Plans

|  |
| --- |
| Describe how this ISMP will be integrated with other documents to facilitate the implementation of project sustainability requirements. Outline which management documents apply to the project. Example below. |

To facilitate implementation of sustainability requirements for (Project name), sustainability measures will be integrated into various management plans, policies, procedures and contract documents developed for the project. This includes interface with the following documents:

* Transport and Main Roads Specifications
* Risk Management Plan
* Design Drawings and Reports
* Transport and Main Roads Communication and Engagement Plan
* Transport and Main Roads Risk Register
* Urban Landscape and Design Plan, and
* Environmental Management Plan.

Sustainability objectives, targets and sustainability actions have been developed and implemented for the XXXXXX phase and are outlined in this ISMP. This ISMP also details the handover process to ensure communication of sustainability outcomes to later phases of the project.

## Infrastructure sustainability

|  |
| --- |
| Describe the context to which infrastructure sustainability applies to the project. |

The Queensland Government has directed that infrastructure projects over $100 million value (project total cost in P90 estimate) are required to undertake a Sustainability Assessment. The Department of Transport and Main Roads have elected to utilise the Infrastructure Sustainability Council's (ISC) Infrastructure Sustainability (IS) Rating Scheme.

|  |
| --- |
| Define sustainability and outline how sustainability (broadly speaking) may be implemented in the context of infrastructure projects in general, or this specific project.  Outline how the project will integrate with the [*Transport and Main Roads Environmental Sustainability Policy*](https://www.tmr.qld.gov.au/Community-and-environment/Environmental-management/Environmental-sustainability-policy)(2021) and the five dimensions of Transport and Main Roads Sustainability Framework (2012) (for the Transport and Main Roads Sustainability Framework please email [environment@tmr.qld.gov.au](mailto:environment@tmr.qld.gov.au)). Example below. |

Transport and Main Roads adopted an Environmental Sustainability Policy in 2021, this sets the direction and focus for the department in protecting and enhancing our environment. The core policy statement is:

Transport and Main Roads aims to be an industry leader and is committed to:

* managing our environmental interactions and incorporating sustainable and innovative solutions to minimise our environmental footprint, as an integral part of our business activities
* continuous improvement in environmentally sustainable practices and partnering with our stakeholders to ensure a resilient and adaptable transport system
* meeting the needs of the current generation while minimising environmental impacts on future generations, and
* contributing to the sustainability of the natural environment, while delivering a single integrated transport network accessible to everyone.

The Transport and Main Roads Sustainability Framework *(for the Transport and Main Roads Sustainability Framework please email* [*environment@tmr.qld.gov.au*](mailto:environment@tmr.qld.gov.au)*)* was adopted in 2012 and is applicable to all Transport and Main Roads Projects. It outlines Transport and Main Road’s five dimensions of sustainability, which are:

1. Our Business: creating opportunities to enhance the cost-effective delivery of our infrastructure and services to enhance business capacity.
2. Our People: building and developing our people within a sustainable and innovative organisation that delivers on commitments.
3. Our Stakeholders: developing partnerships with key stakeholders in government and business to influence sustainable change.
4. Our Society: delivering Transport and Main Roads vision and contributing to the social and economic strength of Queensland.
5. Our Environment: adopting a leadership position in reducing our environmental footprint and influence.

## Sustainability Policy

|  |
| --- |
| Describe the project approach to a sustainability policy (timing and alignment). Describe if the project aligns with [Transport and Main Roads Environmental Sustainability Policy](https://www.tmr.qld.gov.au/Community-and-environment/Environmental-management/Environmental-sustainability-policy) (October 2021) OR if a project-specific sustainability policy is by being developed by Transport and Main Roads or the successful tenderer, and when it will come into effect. Ensure the policy meets any ISC sustainability requirements. |

## Sustainability objectives and targets

|  |
| --- |
| Alignment with IA assessment framework and project objectives. Layer in targets, objectives and metrics. Refer to Appendix A – Transport and Main Roads Guidance Note: Project sustainability commitments / objectives to describe this project's sustainability objectives and targets OR how it may guide / inform the development of a series of project-specific sustainability objectives and targets. The timing for delivery of this milestone is to be agreed with Transport and Main Roads. |

Table 3.4 – Alignment of project objectives, targets and metrics (to be updated / completed)

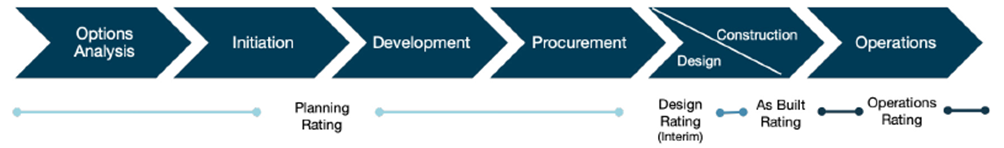
|  |  |
| --- | --- |
| Sustainability Objective | Sustainability Target (with relevant metric) |
| Demonstrate sustainability leadership in infrastructure | [...] |
| Reduce greenhouse gas emissions from transport sector | 15% minimum reduction in greenhouse gas emissions from IS proposed base case. Greenhouse gas emission footprint measured under ENE-1 credit using IS Materials Calculator.  Congestion reduction can be factored in here. |
| Maximise benefits for community health and wellbeing | To be confirmed in BC phase |
| Minimise pollution and environmental harm | [...] |
| Minimise materials use and waste through the Project life-cycle | [...] |
| Build in resilience and adaptation to potential climate change | Minimum benchmark Level 2 for Cli-1 and Cli-2 |

## IS Rating System

The IS Rating Scheme administered by ISC, is a national, third party assurance framework that evaluates sustainability performance across the planning, design, construction and operation phases of infrastructure development.

|  |
| --- |
| Describe the phase the project is at (Preliminary Evaluation / Business Case / Detailed Design / Construction) with regard to Figure 3.5 and whether a rating is being pursued for that phase. Advise what version number of the Rating Scheme is being used (v1.2 or v2.1). |

Figure 3.5 – ISC Stages and IS Rating Types (source ISC Technical Manual v2.1, 2021)



Using the IS Rating Scheme, sustainability performance is evaluated against fifteen categories that are grouped into six themes covering social, environmental, economic and governance aspects of sustainability. The IS Rating Scheme themes and categories are listed in Table 3.5(a).

|  |
| --- |
| Identify if any credits are going to be swapped out from v1.2 for v2.1 credits, such as Sta-1, Sta-2, Eco-1, Eco-2, Leg-1 (replacement for Hea-1 and Hea-2). |

Table 3.5(a) – IS Rating Scheme Themes and Categories

|  |  |  |
| --- | --- | --- |
| Themes | Categories | Abbreviation |
| Management and Governance | Management systems | Man |
| Procurement and purchasing | Pro |
| Climate change adaption | Cli |
| Using Resources | Energy and carbon | Ene |
| Water | Wat |
| Materials | Mat |
| Emissions, Pollution and Waste | Environmental Impacts (Version 2.1) | Eni |
| Lan | Lan |
| Waste | Was |
| Ecology | Ecology (Version 2.1) | Eco |
| People and Plan | Legacy (Version 2.1) | Leg |
| Heritage | Her |
| Stakeholder participation (Version 2.1) | Sta |
| Urban and landscape design | Urb |
| Innovation | Innovation | Inn |

When undertaking the IS assessment, points are allocated according to the performance of the project against credits in each category. An overall score is given for the project which is the sum of the ‘points achieved’ for each credit.

The IS Rating achieved is determined by the score set against a 100-point scale, and provides a level of ‘Commended’, ‘Excellent’ or ‘Leading’ as shown in Table 3.5(b). The Project will seek to align the project with IS Design and As Built Ratings of ‘Excellent', which requires a minimum score of 50. The project is currently aiming to achieve around XX points for the Design / Construction Phase (refer Clause 5.3, Table 5.3) using the target credit levels determined at the Sustainability Workshop.

Table 3.5(b) – IS Rating Levels

|  |  |
| --- | --- |
| Score | Rating level |
| <25 | Not eligible for a certified rating |
| 25-49 | Commended |
| 50-74 | Excellent |
| 75-100+ | Leading |

## IS Rating process

The IS Rating Tool facilitates the implementation of sustainability into the project through a structured process comprising the following four stages, shown in Figure 3.6, detailed below:

Figure 3.6 – Key stage in the IS Rating Process



1. Registration: the first stage to establish a formal connection with ISC and once complete gives access to essential support. Key activities which make up the Registration stage include:
   1. Registration of Interest (RoI): notify ISC of the intent to register a project for an IS Rating by submitting a completed RoI form to ISC via their website.
   2. IS Rating Agreement: following receipt of the RoI form a draft IS Rating Agreement is issued to establish a formal contract with ISC (for the Transport and Main Roads form of the Agreement please email [environment@tmr.qld.gov.au](mailto:environment@tmr.qld.gov.au)).
   3. Project Detail Form: this form is completed with the project’s details, description, images and IS Rating type for ISC to publish on their website.
2. Assessment: the longest stage of the rating process where ISv1.2 is used to facilitate the implementation of sustainability through the project management systems. Key activities throughout this stage include:
   1. IS Rating Kick-off Workshop: a workshop facilitated by an IS Project Manager (assigned to the project by ISC) is used to raise awareness of the project’s sustainability aspirations and intended outcomes. This workshop should be attended by the design leads, construction management leads / managers and other key stakeholders, which in this case would be relevant design, environmental and sustainability leads from Transport and Main Roads.
   2. Verifier Allocation: each ISv1.2 Rating is assigned two independent verifiers. These verifiers are selected from a panel of suitably qualified industry professionals providing assurance of the project’s sustainability performance based on the application of the ISv1.2 Technical Manual and associated Credit Requirements. In the project’s early design phases, the primary verifier will review and verify the IS Weightings Assessment and Base Case Proposal.
      1. IS Weightings Assessment: the IS Weightings Assessment is a risk and opportunity assessment that adjusts the points allocated to each IS Credit to ensure appropriate points are provided to each Credit, based on the specific project impacts across social, environmental and economic aspects. Please refer to Clause 5.3 for the preliminary Weighting Assessment for this project.
      2. Base Case Proposal: for the Using Resources Credits (Energy & Carbon, Water and Materials) adopt an approach of modelling and measuring the performance of the project (in terms of resource consumption or greenhouse gas emissions) and comparing it to a business as usual (BAU) Footprint. This is used as a comparison for the footprints from 100% Detailed Design and Construction (as at Practical Completion) to measure the resources reduction.
   3. Technical Clarifications (TCs) and Credit Interpretation Requests (CIRs): these can be submitted to ISC where a technical aspect of the Rating Tool needs to be clarified or interpreted.
      1. TCs provide clarification on how a specific aspect of the credit criteria should be interpreted.
      2. CIRs are used to gain approval from ISC for the project team to use an alternative, but equivalent, method of achieving the Credit requirements.
      3. Rulings: approved TCs and CIRs are published in a Rulings Register on the ISC Infrastructure Sustainability Accredited Professional (ISAP) portal website. These should be frequently reviewed to understand adjustments in Credit criteria.
   4. IS Rating Submission: at the end of the assessment stage (end of Detailed Design phase or Construction phase) the finalised self-assessment including a completed scorecard, a completed set of credit summary forms and all evidence, is submitted to ISC for verification.
3. Verification: the independent verifiers review the submission in two rounds, after round one the verifiers will request clarification on matters that are deemed not to meet the Credit criteria. The project team has an opportunity to have a face to face meeting with the verifiers to ensure the verifiers queries are clear. Then the project team responds to the verifiers queries, using the credit summary forms, between rounds one and two, with all responses finalised and re-submitted to ISC for the final round of verification. After round two the verifiers will provide the final score and any additional commentary.

The project team is asked “to the best of the management team’s knowledge if the project has any actual, pending or possible fines, penalties or prosecutions”. Once confirmed that there are no fines, penalties or prosecutions, the rating will move to Certification. Otherwise, then ISC, at its discretion, will consider whether to proceed to Certification or not.

The project team can also raise a dispute if they do not agree with the final verification outcome and have reasonable justification for this. ISC’s dispute process can then be followed to proceed with the dispute.

1. Certification: the outcome of the verification is submitted to an ISC committee to approve the score and rating level and certify the achievement of a rating at either ‘Commended’, ‘Excellent’ or ‘Leading’ performance level. The certified Rating can be presented at a specific certification event or at ISC’s Annual Gala Dinner as part of the Annual ISC Conference. The project’s Rating is also published on ISC’s website.

# Sustainability management approach

## Progress Milestones

|  |
| --- |
| Describe what progress milestones will be used to monitor, document and manage sustainability under the ISMP. Outline these in Table 4. Describe at which stage of the project these activities will be undertaken and how they will be integrated and managed. |

Table 4.1 – Progress Milestones

|  |  |
| --- | --- |
| Milestones | Indicative timing / frequency |
| Sustainability kick off meeting | October 2022 |
| Preparation of initial ISMP | October 2022 |
| Weightings assessment | [...] |
| Verification of Base Case | [...] |
| Attend planning and sustainability meetings | Weekly |
| Attend risk and opportunities workshop | @ Type here |
| Climate change risk assessment workshop | December 2022 |
| [...] | [...] |
| [...] | [...] |
| [...] | [...] |
| Completion of credit summary forms | [...] |

## Roles and responsibilities

|  |
| --- |
| Outline the roles and responsibilities of project team members when it comes to how sustainability aspects are decided, designed, implemented, monitored, managed and so on in Table 4.2 Determine which personnel are working on the project and whether the personnel are Transport and Main Roads or Contractor representatives. Include any ISAP certificates in Appendix B. |

Table 4.2 – Project Team Sustainability Responsibilities

| Role | Name | Responsibilities |
| --- | --- | --- |
| Project Manager | [...] | The Project Manager is responsible for the overall commercial management of the project, and that monthly claims are managed in accordance with the General Conditions of Contract.  Sustainability specific responsibilities:   * Endorse and promote the projects ISMP and sustainability objectives and targets. * Ensure project teams are implementing sustainable design and construction practices in line with the ISMP. * Ensure all managers and disciplines leads understand and are responsible for ensuring their scope of works meet the projects sustainability obligations. * Maintain governance structures, processes and systems, ensuring integration of all sustainability considerations, initiatives, monitoring and reporting. * Ensure sufficient resources are made available to implement the ISMP and its obligations. |
| Sustainability Lead | [...] | * Liaison with the Project Manager, Design Manager, Design Leads and Transport and Main Roads representatives. * Oversight of the development/ implementation of the ISMP and achievement of an ISv1.2 Design and As Built 'Excellent' Rating. * Review and approval of sustainability deliverables. * Attendance at sustainability meetings. |
| Environmental Lead | [...] | Provide guidance and as required, review / input for the environmental aspects of sustainability to ensure the best for project environmental outcomes. |
| Design Manager | [...] | * Endorse and promote the projects ISMP and sustainability objectives and targets and their inclusion within the design. * Ensure project teams are implementing sustainable design requirements in line with the ISMP. * Ensure all disciplines leads understand and are responsible for ensuring their scope of works meet the projects sustainability obligations. * Maintain governance structures, processes and systems, ensuring integration of all sustainability considerations, initiatives, monitoring and reporting. |
| Communications Lead | [...] | Provide guidance and as required, review / input for the social aspects of sustainability to ensure the best for project social outcomes. |
| Cultural Heritage Lead | [...] | Provide guidance and as required, review / input for the cultural heritage aspects of sustainability to ensure the best for project cultural heritage aspects outcomes. |
| Landscape Architect | [...] | Provide guidance and as required, review / input for the urban and landscape design aspects of sustainability to ensure the best for project urban and landscape design outcomes. |
| Climate Change Advisor | [...] | * Preparation of climate change risk assessment and adaptation plan. * Development of adaptation responses in conjunction with design and construction teams. |
| ISC Project Manager | [...] | Facilitate the implementation of the IS Rating through the project development phases. |
| [...] | [...] | [...] |

## Risk and opportunities

Risk and opportunities are managed through risk and IS opportunities workshops and captured in the Transport and Main Roads Risk Register (for the Transport and Main Roads Risk Register please email [environment@tmr.qld.gov.au](mailto:environment@tmr.qld.gov.au)).

|  |
| --- |
| Describe how risks and opportunities will be assessed (including consequence and likelihood criteria), communicated and managed, such as via project workshops or a risk register. Outline frequencies and dates of project workshops if applicable, such as the IS opportunities workshop. Include the Transport and Main Roads Risk Register in Appendix C, incorporating climate change risks that are unmitigated. Also add key opportunities and sustainability initiatives in the Transport and Main Roads Risk Register that are identified and confirmed through the Sustainability Initiatives Register (Clause 5.5). |

## Significant decisions

Transport and Main Roads has developed a decision-making tool (Transport and Main Roads Decision Making Tool Version 1.0) to assist decision making for significant issues during the design phase of the project. This tool is utilised when considering significant decisions, to achieve sustainability outcomes.

|  |
| --- |
| Describe the methodologies to be employed when significant decisions need to be made, such as holding Options Shortlisting workshops and using Transport and Main Roads Decision Making Tool Version 1.0 (multi-criteria analysis tool). Clarify how 'significant decisions' are defined, and be clear if the process is risk driven, and where authority sits for approvals. Include the significant decisions register in Appendix D. |

## Document and data control

The ISMP is a live document that is amended and updated throughout the duration of the project to incorporate sustainability initiatives developed through the planning phase. The document history and status of this ISMP is provided on page ii. XXXX is the primary system used for document management, sharing, storing and transmitting documents for the XXXX phase. Describe who is responsible for reviews and updates.

# Sustainability strategy

## Project approach

|  |
| --- |
| Describe the project's approach (actions) to achieve sustainability objectives and targets, including whether any ISv2.1 credits are being targeted, and what project phases they apply to. Communicate this in Table 5.1. |

Table 5.1 – Project Sustainability Objectives, Targets and Actions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Objectives** | **Targets** | **Actions** | **Reference Design and Detailed Business Case** | **Detailed Design** | **Construction** |
| **Waste** | | | | | |
| *Minimise project waste generation* | *Identify and implement measures for waste avoidance, reduction, reuse, recycling and disposal.* | *Monitor waste generation*  *Optimise cut / fill balance* |  |  |  |
| *Implement circular economy principles* | *Achieve minimum Level 2 for Was-2*  *Identify measures to divert waste from landfill, including:*   * *80-100% of spoil* * *50-90% of inert and non-hazardous waste* * *40-60% of office waste* | *Maximise use of recycled materials in material selection Identify opportunities to avoid waste generation by using in-situ materials*  *Avoid vegetation clearing*  *Identify opportunities to stimulate circular economy* |  |  |  |
| [...] | | | | | |
| [...] | [...] | [...] |  |  |  |
| [...] | [...] | [...] |  |  |  |
| [...] | [...] | [...] |  |  |  |
| [...] | | | | | |
| [...] | [...] | [...] |  |  |  |
| [...] | [...] | [...] |  |  |  |
| [...] | [...] | [...] |  |  |  |

## Sustainability workshop

A Sustainability Workshop was held on DDMMYYY with project design leads and project senior management to extend infrastructure sustainability to the team and initiate incorporation of sustainability measures in XXXX phase. *The IS Scorecard was reviewed with other sustainability assessment items to confirm the sustainability measures that will be implemented for the project and the target levels to achieve an ‘Excellent’ IS Rating during the future* XXXX *phase.*

## Weightings assessment and IS Scorecard

A materiality and weightings assessment was conducted for the XXXX project with multi-disciplinary input from project design leads and senior management at the Sustainability Workshop (DDMMYYYY). Each category in the assessment was weighted based on how material (important) it is to the overall sustainability performance of the project based on responses to the IS Scorecard questionnaire. Credits with weightings that fall to zero or below a materiality threshold will be ‘scoped out’.

An overview of the weightings assessment is provided in Table 5.3. Please note that the weightings assessment, and associated points allocation (shown as adjusted points) for each credit, is presented as draft only. Once the weightings assessment has been verified by ISC the points allocation becomes formal.

Stretch targets for the credits have been identified where there are opportunities for increased sustainability performance.

Provide a discussion on any categories scoped out, where did materiality change and justify as to why (summarise the weightings assessment). What are the key areas for having high or very high materiality?

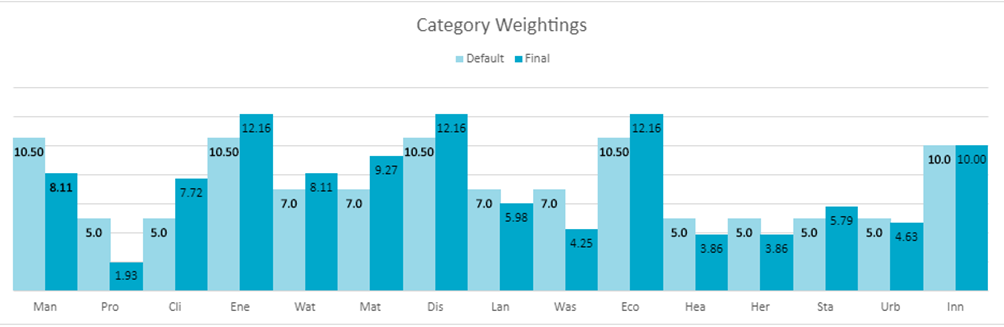
The IS Scorecard was reviewed with multi-disciplinary input from project design leads and senior management at the Sustainability Workshop to confirm the sustainability measures to be implemented for the project and the target levels to achieve an ‘Excellent’ IS Rating (requires 50 to 74.99 points) during the future XXXX phase. Target levels were set for each credit based on benchmark requirements that are achievable for the project beyond business as usual.

Table 5.3 – Weighting assessment, target credit levels and indicative scores, with stretch targets identified

| **Sustainability category** | **Materiality** | **Default point** | **Adjusted points** | **Target level / maximum** | **Indicative score** | **Stretch target level / maximum** | **Stretch Score** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Climate change risk assessment (Cli-1) | *4* |  |  |  |  |  |  |
| Adaptation options (Cli-2) | *4* |  |  |  |  |  |  |
| Energy and carbon monitoring and reduction (Ene-1) | *3* |  |  |  |  |  |  |
| Renewable energy (Ene-2) | *3* |  |  |  |  |  |  |
| Water use monitoring and reduction (Wat-1) | *3* |  |  |  |  |  |  |
| Replace potable water (Wat-2) | *3* |  |  |  |  |  |  |
| Materials footprint measurement and reduction (Mat-1) | *2* |  |  |  |  |  |  |
| Environmentally labelled products and supply chains (Mat-2) | *2* |  |  |  |  |  |  |
| Receiving water quality (Dis-1) | *4* |  |  |  |  |  |  |
| Noise (Dis-2) | *4* |  |  |  |  |  |  |
| Vibration (Dis-3) | *3* |  |  |  |  |  |  |
| Air quality (Dis-4) | *4* |  |  |  |  |  |  |
| Light pollution (Dis-5) | *4* |  |  |  |  |  |  |
| Previous land use (Lan-1) | *2* |  |  |  |  |  |  |
| Conservation of onsite resources (Lan-2) | *2* |  |  |  |  |  |  |
| Contamination and remediation (Lan-3) | *4* |  |  |  |  |  |  |
| Flooding design (Lan-4) | *3* |  |  |  |  |  |  |
| Waste management (Was-1) | *2* |  |  |  |  |  |  |
| Diversion from landfill (Was-2) | *2* |  |  |  |  |  |  |
| Deconstruction/Disassembly/Adaptability (Was-3) | *1* |  |  |  |  |  |  |
| Ecological value (Eco-1) | *4* |  |  |  |  |  |  |
| Habitat connectivity (Eco-2) | *4* |  |  |  |  |  |  |
| Community health, well-being and safety (Hea-1) | *2* |  |  |  |  |  |  |
| Crime prevention (Hea-2) | *2* |  |  |  |  |  |  |
| Heritage assessment and management (Her-1) | *4* |  |  |  |  |  |  |
| Monitoring and management of heritage (Her-2) | *4* |  |  |  |  |  |  |
| Stakeholder engagement strategy (Sta-1) (V2.1) | *4* |  |  |  |  |  |  |
| Level of engagement (Sta-2) (V2.1) | *4* |  |  |  |  |  |  |
| Urban and landscape design (Urb-1) | *3* |  |  |  |  |  |  |
| Implementation (Urb-2) | *3* |  |  |  |  |  |  |
| Innovation (Inn-1) | *2* |  |  |  |  |  |  |
| **TOTAL** |  | **110** | **110** |  |  |  |  |

The Weightings Chart (Figure 5.3) is a graphical summation of the weightings that have been assigned across the categories that will be addressed as part of the sustainability assessment. The default weighting for each category is also shown in this figure.

Figure 5.3 – Assigned weightings against the default



Insert the project weighting chart here

## Base Case preparation

The Base Case for the ISC Using Resources credits (energy and carbon, materials and water) was developed during the Detailed Business Case in accordance with the indicative timeframes outlined in Table 4.1 (Clause 4.1). A Base Case Proposal and Business as Usual (BAU) Framework (Appendix E) was prepared to inform the approach to future resource modelling which will compare resource consumption for the Actual Design and As Built Footprints to the Base Case Footprint.

## Sustainability Initiatives Register

A Sustainability Initiatives Register (Appendix F) was developed during the XXXX phase to record the sustainability initiatives considered and developed to achieve an ‘Excellent’ IS rating. Any requirement identified within the BAU gap analysis (Appendix G) that was above Transport and Main Roads Business as Usual, but required to meet the project objectives, was considered a sustainability initiative and included in the Sustainability Initiatives Register. The register includes evaluation and prioritisation of the initiatives based on the following attributes:

* Costs to the project to implement through Detailed Business Case, Detailed Design, Construction and Operation
* Whole-of-life costs for the asset
* Whole of life benefits including economic, social and environmental outcomes, and
* Payback period for investment.

Initiatives were assigned a high priority if they were identified as a requirement to meet targets (excluding stretch targets) within the BAU gap analysis, did not impose a whole-of-life cost, had high benefit realisation outcomes and could be easily implemented. These were also captured in the Transport and Main Roads Risk Register (Appendix C). In contrast, initiatives were assigned a low priority due to low benefit of realisation, high cost and low ease of implementation.

## ISC Kick-off meeting

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| Briefly describe the kick-off meeting with ISC by detailing the date it was held, who was involved, and the intent of the meeting. Refer the reader to Appendix H for meeting minutes. |

# Management and Implementation

## Development of sustainability tools

Sustainability tools developed for the XXXX project to support incorporation of sustainability in the XXXX phase include:

* *This ISMP, a Compliance Register and associated Monitoring Spreadsheet, tracking both contractual commitments and progress against credits (Appendix I).*
* *Sustainability Initiatives Register (Appendix F), recording initiatives implemented for IS credit target levels, and*
* *Significant decisions register (Appendix D) to capture decisions that have a high impact on the project.*

## Monitoring of sustainability implementation

Actions and procedures that are implemented to ensure that sustainability initiatives are incorporated into the XXXX phase include:

* A sustainability workshop with design and project team members to provide an overview of sustainability in design, conduct the weightings assessment, review sustainability objectives and targets and review the IS Scorecard to determine ISC credit target levels and initiatives required to achieve ISC benchmarks to support a future IS Rating.
* Revision of the ISMP following key milestones (refer to Table 4.1) and updates as the project progresses.
* Reporting to management and progress towards objectives and targets.
* The Compliance Register (Appendix I) to guide implementation of sustainability initiatives, and identify intended final delivery outcomes, during the XXXX phase to ensure sustainability objectives and targets are achieved.
* Compliance Register Monitoring Spreadsheet to monitor progress of implementation of actions from the Compliance Register and to record who completed actions and when these actions were completed. The Spreadsheet also records reference documents that contain evidence that will be conveyed to future project phases.
* Liaison with team leads (including attendance at meetings) and review of reports and plans to ensure that sustainability outcomes are incorporated, and reports can be used to support ISC evidence.
* Review of the Environmental Management Plan to ensure that sustainability outcomes are supported through implementation of sustainability management measures.
* Final update of the ISMP at completion of the XXXX phase to ensure that sustainability initiatives, requirements and commitments are communicated to future project phases and will be detailed in contract specifications, and
* Preparation of Credit Summary Forms for all credits that the XXXX phase activities contributed towards for handover to the subsequent project phase.

## Education, training and knowledge share

Education, training, and knowledge sharing will be undertaken with regard to IS credit Man-6 Knowledge Sharing.

Sustainability knowledge sharing will be a key agenda item at project weekly and monthly meetings or as otherwise agreed during the respective project phase. Discipline Leads and project staff will participate in these meetings as required.

The Sustainability Lead will participate in Transport and Main Roads knowledge sharing sessions that are undertaken with the wider industry and key Transport and Main Roads project stakeholders. A knowledge sharing workshop, alternating with a Major Projects Infrastructure Sustainability Working Group meeting, is held by Transport and Main Roads every three months.

Sustainability knowledge will be shared beyond project boundaries to key stakeholders during all project phases.

## Sustainability auditing

Internal and external audits will be conducted during the project in accordance with an Audit Schedule to ensure the effectiveness of sustainability systems. Audits will be conducted consistent with ISO19011 – Guidelines for auditing management systems. Sustainability audits will cover environmental, social and economic issues and priority will be given to matters that are material to the sustainability requirements and impacts of the project.

|  |
| --- |
| Describe the timing and responsibility for / ownership of internal and external auditing processes. |

## Project workshops and meetings

Throughout the XXXX phase, ISAPs have contributed to project workshops and regular project meetings to ensure sustainability elements are considered, including:

* Risk and Value Engineering Workshops (refer to Man-2 Credit Summary Form).
* Climate Change Risk Workshop (refer to Cli-1 and Cli-2 Credit Summary Forms).
* Sustainability progress meetings (refer to Appendix J for meeting minutes).

The integration of resulting workshop documentation and decisions relevant to sustainability has been captured in the relevant discipline design reports, environmental assessments, stakeholder engagement processes and management documents.

# Project phase responsibilities

As the project progresses through various phases, the specific deliverables to achieve stated sustainability objectives will be refined and articulated.

At this stage Table 7 provides an indication of deliverables and documentation required to evidence the achievements made.

Table 7 – Project Name Sustainability Assessment Deliverables

|  |
| --- |
| An additional column can be added to this table to clarify timing and relevant project phase. |

| Sustainability category | Potential evidence to meeting requirements |
| --- | --- |
| Sustainability, leadership and commitment (Man-1) | *Publicly available sustainability policy*  *Infrastructure Sustainability Management Plan*  *Project specific sustainability objectives and targets*  *Environmental Management Plan* |
| Risk and opportunity management (Man-2) | *Risk and opportunity register*  *Sustainability opportunities and initiatives register* |
| Organisational structure, roles and responsibilities (Man-3) | *Organisational Chart listing IS accredited professionals*  *Roles and responsibilities included in the ISMP*  *ISAP certificates*  *Meetings with the project team with minutes taken* |
| Inspection and auditing (Man-4) | *Quarterly Sustainability Reports*  *Regular meetings with Transport and Main Roads and ISAP coordinators with minutes taken*  *External and internal sustainability audit reports with SQP experience and qualifications* |
| Reporting and review (Man-5) | *Sustainability reports to management*  *Minutes of management meeting discussing sustainability performance and areas for improvement* |
| Knowledge sharing (Man-6) | *Documented knowledge sharing and lessons learnt (documented with notes, presentation and attendees)* |
| Decision making (Man-7) | *Definition for project significant decisions*  *Multi-criteria analysis on significant design decisions*  *Decision support tool*  *Significant Decisions Register* |
| Commitment to sustainable procurement (Pro-1) | *Procurement policy with sustainability commitments*  *Sustainability objectives and targets in contracts* |
| Identification of suppliers (Pro-2) | *Supplier pre-qualification questionnaires requesting sustainability policy and details of its implementation* |
| Supplier evaluation and contact award (Pro-3) | *Procurement evaluation criteria and inclusion of sustainability into the criteria* |
| Managing supplier performance (Pro-4) | *Sustainability objectives and targets included in supply contracts* |
| Climate change risk assessment (Cli-1) | *Climate Change Risk Assessment Workshop records*  *Climate Change Study Report*  *Climate change risk assessment* |
| Adaptation options (Cli-2) | *Climate Change Adaptation Plan*  *Climate change risk assessment*  *Design Report and drawings showing treatment of risks* |
| Base Case | *Base Case Proposal with identified key reduction initiatives*  *BAU Assumptions* |
| Energy and carbon monitoring and reduction (Ene-1) | *Energy use and Greenhouse Gas Assessment*  *Design reports and drawings*  *Construction Environmental Management Plan, showing energy measurement and monitoring processes* |
| Renewable energy (Ene-2) | *Energy use and Greenhouse Gas Assessment*  *Design reports and drawings*  *Renewable energy feasibility assessments* |
| Water use monitoring and reduction (Wat-1) | *Base Case Framework and Reference Design*  *Water Use Modelling Report*  *Design reports and drawings*  *Construction Environmental Management Plan, showing water measurement and monitoring processes* |
| Replace potable water (Wat-2) | *Water balance*  *Potable water replacement initiatives* |
| Materials footprint measurement and reduction (Mat-1) | *Materials Lifecycle Modelling Report*  *IS Materials Calculator*  *Design reports and drawings* |
| Environmentally labelled products and supply chains | *Identified materials and associated certification documentation*  *Design reports and drawings* |
| Receiving water quality (Dis-1) | *Baseline water quality monitoring*  *Environmental Management Plan*  *Design reports and drawings*  *Construction Environmental Management Plan, showing water quality management and monitoring processes* |
| Noise (Dis-2) | *Baseline noise monitoring*  *Noise modelling for operation*  *Design reports and drawings*  *Construction Environmental Management Plan, showing noise management and monitoring processes* |
| Vibration (Dis-3) | *Dilapidation surveys*  *Baseline vibration monitoring (where required)*  *Vibration modelling for operation*  *Design reports and drawings*  *Construction Environmental Management Plan, showing vibration management and monitoring processes* |
| Air quality (Dis-4) | *Baseline air quality monitoring*  *Design reports and drawings*  *Construction Environmental Management Plan, showing air quality management and monitoring processes* |
| Light pollution (Dis-5) | *Design reports and drawings*  *Construction Environmental Management Plan, showing light spill management and monitoring processes* |
| Previous land use (Lan-1) | *Mapping showing before and after land uses with calculations* |
| Conservation of onsite resources (Lan-2) | *Construction Environmental Management Plan, with top and sub soil management and quality assessment processes*  *Calculations of expected topsoil locations and qualities* |
| Contamination and remediation (Lan-3) | *Contaminated land assessments*  *Remediation action plans (where required)* |
| Flooding design (Lan-4) | *Flood modelling*  *Design reports and drawings* |
| Waste management (Was-1) | *EIS or similar with waste predictions*  *Waste Management Plan* |
| Diversion from landfill (Was-2) | *Waste Management Plan* |
| Deconstruction/Disassembly / Adaptability (Was-3) | *Deconstruction Plan* |
| Ecological value (Eco-1) | *Ecological Assessment Report*  *Ecological Management Plan* |
| Habitat connectivity (Eco-2) | *Ecological Assessment Report*  *Ecological Management Plan* |
| Community health, well-being and safety (Hea-1) | *Assessment of priority community issues and indicators to measure*  *Identified initiatives with implementation documents* |
| Crime prevention (Hea-2) | *Construction Management Plan*  *Design Report*  *Safety in Design Risk assessment including CPTED* |
| Heritage assessment and management  (Her-1) | *Culture and heritage impact assessment*  *Heritage interpretation plan* |
| Monitoring and management of heritage (Her-2) | *Culture and heritage impact assessment*  *Heritage interpretation plan* |
| Stakeholder engagement strategy (Sta-1) (V2.1) | *Stakeholder Engagement Strategy (Transport and Main Roads Community Engagement Plan – for the Transport and Main Roads Community Engagement Plan please email* [*environment@tmr.qld.gov.au*](mailto:environment@tmr.qld.gov.au)*)* |
| Level of engagement (Sta-2) (V2.1) | *Stakeholder Engagement Strategy (Transport and Main Roads Community Engagement Plan – for the Transport and Main Roads Community Engagement Plan please email* [*environment@tmr.qld.gov.au*](mailto:environment@tmr.qld.gov.au)*)*  *Records of stakeholders informed on negotiable issues*  *Records of engagement with stakeholders on negotiable issues* |
| Urban and landscape design (Urb-1) | *Urban and Landscape Assessment*  *Urban and Landscape Management Plan*  *Design reports and drawings* |
| Innovation (Inn-1) | *Innovation Report*  *Innovation Register* |

# Management references / sub-plans

|  |
| --- |
| The following subplans may be developed as the Project progresses. |

## Subcontractor and supplier engagement and performance

Requirements associated with procurement and supplier engagement will be identified during the Internal IS Workshop, held during the BC phase development. A Subcontractor and Supplier Engagement and Performance Plan or equivalent is to be developed by the Contractor prior to construction.

## Energy use and efficiency

Opportunities to increase energy efficiency and mitigate GHG emissions during construction and operation will be identified as part of the IS initiatives identification process. An Energy Use and Efficiency Plan is to be developed by the Contractor prior to construction.

## Water use and efficiency

Opportunities to reduce water consumption through reduction and efficiency will be identified and evaluated during the IS workshops. A Water Use and Efficiency plan is to be developed by the Contractor prior to construction.

## Materials use

Whole of life initiatives and opportunities to reduce the impact of materials will be identified during the IS workshops and evaluated as part of the BC. A Materials Use Efficiency Plan is to be developed by the Contractor prior to construction.

## Waste management

Opportunities and initiatives to reduce waste production and support circular economy principles will be identified during the IS workshops and evaluated as part of the BC. A Waste Management Plan is to be developed by the Contractor prior to construction.

# Appendix A – Transport and Main Roads Guidance Note: Project Sustainability Commitments / Objectives

# Appendix B – ISAP Accreditations

# Appendix C – Transport and Main Roads Risk Register

# Appendix D – Significant Decisions Register

# Appendix E – Base Case Proposal

# Appendix F – Sustainability initiatives register

# Appendix G – BAU Gap Analysis

# Appendix H – ISC Kick-off Meeting Minutes

# Appendix I – Compliance Register and Monitoring Spreadsheet

# Appendix J – Sustainability Meetings Minutes