Job Number @ Type here

Functional Specification Template

C7523 and C7524 – Infrastructure Sustainability Design Requirements Addendum

June 2024

* To be used as a guide when compiling project-specific specifications.
* @ = project-specific detail required.
* For clauses / items not required – insert text “Not Required” in clause heading, do not delete clause.
* Delete this table when document finalised.

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# Infrastructure Sustainability – Introduction

This Functional Specification applies to the Department of Transport and Main Roads’ requirement for the Consultant’s design to achieve a certified Infrastructure Sustainability Council (ISC) Infrastructure Sustainability (IS) v2.1 Design rating, independently verified by the ISC.

## Definition of terms

The terms used in this Design Functional Specification shall be as defined in Table 1.1.

Table 1.1 – Definitions

| Term | Definition |
| --- | --- |
| Base Case | A business-as usual footprint / reference design for energy, carbon, materials, and water, used as a means for demonstrating reductions against an Actual Case (the documented proposed design). This is not to be confused with the Base Case Proposal. |
| Base Case Proposal | Means the IS Base Case Proposal in accordance with the IS Technical Manual v2.1. It is a v2.1 requirement that this is submitted to and verified by ISC within the Establishment Period. |
| Consultant | The broader Design consulting team organisation(s), which includes the Sustainability Representative. |
| Establishment Period | Means the Establishment Period in accordance with the IS Technical Manual v2.1, a three- to six-month period (depending on length of project phase) during which several mandatory processes must be undertaken. |
| ISC | Infrastructure Sustainability Council. |
| ISMP | Infrastructure Sustainability Management Plan |
| Rating Tool / Rating Scheme | ISC's Infrastructure Sustainability Rating Tool v2.1, details of which are available at the [Infrastructure Sustainability Council](https://www.iscouncil.org/) website. |
| SMART Targets | Targets that are Specific, Measurable, Achievable, Relevant, and Time-bound. These are referenced in several IS credits. |
| Sustainability Representative | Means the Consultant’s Infrastructure Sustainability Accredited Professional under ISC, who must have a minimum of two years’ experience delivering ISC ratings on linear infrastructure projects. |
| Materiality Assessment | Means the IS Materiality Assessment, also sometimes referred to as the Weightings Assessment, in accordance with the IS Technical Manual v2.1. It is a v2.1 requirement that this is submitted to and verified by ISC within the Establishment Period. |

## Reference documents

Reference documents in this Design Functional Specification are listed in Table 1.2 and provided as Appendices where indicated.

Table 1.2 – Reference documents

| Appendix Reference | Title | Description |
| --- | --- | --- |
| N/A | IS Technical Manual, v2.1 | Refer Clause 2.1  Infrastructure Sustainability Council’s Infrastructure Sustainability Technical Manual, Design & As Built, v2.1. |
| A | Guidance and policy information for infrastructure sustainability | Refer Clause 2.6  Links to supporting Queensland Government and Transport and Main Roads guidance and policy documents. |
| B | Infrastructure sustainability management plan outline | Refer Clause 3.1  Document template for the ISMP. |
| C | Guidance Note – Project sustainability objectives and targets | Refer Clause 3.1.2.2.3  Guidance on sustainability commitments and objectives that could be considered for the project. |
| D | Guidance Note – Infrastructure Sustainability Base Case Framework | Refer Clauses 3.1.2.2.3 and 3.1.3  Guidance to determine appropriate project boundaries and business as usual assumptions for the submissions to ISC. |
| E | Guidance Note – Incorporating sustainability into project decision-making | Refer Clause 3.1.2.2.5  Guidance and a template for incorporating sustainability into decision making to address ISC requirements. |
| N/A | IS Scorecard, v2.1 | Refer Clause 3.1.4  Infrastructure Sustainability Council’s Infrastructure Sustainability Scorecard, v2.1. |

# Infrastructure sustainability in the Design phase

## Context

As part of the Queensland Government’s commitment to ensuring the long term sustainability of infrastructure investment, this project, and all state government projects valued at more than $100 million, will be subject to a sustainability assessment. This is to be undertaken in accordance with the IS Rating Tool.

Further, Transport and Main Roads actively supports and strives to contribute to the State Government’s [objectives for the community](https://www.qld.gov.au/about/how-government-works/objectives-for-the-community). Transport and Main Roads set a clear sustainability direction for the project through the [*Environmental Sustainability Policy*](https://www.tmr.qld.gov.au/community-and-environment/environmental-management/environmental-sustainability-policy).

The terms in this Functional Specification shall be read in conjunction with those identified in the IS Technical Manual, v2.1.

## Infrastructure sustainability integration across project disciplines

While meeting the infrastructure sustainability deliverables, the Consultant shall ensure that infrastructure sustainability requirements are considered within the broader context of the brief. This includes an interface with tasks being undertaken during the Design such as:

* Risk Management Plan and Risk Register
* Project Schedule
* Design Drawings and Reports and Basis of Design Report, including BIM 3D models
* Communication and Engagement Plan
* Urban and Landscape Design Plan (as called by ISC) / Integrated Landscape Assessment (equivalent document in Transport and Main Roads)
* Draft Urban and Landscape Design Statement
* Environmental Management Plan (EMP)
* Cultural Heritage Risk Assessment
* Social Impact Evaluation
* Significant project decisions
* Options Analysis and MCA
* Infrastructure / Project Procurement Plan
* Benefits Realisation Plan
* Investment Logic Map
* Monthly meetings

All applicable assessments and evidence should be documented sufficiently and in accordance with the requirements of the IS Technical Manual, v2.1 to enable their collation as evidence for future IS rating submissions to ISC.

## Business case phase infrastructure sustainability assessment

Prior to the Design phase, work has commenced on the infrastructure sustainability assessment. The deliverables and assessments completed to date are:

|  |
| --- |
| Project Manager: include any sustainability assessment work that has already been completed. |

* @ Type here for example:
* @ Type here Infrastructure Sustainability Management Plan (Planning) – ISMP(P) and associated appendices, including:
  + Materiality Assessment
  + IS Scorecard
  + Workshop minutes
  + Compliance Register Monitoring Spreadsheet
  + Sustainability meetings minutes
  + Risks and opportunities registers
  + Decision making records
* @ Type here Urban and landscape design plan, statement and assessment
* @ Type here Climate Change and Natural Hazards Risk Assessment
* @ Type here Resilience Assessment
* @ Type here Greenhouse Gas Lifecycle Emissions Report
* @ Type here Resource efficiency investigation
* @ Type here Water quality assessment
* @ Type here Ecological impact assessment
* @ Type here Options Assessment and Significant Decisions
* @ Type here Business Case cost estimate sustainability inputs
* @ Type here Stakeholder engagement and heritage deliverables

These documents form the Business Case infrastructure sustainability assessment package and are made available to the Design Consultant.

Upon review of the Business Case infrastructure sustainability assessment, the Consultant may seek clarification from the Principal whether there is additional evidence and documentation available from previous work that may be of use in undertaking the Design sustainability assessment.

## Principal retained infrastructure sustainability deliverables

Under this Contract, unless otherwise stated, the Principal will retain responsibility for delivering the actions and evidence as outlined within Table 2.4.

Table 2.4 – Principal retained responsibilities

|  |
| --- |
| Project Manager: delete / add relevant credits and requirements as applicable but note that removal of any items may put achievement of the future IS rating at risk. |

| ISC Credit / Requirement | Benchmark Level | Principal-retained Deliverable / Evidence |
| --- | --- | --- |
| ISC project registration | - | Signed and dated ISC Rating Agreement  (Note: The Principal will endeavour to register the project with ISC in line with the Consultant’s Start Date.) |
| Materiality Assessment | - | Evidence as required (i.e., where otherwise unavailable to the Consultant) |
| Base Case Proposal | - | Evidence as required (i.e., where otherwise unavailable to the Consultant) |
| Pla-2 – Urban and Landscape Design | Level 2 | Engagement of independent reviewer(s) |
| Lea-1 – Integrating Sustainability | Level 1 | * Evidence of formal senior management review and feedback on quarterly sustainability reports * Formal approval and endorsement of the ISMP(D) * Formal approval and endorsement of sustainability objectives and targets |
| Spr-1 – Sustainable Procurement Strategy | Level 3 | Evidence of communication to potential suppliers before going to market |
| Res-1 – Climate and Natural Hazards Risks | Level 2 | * Evidence of non-design treatment options for extreme and high priority risks, e.g., plans, policies and procedures for construction, operation, and maintenance * Evidence of engagement with affected stakeholders to identify risks and treatment options |
| Res-2 – Resilience Planning | Level 1 | Evidence of non-design treatment options for identified shocks and stresses, e.g., plans, policies and procedures for construction, operation, and maintenance |
| * Env-1 – Receiving Water Quality * Env-2 – Noise * Env-3 – Vibration | DL2.1 | Dependent on communications undertaken by Transport and Main Roads, evidence of engagement with impacted stakeholders in relation to impacts, controls, and mitigation measures for water quality, noise, and vibration. |
| Rso-1 – Resource Strategy Development | Level 2 | * Evidence of performance targets including circular economy outcomes being reviewed with external stakeholders * Evidence of resource efficiency targets and requirements being proactively communicated to the market |
| * Sta-1 – Stakeholder Engagement Strategy * Sta-2 – Stakeholder Engagement and Impacts | Level 2 | * Community Engagement Plan * First Nations / Indigenous Participation Plan * Evidence of community engagement (e.g., meeting minutes, emails, workshop records) * Social Impact Assessment (outsourced) |
| Leg-1 – Leaving a Lasting Legacy | DL1.1, DL2.1, DL3.1 | Evidence of community engagement to identify community priority issue(s) and provide feedback on implemented legacy initiatives. |
| Her-1 – Heritage Protection and Enhancement | Level 2 | * Cultural Heritage Risk Assessment * Cultural Heritage Field Assessment / Report * Cultural Heritage Management Plan * Cultural Heritage Management Agreement * First Nations / Indigenous Participation Plan |
| Evidence of engagement related to heritage issues (e.g., meeting minutes, emails, workshop records) |
| Wfs-1 – Jobs, Skills, and Workforce Planning | Level 1 | * Workforce capacity and capability skills analysis * Evidence of workforce actions for departmental staff on the project |
| Wfs-3 – Diversity and Inclusion | Level 2 | Evidence of diversity and inclusion training, surveys, programs and reporting being conducted for departmental staff on the project. |
| @ Type here | @ Type here | @ Type here |

## Sustainability representative

The Consultant must engage a Sustainability Representative for the Design contract whose sole focus is the delivery of sustainability on the project, with no shared responsibilities to other disciplines or requirements outside this Functional Specification. The Consultant must also ensure that sufficient resources are provided to address infrastructure sustainability and achieve the defined requirements in this Functional Specification. The Sustainability Representative must be embedded in the core project team, including regular attendance at project team meetings, and work directly with the senior management team regarding infrastructure sustainability to ensure sustainability is considered across all project decisions.

The Consultant’s Sustainability Representative shall lead and deliver the IS rating process. This shall include (without limitation) liaison with ISC, undertaking assessment of sustainability performance in accordance with the Rating Tool, submitting assessments to ISC for verification, and promptly providing all information requested by ISC to assist completion of its verification process.

## Supporting information for infrastructure sustainability

Appendix A includes a suite of guidance materials and supporting documentation relating to infrastructure sustainability that the Consultant shall consider and/or reference where appropriate.

# Infrastructure sustainability deliverables and activities

This section outlines the deliverables that the Consultant shall produce as part of the Design phase infrastructure sustainability assessment, as well as minimum expectations for participating in and/or facilitating sustainability-related meetings and workshops to support the development of deliverables and the overall assessment.

A summary of deliverables is provided in Table 3. Where applicable, all deliverables are to be completed in accordance with the requirements of IS Technical Manual, v2.1.

Table 3 – Design phase infrastructure sustainability deliverables and activities

| Clause | Deliverable / Workshop | Format |
| --- | --- | --- |
| 3.1 | Certified IS rating | ISC Design rating certificate |
| 3.1.1 | Sustainability targets and requirements | As per IS Technical Manual, v2.1 |
| 3.1.1.2 | Specified Design Phase Activities | |
| 3.1.1.2.1 | Lea-1: Integrating Sustainability  Establishment Period program | Timeline (e.g., Gantt Chart or table) |
| 3.1.1.2.2 | Infrastructure Sustainability Management Plan (Design) (ISMP(D)) | Report |
| 3.1.1.2.3 | Lea-2: Risks and Opportunities  Sustainability opportunities / initiatives / innovations | Register |
| Workshop(s) |
| Initiatives Investigation Form | Form |
| 3.1.1.2.4 | Res-1: Climate and Natural Hazards Risk  Climate change and natural hazards risk assessment | Report |
| 3.1.1.2.5 | Ecn-1: Options Assessment and Significant Decisions  Decision making procedures and records | Workshop |
| 3.1.1.2.6 | Ene-1: Energy Efficiency and Carbon Reductions, and  Rso-6: Material Life Cycle Impact Measurement and Management  Preliminary energy and materials modelling | Outputs from modelling spreadsheet(s) or other resources modelling software |
| 3.1.1.2.7 | Sta-1, Sta-2: Stakeholder Engagement Strategy and Impacts,  Leg-1: Leaving a Lasting Legacy, and  Her-1: Heritage Protection and Enhancement:  Stakeholder documentation review and input | Report(s) |
| 3.1.2 | Materiality Assessment | ISC-verified Materiality Assessment |
| 3.1.3 | Base Case Proposal | ISC-verified Base Case Proposal |
| 3.1.4 | IS scorecard | Register |
| 3.2 | Compliance Register Monitoring Spreadsheet | Register |
| 3.3 | Monthly sustainability progress meetings | Meeting minutes |
| 3.4 | Inputs to project cost estimate | Cost estimate line item(s) |
| 3.5 | TIC-CO Contract inputs | |
| 3.5.1 | Infrastructure sustainability project supplementary technical specification (IS PSTS) | Specifications |
| 3.5.2 | Project documents for issue in Tender Package | Various |
| 3.5.3 | MRTS Annexures | Specifications |
| 3.6 | Construction Tenderer engagement | Tender communication materials, meetings |
| 3.7 | Construction sustainability pre-start meeting | Meeting |

## Certified IS rating

The Consultant shall deliver a certified IS v2.1 Design rating, independently verified by ISC. This includes:

* collecting, collating, and documenting the evidence necessary to achieve the certified rating outcome
* preparing the agenda for, and participating in, ISC verification meeting(s), and
* completing and submitting ISC forms for certification (e.g., Ratings Highlights Form and Ratings Directory Website Sign-off Form).

The Consultant shall progressively submit completed IS design rating credits to the Principal for review and acceptance prior to formal submissions to ISC for verification.

|  |
| --- |
| Project Manager: update milestones below if necessary. Recommended milestones have been included below, noting that the IS Design submission will need to include contract specifications, and drawings / reports that are complete (i.e., Tender / IFC issue or similar level of progress). |

The Consultant shall submit the Round 1 Design submission to ISC for verification within [@ Type here three months of issuing the Certified Scheme Prototype milestone].

The Round 2 Design submission shall be submitted to ISC for verification no later than [@ Type here six weeks following the receipt of minutes from the ISC Round 1 verification feedback meeting].

Additional requirements and guidance relating to this deliverable are presented in the following sub-Clauses.

### Sustainability targets and requirements

#### Background

In addition to the requirement to achieve an IS rating for infrastructure projects, there are several sustainability-related priorities driven by various levels of government that cascade down to Transport and Main Roads infrastructure projects. Transport and Main Roads have identified a list of overall IS Design rating targets for projects to demonstrate their alignment with these priorities, which are presented in two categories within Table 3.1.1.2 as follows:

1. Design Rating Minimum Requirement

Achievement of these credit requirements (whole levels or sublevel DLX.X requirements as specified) will be directly supported by mandatory process- or outcome-based requirements and targets in government priorities and standards. All projects are required to include these as part of their IS rating pathway.

Where achievement of these Minimum Requirements is not practicable, the Consultant shall provide documented justification to the Principal.

1. Design Rating Stretch Targets

These credit targets directly align with non-mandatory government objectives, and therefore are not compulsory, but should be included within the project’s IS rating pathway.

The Consultant shall ensure their minimum scope, deliverables and methodology aligns with that required by the IS Technical Manual, v2.1 to meet the Design Rating Stretch Targets. That is, the Consultant is expected to demonstrate a reasonable attempt to achieve the Stretch Targets. However, the Department is not mandating that the Stretch Targets are formally achieved as individual ISC-verified credit outcomes if the overall certified rating is still achieved as per Clause 3.1.

Key documents that have informed the above requirements and targets are listed in Appendix A. For each requirement and target listed in Table 3.1.2.2, superscript citations are provided to indicate the primary source document in Appendix A:

General format = [Level X]Appendix A reference / [DLX.X]Appendix A reference

Examples = Level 2⁴ª, DL1.1-DL2.3²ª

#### Specified Design Phase Activities

To support the achievement of the Design Rating Minimum Requirements and Stretch Targets, and to ensure a minimum level of consistency across projects targeting IS ratings, Transport and Main Roads have developed additional prescriptive requirements and guidance relating to specific IS rating credits. These are summarised in Table 3.1.1.2 and are to be reviewed as being in addition to / in conjunction with the requirements of the IS Technical Manual, v2.1.

The Consultant is not expected to produce separate deliverables for each individual requirement. The Consultant is encouraged to combine deliverables, and integrate requirements into existing project deliverables, where they feel it is appropriate to do so and as agreed with the Principal.

Table 3.1.1.2 – Specified Design Phase Activities

| Theme | Credit | Specified Design phase activity | Design Rating Minimum Requirement  [DLX.X]Appendix A reference | Design Rating Stretch Target  [Credit Level]Appendix A reference |
| --- | --- | --- | --- | --- |
| Governance | Pla-2: Urban and Landscape Design | As per IS TM v2.1 | - | Level 3⁴ª |
| Lea-1: Integrating Sustainability | As per IS TM v2.1, Clause 3.1.1.2.1, and Clause 3.1.1.2.2 | - | Level 1⁶ª |
| Lea-2: Risks and Opportunities | As per IS TM v2.1, and Clause 3.1.1.2.3 | - | Level 1⁶ª |
| Lea-3: Knowledge Sharing | As per IS TM v2.1 | - | Level 3⁴b |
| Spr-1: Sustainable Procurement Strategy | As per IS TM v2.1 | - | Level 3¹b |
| Spr-2: Supplier Assessment and Selection | As per IS TM v2.1 | DL1.1⁷ª | Level 2⁴b |
| Spr-3: Contract and Supplier Management | As per IS TM v2.1 | - | Level 2¹b |
| Res-1: Climate and Natural Hazards Risks | As per IS TM v2.1, and Clause 3.1.1.2.4 | DL1.1-DL2.3²ª | Level 2⁴ª |
| Res-2: Resilience Planning | As per IS TM v2.1 | DL1.1-DL1.4²ª | Level 1⁴ª |
| Economic | Ecn-1: Options Assessment and Significant Decisions | As per IS TM v2.1, and Clause 3.1.1.2.5 | - | Level 1⁴ª |
| Environment | Ene-1: Energy Efficiency and Carbon Reductions | As per IS TM v2.1, and Clause 3.1.1.2.6 | DL1.1²b | DL1.1-DL1.2, and target 15% reduction under DL1.3³ª |
| Rso-1: Resource Strategy Development | As per IS TM v2.1 | - | Level 2⁴b |
| Rso-4: Resource Recovery and Management | As per IS TM v2.1 | DL2.2¹b | Level 3¹b |
| Rso-6: Material Life Cycle Impact Measurement and Management | As per IS TM v2.1, and Clause 3.1.1.2.6 | DL1.1²b | DL1.1, and target 15% reduction under DL1.2³ª |
| Environment | Rso-7: Sustainability Labelled Products and Supply Chains | As per IS TM v2.1 | - | Level 2¹b |
| Wat-1: Avoiding Water Use | As per IS TM v2.1 | DL1.1²ª | DL1.1-DL1.2, and maximise % reduction under DL1.3²ª |
| Env-1: Receiving Water Quality | As per IS TM v2.1 | DL1.3, DL1.4⁴d | Level 2²ª |
| Env-2: Noise | As per IS TM v2.1 | - | Level 2²ª |
| Env-3: Vibration | As per IS TM v2.1 | - | Level 2²ª |
| Eco-1: Ecological Protection and Enhancement | As per IS TM v2.1 | DL1.1-DL1.4¹ª | Level 1¹ª |
| Social | Sta-1: Stakeholder Engagement Strategy | As per IS TM v2.1 | - | Level 2¹ª |
| Sta-2: Stakeholder Engagement and Impacts | As per IS TM v2.1 | - | Level 2¹ª |
| Leg-1: Leaving a Lasting Legacy | As per IS TM v2.1 | - | Level 3⁴ª |
| Her-1: Heritage Protection and Enhancement | As per IS TM v2.1 | - | Level 2⁴ª |
| Wfs-1: Jobs, Skills and Workforce Planning | As per IS TM v2.1 | Level 1⁷ª | Level 1⁷ª |
| Wfs-3: Diversity and Inclusion | As per IS TM v2.1 | DL1.1, DL1.2⁷ª | Level 2⁷ª |

##### Establishment Period program

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Lea-1 | - | Level 1⁶ª |

In addition to the standard requirements for the Consultant to submit a contract program, the Consultant shall develop a program for the IS Establishment Period within two weeks of the Start Date.

The program shall be developed in collaboration with, at minimum, the Principal’s Project Manager and the Consultant’s Project Manager (or appropriate equivalents) and clearly define:

* Formal start and end dates for the project’s Establishment Period, ensuring there is sufficient project documentation available to justify and evidence these. Depending on project circumstances, the project may need to seek confirmation from ISC on the appropriateness of proposed start and end dates.
* Key dates for all activities within the Establishment Period, as applicable to the project’s IS scorecard credit targets (refer Clause 3.1.4). A detailed list of all Establishment Period activities is included in the IS v2.1 Factsheet: Establishment Period Requirements on the [IS Learn](https://learn.iscouncil.org/login/index.php) website (please contact [sustainability@tmr.qld.gov.au](mailto:sustainability@tmr.qld.gov.au) if you are unable to access a copy).
* Any additional key dates required to ensure successful delivery against the program, such as workshops, internal milestones for draft submissions, and Principal reviews / approvals.

The Establishment Period program is to be documented within the ISMP(D) (refer Clause 3.1.1.2.2).

##### Infrastructure Sustainability Management Plan (Design) (ISMP(D))

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Lea-1 | - | Level 1⁶ª |

The intent of the Infrastructure Sustainability Management Plan (Design) (ISMP(D)) is that it provides a living document of infrastructure sustainability targets, management measures, and evidence requirements identified for the project. On its own, it is a primary piece of evidence for the Lea-1 credit, but it also serves as an overarching deliverable documenting the project’s approach to all other credits within the IS Rating Scheme.

The Consultant shall develop an ISMP(D) in accordance with the template in Appendix G and relevant requirements under Lea-1. The Consultant shall maintain the continuity and intent of previous plans, studies and assessments (including those outlined in Clause 2.3) and include enough additional actions and documentation to deliver the certified rating as per Clause 3.1.

The ISMP(D) shall be:

1. submitted to the Principal for review and formal endorsement at an agreed milestone defined in the project’s Establishment Period program (refer Clause 3.1.1.2.1).

|  |
| --- |
| Project Manager: include timing of key project delivery milestones, including 100% Detailed Design or equivalent end-milestone. |

1. formally updated and re-issued at [@ Type here] through the duration of the detailed design to capture the latest decisions and targets as they evolve through the contract.

In addition to a final PDF copy with all included appendices, the Consultant shall include a native format version (i.e., a Word (.docx) format) of the primary ISMP(D) document to support handover into the next phase.

##### Sustainability opportunities / initiatives / innovations

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Lea-2 | - | Level 1⁶ª |

The Consultant shall facilitate an internal infrastructure sustainability workshop with members from both the Principal and Consultant team.

|  |
| --- |
| Project Manager: update timing below if required. Recommended timing is to allow for flexibility in project Establishment Period dates while ensuring the workshop is held sufficiently early in the program. |

This shall be held no later than @ Type here three weeks after the commencement of the project’s Establishment Period (refer Clause 3.1.1.2.1)] to inform development and updates of the ISMP(D) and:

* raise awareness of infrastructure sustainability and the key areas of opportunity and constraint in relation to the project
* discuss and assign roles and responsibilities for sustainability assessment and delivery of specific IS rating credits, emphasising that sustainability concepts are to be a consideration for all disciplines to enable effective reporting and validation
* establish incorporation within other contract deliverables
* discuss ISC advice on addressing IS rating requirements
* discuss and confirm or establish the project specific sustainability SMART objectives and targets (refer guidance and templates in Appendix C), and
* identify potential infrastructure sustainability strategies, actions, opportunities, initiatives, and innovations that would assist the project to achieve positive quadruple bottom line (governance, economic, environmental, and social) outcomes over the life of the asset and a certified IS v2.1 rating.

This should include opportunities that align with the following focus areas:

* + Energy and carbon emissions reduction opportunities (Ene-1 DL1.2).
  + Resource efficiency opportunities (Rso-1 DL1.2).
  + Opportunities for beneficial reuse of resource outputs (i.e., waste) (Rso-4 DL2.1).
  + Water use avoidance and reduction opportunities (Wat-1 DL1.2).
  + Alternative (non-potable) water source options (Wat-2 DL1.1).
  + Innovations that may qualify under an IS innovation category (Inn-1).

To support specific government sustainability objectives, the Department highlights the following for the Consultant to consider as part of the opportunities identification process where appropriate and relevant. Superscript citations are provided to indicate the source document for the initiative in Appendix A:

* + Initiatives listed in the Initiatives Investigation Form in Appendix F, which the Consultant shall complete and submit as a standalone deliverable to [sustainability@tmr.qld.gov.au](mailto:sustainability@tmr.qld.gov.au) prior to the end of the project’s Establishment Period as defined in Clause 3.1.1.2.1.
  + Construction process carbon reduction measures listed in Table 1 of the journal paper, [Holistic Review of Construction Process Carbon-Reduction Measures](https://www.mdpi.com/2075-5309/13/7/1780)³ª.
  + Provision of EV charging infrastructure⁴ª.
  + Opportunities to re-use waste materials, particularly in earthworks and drainage applications⁴ª.
  + Opportunities to use crumbed rubber⁴ª.
  + Market development, research and reporting on waste and circular economy opportunities to understand business barriers, including innovative solutions and materials¹b. This includes opportunities to partner with industry to identify and realise circular economy opportunities.
  + Accessibility and inclusion in design, including co-design opportunities, in accordance with the [Guiding Principles](https://www.tmr.qld.gov.au/about-us/our-organisation/accessibility-and-inclusion/accessibility-and-inclusion-strategy/introduction/guiding-principles) in the department’s Accessibility and Inclusion Strategy and the [Disability Standards for Accessible Public Transport](https://www.tmr.qld.gov.au/travel-and-transport/disability-access-and-mobility/accessible-public-transport-standards)⁴ª.
  + Catering to new transport modes (e.g., personal mobility devices and connected vehicles)⁴ª.
  + For projects in rural and remote areas, provision of recreation trails⁴ª.
  + Options to temporarily relocate vegetation for future reinstatement, rather than permanent clearing and revegetation¹ª.

The Consultant shall produce a sustainability initiatives register as an output of the internal sustainability initiatives workshop and include this as an Appendix within the ISMP(D). The sustainability initiatives listed should not include those concepts considered business-as-usual as defined by the Base Case Framework in Appendix D.

The Consultant is expected to review and update the register in consultation with the project team in monthly progress meetings (refer Clause 3.3) and as part of formal revisions to the ISMP(D) (refer Clause 3.1.1.2.1) to refine, identify, and close out initiatives.

##### Climate and natural hazards risk assessment

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Res-1 | DL1.1-DL2.3²ª | Level 2⁴ª |

The Consultant shall identify, assess and treat climate change and natural hazards risks as part of a multidisciplinary process in accordance with Transport and Main Roads’ guidance and templates in [Climate change technical publications](https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Climate-change), the [*Road planning and design manual - 2nd edition*](https://www.tmr.qld.gov.au/business-industry/technical-standards-publications/road-planning-and-design-manual-2nd-edition), Vol 3, Part 5, as well as requirements for Res-1 Level 2.

The outcomes of the assessment shall be documented in a report. In addition to a final PDF copy with all included appendices, the Consultant shall include native format versions (i.e., Word (.docx) and/or Excel (.xlsx) formats) of the documents to support handover into the next phase.

##### Decision making procedures and records

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Ecn-1 | - | Level 1⁴ª |

The Consultant shall facilitate a multidisciplinary decision-making governance workshop aimed at establishing the following procedures for decision-making in accordance with Ecn-1 Level 1. Where previous decision-making procedures on the project have already been established (refer Clause 2.3), the Consultant may use the decision-making governance workshop to review and ratify those procedures for use in Design phase:

* Parameters and thresholds for defining a decision (options assessment) as “significant”.
* A minimum set of core criteria for formal multi-criteria analysis (MCA), which the project shall aim to apply to all “significant” decisions.

The core criteria for MCA shall include at least one criterion for each of the following:

* + outward impacts from the project to the environment
  + outward impacts from the project to society (i.e., local community stakeholders)
  + outward impacts from the project to the economy (i.e., local businesses and supply chain – not to be confused with project / asset financial impacts), and
  + monetised whole-of-life cost impact (i.e., project / asset financial impacts).

The project may introduce additional criteria for specific decisions as needed, but the intent is to ensure all “significant” decisions are assessed including consideration of environmental, social, economic, and financial impacts.

* Communication protocols for ensuring the appropriate team members are alerted to, and will be able to participate in, “significant” decision assessments arising on the project.

At minimum, workshop participants shall include members of the team with decision-making authority (including the Principal’s Project Manager and the Consultant’s Project Manager), and key technical disciplines whose scope of work are most likely to impact, or be impacted by, project decisions (e.g., structural, pavement, civil, geotechnical, environment).

The agreed project decision-making procedures shall be minuted as a project record for IS rating evidence and documented within the ISMP(D).

At a minimum, the Consultant shall apply the agreed procedures to initiatives in the following categories (as identified through the Lea-2 sustainability opportunities identification process in Clause 3.1.2.2.3):

* Energy and carbon emissions reduction opportunities (Ene-1 DL1.2)
* Resource efficiency opportunities (Rso-1 DL1.2)
* Opportunities for beneficial reuse of resource outputs (i.e., waste) (Rso-4 DL2.1)
* Water use avoidance and reduction opportunities (Wat-1 DL1.2)
* Alternative (non-potable) water source options (Wat-2 DL1.1)

Evidence of decision-making processes being applied shall be provided as an Appendix to the ISMP(D). For example:

* Minutes from the decision-making governance workshop
* Decision register, demonstrating application of the agreed procedures to identify which decisions are “significant”

Appendix B provides guidance and a template for the above to address ISC requirements (Consultant is not required to use these and may opt to develop / use their own).

##### Preliminary energy and materials modelling

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Ene-1 | DL1.1²b | DL1.1-DL1.2, and target 15%\* reduction under DL1.3³ª |
| Rso-6 | DL1.1²b | DL1.1, and target 15%\* reduction under DL1.2³ª |

|  |
| --- |
| \*Target of 15% reduction or revised for specific project context.  Project Manager to review and revise % target with consideration of project context. Ensure corresponding targets in Table 3.1.1.2 are also updated accordingly.  Project Manager: update timing for modelling below if required. Recommended options are provided, acknowledging some projects may first go need to go through a value engineering / optioneering phase at the beginning of Preliminary Design to determine a preferred design option. |

Where a greenhouse gas lifecycle emissions estimate was not previously undertaken as part of the Business Case (refer Clause 2.3), the Consultant shall produce preliminary IS “Base Case” energy and materials models (as per DL1.1 of Ene-1 and Rso-6) for the preferred option within [@ Type here eight weeks of the Start Date, or after a preferred design option has been determined, whichever is later].

This activity is to inform early design phase optioneering and quantitative evaluation of initiatives (e.g., in support of Ecn-1). As such, the models should assume business-as-usual material types (e.g., no recycled material) as per the Base Case Framework in Appendix D, with quantities as per the design documented at time of modelling. The preliminary models are only expected to be high-level, indicative order-of-magnitude estimates of the IS Base Case impacts for Ene-1 and Rso-6, and may be developed using rules of thumb, built up as first-principles estimates from available project information such as drawings, and/or scaled from past projects.

It is emphasised that as preliminary models only, the level of detail is not expected nor required to reflect that of a complete IS “Base Case” model(s), and no detailed reporting or evidence is required as part of this activity. This activity does not supersede or fulfil the formal credit submission requirements for Ene-1 and Rso-6.

##### Stakeholder documentation review and input

|  |  |  |
| --- | --- | --- |
| Credit | Design Rating Minimum Required Outcome | Design Rating Stretch Target |
| Sta-1 | - | Level 2¹ª |
| Sta-2 | - | Level 2¹ª |
| Leg-1 | - | Level 3⁴ª |
| Her-1 | - | Level 2⁴ª |
| Res-1 | DL1.1-DL2.3²ª | Level 2⁴ª |
| Env-1 | DL1.3, DL1.4⁴d | Level 2²ª |
| Env-2 | - | Level 2²ª |
| Env-3 | - | Level 2²ª |

In collaboration with the Principal or nominated representative (refer Clause 2.4), the Consultant shall contribute to the development of the Community Engagement Plan, and available heritage assessment and consultation documentation, to ensure they are sufficient to support achievement of the following credits / credit criteria:

* Sta-1 and Sta-2 – Level 2
* Her-1 – Level 2
* Leg-1 – Level 3.
* Env-1 to Env-3 – DL2.1
* Res-1 – DL2.4

This includes, but is not limited to, ensuring the following are addressed in relevant documents:

* Document content requirements outlined under each credit.
* Schedules for progress reviews, reporting, workshops, and other process requirements.
* Identification of potential topics / issues for which the project could seek stakeholder input, including:
  + High priority stakeholder issues (Sta-1, Sta-2 and Leg-1)
  + Heritage and cultural values (Her-1)
  + Environmental impacts and mitigations (Env-1 to Env-3), and
  + Climate and natural hazard risks and treatment options (Res-1).
* Identification of potential forums and other mechanisms to seek stakeholder input on the nominated topics / issues.

### Materiality Assessment

The Consultant shall review and update (where appropriate) the Materiality Assessment undertaken during Business Case (refer Clause 2.5). This shall be undertaken using the assessment tool in the ISC IS v2.1 scorecard. The relevant inputs and outputs from the assessment tool shall be attached as an Appendix to the ISMP(D). Key outcomes of the Materiality Assessment shall be discussed in the relevant section of the ISMP(D) and used to guide the development of objectives and targets (Clause 3.1.2.2.3).

The Consultant shall submit the Materiality Assessment to the Principal for review and acceptance prior to submission to ISC for verification.

The Consultant shall complete and submit the Materiality Assessment to ISC for verification within six months of the Rating Agreement being signed and at least three months before the Round 1 Design submission. The Consultant shall be responsible for updating and resubmitting the Materiality Assessment in response to any ISC verification comments.

### Base Case Proposal

The Consultant shall prepare an IS Base Case Proposal for the project in accordance with ISC’s IS Technical Manual, v2.1 and any other relevant guidance and rulings published by ISC in relation to the Base Case and business-as-usual assumptions.

The Department encourages the Consultant to develop the Base Case Proposal, and subsequent modelling, in accordance with the Reverse-Calculated Base Case approach (also known as the “back-casting” method).

The Consultant may also refer to the Transport and Main Roads Guidance Note: Infrastructure Sustainability Base Case Framework (Appendix D) for guidance on concepts considered business-as-usual for Transport and Main Roads projects. It is noted that the document exists as guidance only, and the Consultant should not rely on the Guidance Note as evidence for the Base Case Proposal. All Base vs Actual Case assumptions in the Base Case Proposal should be evidenced with project-specific documentation, past project documentation, and/or industry standard (including Transport and Main Roads) specifications and drawings, as relevant to the initiatives being claimed.

The Consultant shall submit the Base Case Proposal to the Principal for review and acceptance prior to submission to ISC for verification.

The Consultant shall be responsible for completing and submitting the Base Case Proposal to ISC for verification. It is recommended that this occurs prior to commencing detailed modelling for the relevant resources credits. The Consultant shall also be responsible for updating and resubmitting the Base Case Proposal in response to any ISC verification comments.

### IS scorecard

The Consultant shall produce an IS scorecard to document the proposed v2.1 IS rating pathway for the project, identifying target credits and levels (including stretch targets) as well as any credits scoped out via the Materiality Assessment (Clause 3.1.2).

The scorecard shall identify the risk level (low, medium, high / stretch) for each of the targeted credit levels, indicating which items may require application of additional strategies and measures to achieve the targeted credit outcome and the overall v2.1 rating.

As a minimum, the scorecard shall reflect the Design Rating Minimum Requirements and Stretch Targets listed in Table 3.1.2.2. However, the Consultant is encouraged to identify any and all additional targets that may be feasible and appropriate for the project, balancing effort and value for money, not from a points perspective but in achieving holistic sustainability outcomes, ensuring that there is also sufficient buffer of at least 5 points in the overall points targeted to achieve the certified rating as per Clause 3.1.

## Compliance Register Monitoring Spreadsheet

The Consultant shall prepare a Compliance Register Monitoring Spreadsheet as an Appendix to the ISMP(D). A template for the Spreadsheet is included as part of the ISMP template in Appendix B. The Spreadsheet shall be updated and issued with each revision of the ISMP (refer timing requirements Clause 3.1.1.2.2). With each issue, the Spreadsheet shall list the evidence identified to date (including any evidence that may not yet be available but is expected to become available in future) for each “must statement” relevant to the targets within the Consultant’s IS scorecard (Clause 3.1.4).

This deliverable is intended to serve as a progress reporting mechanism for the IS Design submission, recognising that while compilation of the submission cannot begin meaningfully until documentation for 100% Detailed Design (or equivalent end-milestone) becomes available, projects should begin identifying potential evidence from early Design phase. By the 100% Detailed Design milestone, it is expected that the Spreadsheet will contain a near-complete list of the evidence that will be compiled for the IS Design submission.

The Consultant may also use the Spreadsheet throughout the contract to track progress against contractual commitments and targeted credits, and responsibilities / timing for implementation of actions. However, evidence of this ongoing use is not required as part of the final deliverable.

## Monthly sustainability progress meetings

The Consultant shall conduct monthly sustainability progress meetings with Transport and Main Roads as part of implementation management and monitoring of the ISMP(D) and/or as agreed in the Consultancy Service Agreement. Meetings shall discuss the following:

* progress of infrastructure sustainability deliverables under the Design phase contract
* actions to address risks and opportunities identified for the project in relation to infrastructure sustainability outcomes (refer Clause 3.1.2.2.3), and
* performance progress or outcomes against project sustainability objectives and targets.

Discussion, actions, and outcomes shall be documented by the Consultant in meeting minutes.

## Inputs to project cost estimate

The Consultant shall incorporate costs associated with infrastructure sustainability into the final Design cost estimate to ensure there is a budget allocated for delivering sustainability in Construction phase. The costs shall include as a minimum:

* Costs for the development and implementation of an Infrastructure Sustainability Management Plan (Construction).
* Costs required to implement any sustainability initiatives contributing towards the targeted v2.1 certified rating (if not already captured in other items). This may include, as relevant to initiatives and recommendations identified in the ISMP(D):
  + Costs for construction phase establishment, development, and monitoring activities required to ensure successful implementation of initiatives for enhancing sustainability outcomes (for example, water quality, ecology, offsets, urban and landscape design, and climate and natural hazards resilience).
  + Costs associated with procurement of products that may be over and above the BAU requirements (for example, lower carbon products and products with sustainability certifications).
* ISC fees for registration, ongoing support, verification, and certification for the remainder of the rating process through to certification of the As Built rating.
* Order-of-magnitude fees (e.g., nearest $100k) to deliver the sustainability scope for Construction phase.

## TIC-CO Contract inputs

### Infrastructure sustainability project supplementary technical specification (IS PSTS)

The Consultant shall develop an Infrastructure Sustainability Project Supplementary Technical Specification (IS PSTS) for the construction contract. The IS PSTS shall be written to ensure it can simultaneously fulfil the following key purposes:

1. An effective contractual document that sets the construction contract up for success to achieve a certified As Built rating. This shall include enabling the construction contractor to elect to either:
   1. adopt the prescribed requirements detailed in the IS PSTS, or
   2. develop their own ISMP, strategies and actions to achieve a certified As Built rating.
2. Provide a primary piece of evidence within the Design rating submission that demonstrates the contractor is contractually obliged to deliver construction phase requirements relevant to certain credits.

At minimum, the following shall be included within the IS PSTS:

* A preliminary As-Built scorecard outlining recommended credit targets and points to be achieved, based on the Design rating pathway. This should consider the status (verification risk) of Design rating credits at the time of developing the IS PSTS, and any opportunities for further improvement in Construction, to ensure that recommended targets are feasible and practical.
* Quantitative targets for initiatives to reduce impacts from energy, water, materials, and waste.
* Where applicable, a list of outstanding initiatives from the Design phase that were proposed but ultimately not incorporated into the Design but may be feasible for re-investigation and implementation within Construction phase.
* Payment incentives for credit outcomes over which Construction phase projects have greater ability to influence, such as energy and water use. These shall be developed in collaboration with the Principal and may follow a similar format to the Design phase incentives outlined in Clause 4.1.

### Project documents for issue in Tender Package

The Consultant shall provide standalone project documents to the Principal for inclusion in the TIC-CO Tender Package (Part 7) in accordance with one of the following options (as applicable):

1. Option A: If the project has already achieved a certified IS Design rating in accordance with Clause 3.1 at the time when the TIC-CO contract documents are being prepared for issue, the Consultant shall provide a sustainability handover package containing all deliverables within Clauses 3.1-3.4 (including all sub-clauses) of this Functional Specification.
2. Option B: If Option A does not apply, the Consultant shall provide the following:
   * + The ISMP(D) and associated appendices, and
     + Any IS Design rating submission items that have completed verification (for example, the Materiality Assessment, Base Case Proposal, verified credits). Items that have not yet been verified should not be included at this stage.

For this option, the Consultant shall separately prepare and submit a sustainability handover package to the Principal, containing all deliverables within Clauses 3.1-3.4 (including all sub-clauses) of this Functional Specification, no later than two weeks following the achievement of the certified IS Design rating.

### MRTS Annexures

The Consultant shall ensure that requirements for infrastructure sustainability are incorporated into the Annexures to Transport and Main Roads Specifications (MRTS) in the TIC-CO Contract where relevant to the scope of the MRTS. For example, these may include (but are not limited to) requirements relating to material specifications, additional assessment / reporting, construction monitoring, and handover.

## Construction Tenderer engagement

To support the proactive communication of project infrastructure sustainability requirements and expectations to prospective construction contractors and suppliers, the Consultant shall contribute to the following activities:

* Preparation of tender communication materials (e.g., presentation slides and/or talking points as agreed with the Principal) providing a brief overview of the IS rating status, requirements and construction phase expectations for the Principal to use in tender briefings and documents. Discussion on targets and requirements relating to resource efficiency (as per Rso-1 Resource Strategy Development) and sustainable procurement (as per Spr-1 Sustainable Procurement Strategy) may be considered for inclusion at this stage.
* Attendance at pre-close of tender meeting(s) to enable discussion on the above.

## Construction sustainability pre-start meeting

To ensure a smooth handover of the IS rating between the Consultant and successful Construction Contractor, the Consultant shall participate in a dedicated infrastructure sustainability meeting with the Construction Contractor. Compared to the Construction Tenderer engagement activities outlined in Clause 3.6, this meeting shall provide a more detailed overview of the IS rating status, requirements and construction phase expectations, including any verification feedback received to date, and key outstanding issues, risks and/or opportunities for the contractor to consider as a priority in commencing their As-Built rating. The construction sustainability pre-start meeting shall be attended by the Consultant’s Project Manager and Sustainability Representative. Allow a duration of a full day including travel to the job Site for the meeting.

# Payment

|  |
| --- |
| Project Manager: include the associated Item No. for infrastructure sustainability. |

The Lump Sum for Item No. DD @ Type here XX Infrastructure Sustainability shall include all works specified in this Functional Specification – Design.

## Infrastructure sustainability bonus (Item No. DD [@ Type here XX])

In order to incentivise performance in infrastructure sustainability, achievement of key outcomes within the IS rating framework are rewarded through bonus payments. The total value of the Functional Specification Bonus Item is [@ Type here $XXX] and will be awarded in accordance with Table 4.1. Outcomes are determined based on the project’s final results at Design rating certification.

|  |
| --- |
| Project Manager: indicative percentages and indicative credits have been included below. These may be adjusted according to project priorities. Any proposed changes should be discussed with the Transport and Main Roads Sustainability team ([sustainability@tmr.qld.gov.au](mailto:sustainability@tmr.qld.gov.au)). |

Table 4.1 – Infrastructure sustainability bonuses

|  |  |
| --- | --- |
| Certified Design Rating Outcome | Incentive |
| No rating achieved | 100% deduction (-ve) of Functional Specification Bonus Item |
| Rso-6 Material Life Cycle Impact Measurement and Management  10-45% reduction under DL1.2 | 10-45% payment of Functional Specification Bonus Item, awarded on a sliding scale based on percentage reduction achieved between 10-45%. |
| Eco-1 Ecological Protection and Enhancement  Level 2 | 35% payment of Functional Specification Bonus Item. |
| Pla-2 Urban and Landscape Design  Level 3 | 20% payment of Functional Specification Bonus Item. |

# Appendix A: Guidance and policy information for infrastructure sustainability

Table A – Guidance and Policy Documents

These are referenced throughout the document in the following format:

General format = [Level X]Appendix A reference / [DLX.X]Appendix A reference / [other text]Appendix A reference

Examples = Level 2⁴ª, DL1.1-DL2.3²ª

| Department | Title |
| --- | --- |
| Australian Government | |
| 1. Department of Climate Change, Energy, the Environment and Water | 1. [*Nature Positive Plan, National Environmental Standards, and EPBC Act Reforms*](https://www.dcceew.gov.au/environment/epbc/publications/nature-positive-plan) 2. [*National Waste Policy*](https://www.dcceew.gov.au/environment/protection/waste/how-we-manage-waste/national-waste-policy) 3. [*Reef 2050 Plan*](https://www.awe.gov.au/parks-heritage/great-barrier-reef/long-term-sustainability-plan) |
| 1. Infrastructure Australia | 1. [*Assessment Framework Stages 2 and 3*](https://www.infrastructureaustralia.gov.au/publications/assessment-framework) 2. [*Guide to assessing greenhouse gas emissions*](https://www.infrastructureaustralia.gov.au/publications/guide-assessing-greenhouse-gas-emissions) 3. [*Innovate Reconciliation Action Plan*](https://www.infrastructureaustralia.gov.au/reconciliation-action-plan) 4. [*Valuing emissions for economic analysis*](https://www.infrastructureaustralia.gov.au/valuing-emissions-economic-analysis) |
| 1. Department of Infrastructure, Transport, Regional Development, Communications and the Arts | 1. [*Infrastructure Policy Statement*](https://www.infrastructure.gov.au/department/media/publications/infrastructure-policy-statement#:~:text=The%20Infrastructure%20Policy%20Statement%20defines,to%20deliver%20its%20policy%20objectives.) 2. [*Australian Transport Assessment and Planning Parameter values*](https://www.atap.gov.au/parameter-values/index) |
| Queensland Government | |
| 1. Department of State Development and Infrastructure | 1. [*State Infrastructure Strategy 2022-2042*](https://www.statedevelopment.qld.gov.au/industry/infrastructure/state-infrastructure-strategy) 2. [*Reducing Government Infrastructure Emissions Roadmap – Discussion Paper*](https://d15k2d11r6t6rl.cloudfront.net/public/users/Integrators/BeeProAgency/36861_8601/reducing-government-infrastructure-emissions-roadmap-discussion-paper.pdf) 3. [*Business Case Development Framework*](https://www.statedevelopment.qld.gov.au/industry/infrastructure/business-case-development-framework) 4. [*State Planning Policy*](https://planning.statedevelopment.qld.gov.au/planning-framework/plan-making/state-planning/state-planning-policy) |
| 1. Department of Environment and Science | 1. [*Waste Management and Resource Recovery Strategy for Queensland*](https://www.qld.gov.au/environment/circular-economy-waste-reduction/strategy-plans/strategy) 2. [*Climate Change Adaptation Strategy 2017-2030*](https://www.qld.gov.au/environment/climate/climate-change/adapting/strategy) 3. [*Conserving Nature – a Biodiversity Conservation Strategy for Queensland*](https://www.qld.gov.au/environment/plants-animals/biodiversity/strategy) 4. [*Biocondition Assessment Framework*](https://www.qld.gov.au/environment/plants-animals/biodiversity/biocondition) |
| 1. Department of Transport and Main Roads | 1. [*Environmental Sustainability Policy*](https://www.tmr.qld.gov.au/community-and-environment/environmental-management/environmental-sustainability-policy) 2. [*Climate change technical publications*](https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Climate-change) 3. [*Road planning and design manual - 2nd edition, Vol 3, Part 5*](https://www.tmr.qld.gov.au/business-industry/technical-standards-publications/road-planning-and-design-manual-2nd-edition) 4. [*Accessibility and inclusion strategy*](https://www.tmr.qld.gov.au/about-us/our-organisation/accessibility-and-inclusion/accessibility-and-inclusion-strategy/strategy) 5. [*Disability Standards for Accessible Public Transport*](https://www.tmr.qld.gov.au/travel-and-transport/disability-access-and-mobility/accessible-public-transport-standards) 6. *Net zero emissions transport roadmap (to be released)* 7. [*Waste 2 Resource Strategy*](https://www.tmr.qld.gov.au/community-and-environment/environmental-management/land/waste-management) |
| 1. Department of Energy and Public Works | 1. [*Queensland Procurement Strategy*](https://www.forgov.qld.gov.au/finance-and-procurement/procurement/procurement-resources/search-for-procurement-policies-resources-tools-and-templates/queensland-procurement-strategy-2023) 2. [*Ethical Supplier Mandate*](https://www.forgov.qld.gov.au/finance-and-procurement/procurement/procurement-resources/search-for-procurement-policies-resources-tools-and-templates/ethical-supplier-mandate) |
| 1. Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts | 1. [*Queensland Indigenous (Aboriginal and Torres Strait Islander) Procurement Policy*](https://www.dsdsatsip.qld.gov.au/our-work/aboriginal-torres-strait-islander-partnerships/business-economic-development/queensland-indigenous-procurement-policy) |
| Other guidance | |
| 1. N/A – Journal paper from Arogundade S, Dulaimi M, Ajayi S | [*Holistic Review of Construction Process Carbon-Reduction Measures: A Systematic Literature Review Approach*](https://www.mdpi.com/2075-5309/13/7/1780) |
| 1. Transport for New South Wales | [*Beyond the Pavement – Urban Design Policy Procedures and Design Principles*](https://www.transport.nsw.gov.au/system/files/media/documents/2022/beyond-the-pavement-policy-2020.pdf) |

# Appendix B: Infrastructure sustainability management plan outline

# Appendix C: Guidance Note – Project sustainability objectives and targets

# Appendix D: Guidance Note – Infrastructure Sustainability Base Case Framework

# Appendix E: Guidance Note – Incorporating sustainability into project decision making

# Appendix F: Initiatives Investigation Form

This form is to be completed by the Consultant and submitted to the Department at [sustainability@tmr.qld.gov.au](mailto:sustainability@tmr.qld.gov.au) in accordance with Clause 3.1.1.2.3 of this specification. The purpose of this form is to drive a minimum level of investigation, market demand signalling, and ultimately uptake, for key sustainability initiatives that the Department considers to be a priority for its projects and the Queensland construction industry.

The Consultant shall complete this form for the pre-populated initiatives listed in Table F at minimum. The Consultant may wish to record details of investigation into additional initiatives, but this is not required.

Table F – Detailed Initiatives Investigation

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Initiative | Suppliers contacted | Date contacted | Supplier location | Quantity available | $ cost per unit quantity (if available) | Quantity planned to be used / specified on project | Justification if not planning to use on project |
| Renewable diesel | Supplier name(s) | DD/MM/YY | Suburb & city/town | Quantity in kL | $ per kL | Quantity in kL | Comment |
| Biodiesel | Supplier name(s) | DD/MM/YY | Suburb & city/town | Quantity in kL | $ per kL | Quantity in kL | Comment |