

Project Controls

Master Specification

PC-ST1 Sustainability in Design

Document Information

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DEPARTMENT FOR
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| 1 | Initial Issue | 02/05/2019 |
| 2 | Removed reference to sustainability returnable schedule and for projects undergoing an IS rating. Added requirements projects undergoing an IS rating. Added specific sustainability initiatives to be investigated. Reduced requirements for Estimation of Impacts and removed requirement for Socially Sustainable Procurement. | August 2020 |
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PC-ST1 Sustainability in Design

1 General

- 1.1 This Part specifies the requirements for understanding impacts and investigating and implementing initiatives to improve sustainability through design.
- 1.2 Where the Contract Documents specify that the project is to obtain a rating under the Infrastructure Sustainability Council of Australia (ISCA) rating scheme, Clause 11 "Infrastructure Sustainability (IS) Rating" applies, and Clauses 2 to 10 do not apply.
- 1.3 Where the Contract Documents do not specify that the project will obtain a rating under the ISCA rating scheme, Clauses 2 to 10 apply and Clause 11 "Infrastructure Sustainability (IS) Rating" does not apply.

2 Sustainability Objectives

- 2.1 The Contractor's design methodology must be undertaken to maximise the achievement of the following sustainability objectives:
 - a) minimise the generation of greenhouse gases across the full asset lifecycle;
 - b) minimise waste generated during construction across the full asset lifecycle;
 - c) minimise use of mains water across the full asset lifecycle through demand reduction strategies and through use of captured rainwater and recycled water;
 - d) minimise materials' lifecycle impacts across the full asset lifecycle;
 - e) mitigate sustainability risks and drive improved sustainability performance in the project's supply chains;
 - f) protect and where possible enhance water quality, using WSUD principles;
 - g) avoid mobilisation of contaminants and where feasible, remediate contaminated land;
 - h) minimise the destruction / disturbance of native flora and amenity vegetation and where possible improve biodiversity outcomes;
 - i) conserve places of cultural value within and adjacent development sites;
 - j) design assets to minimise future maintenance, repair, re-engineering and / or replacement costs, having regard to future climate change impacts;
 - k) enhance the amenity of project sites and surrounding areas with urban design and landscaping;
 - l) contribute to improved community wellbeing by identifying and responding to community needs, and engaging effectively with local communities and relevant stakeholders;
 - m) design assets to facilitate and encourage greater use of public transport and active transport modes, including cycling and walking as well as facilitating use of sustainable low occupancy low / zero emission vehicles;
 - n) design assets to facilitate private sector investment and contribute to local prosperity;
 - o) recognise and promote the role of smart technology and infrastructure in achieving sustainability outcomes.

3 Sustainability Plan

- 3.1 The Contractor shall prepare a Preliminary Sustainability Plan which complies with the requirements in the Department's Sustainability Manual part 5. Submission of the Preliminary Sustainability Plan shall constitute a **Hold Point**.
- 3.2 The Contractor shall, on a six-monthly basis following acceptance of the Preliminary Sustainability Plan and until submission of the Final Sustainability Plan, submit Sustainability Progress Reports to the Principal, in accordance with the Department's Sustainability Manual part 5.

- 3.3 The Contractor shall prepare a Final Sustainability Plan which complies with the requirements in the Department's Sustainability Manual part 5.

4 Sustainable Materials

- 4.1 The Contractor shall apply the principles of the waste hierarchy to the project, in accordance with the Department's Sustainability Manual part 8.1. The outcomes must be recorded in the Sustainability Plan.

5 Minimum Sustainability Requirements

- 5.1 The Principal has nominated Minimum Sustainability Requirements for the asset in the Contract Documents. The Contractor may choose to nominate higher or additional Minimum Sustainability Requirements in accordance with the Department's Sustainability Manual part 7.2.
- 5.2 The Contractor shall achieve the Minimum Sustainability Requirements specified in the Contract Documents, unless the Principal has accepted alternative Minimum Requirements nominated by the Contractor.
- 5.3 The Minimum Sustainability Requirements shall be achieved within the Contract Sum. The Contractor shall not rely on discretionary sustainability initiatives (as described in Clause 9 "Implementation of Sustainability Initiatives") to achieve the Minimum Sustainability Requirements.

6 Estimation of Impacts

- 6.1 The Contractor shall estimate whole of life greenhouse gas emissions for the asset in accordance with the Department's Sustainability Manual part 6.

7 Identification of Sustainability Initiatives

- 7.1 The Contractor must identify initiatives to reduce greenhouse gas emissions, water use, waste disposed to landfill and materials' lifecycle impacts. As a minimum, these must include:
- a) Use of alternatives to traditional Portland cement concrete (eg high SCM concretes, geopolymer concretes, polymer reinforcement)
 - b) Use of crumb rubber in pavements
 - c) Use of recycled soft plastics in pavements
 - d) Use of recycled plastic products for railway sleepers, noise walls, landscaping elements, balustrades, bollards, street furniture etc
 - e) Use of concrete alternatives for noise walls, such as expanded polystyrene or recycled plastic products
 - f) Use of smart lighting to reduce operational energy consumption
 - g) Use of recycled water for operation (eg irrigation) of the asset (including, if necessary, extension of the current network to the project site)

Initiatives must be investigated and documented in accordance with the Department's Sustainability Manual part 8.

- 7.2 The Contractor must undertake at least one workshop to identify sustainability initiatives to be further developed and implemented for the contract. The workshop must:
- a) be held at the earliest available opportunity and no later than 1 month of tender award, or as otherwise agreed by the Principal;
 - b) involve all relevant Contractors' design and construction personnel and Principal's personnel and other relevant stakeholders;
 - c) be facilitated by a suitably qualified professional with specific experience in undertaking sustainability assessments for major construction projects.

- 7.3 The workshop may take place as part of the 30% preliminary design workshop.

8 Implementation of Sustainability Initiatives

- 8.1 The following sustainability initiatives shall be non-discretionary sustainability initiatives:
- a) Principal-nominated sustainability initiatives specified in Contract Documents;
 - b) sustainability initiatives nominated by the Contractor and accepted in writing by the Principal;
 - c) sustainability initiatives identified by the Contractor in accordance with Clause.8 ("Identification of Sustainability Initiatives") with a payback period less than the construction duration.
- 8.2 The Contractor shall implement all non-discretionary sustainability initiatives, unless directed otherwise by the Superintendent.
- 8.3 Sustainability initiatives identified by the Contractor in accordance with Clause 8 "Identification of Sustainability Initiatives" which are not non-discretionary sustainability initiatives shall be discretionary sustainability initiatives. Costs associated with implementation of discretionary sustainability opportunities shall not be included in the Contract Sum.
- 8.4 The Contractor shall submit discretionary sustainability initiatives to the Principal as soon as practicable for consideration.
- 8.5 Upon request from the Superintendent, the Contractor shall implement any discretionary sustainability initiatives submitted by the Contractor. Work carried out under this Clause may constitute a Variation to the Contract.

9 Performance Measurement

- 9.1 For each sustainability initiative incorporated into the design, the Contractor shall keep a record of implementation costs and outcomes (in terms of actual reductions / improvements achieved). This shall be presented in the final sustainability plan.

10 Infrastructure Sustainability (IS) Rating

- 10.1 Where the Contract Documents specify that the Contractor must obtain an IS rating, the Contractor shall comply with the requirements outlined in the Department's Sustainability Manual part 4.1, unless otherwise agreed in writing with the Principal.
- 10.2 The Principal has nominated Minimum Sustainability Requirements for the asset in the Contract Documents, including a minimum IS rating score for the project and minimum levels to be achieved for specified credits.
- 10.3 The Contractor shall achieve the Minimum Sustainability Requirements specified in the Contract Documents, unless
appropriate justification is provided to and approved by the Principal as to why the Minimum Sustainability Requirements are not able to be achieved.
- 10.4 For each sustainability initiative incorporated into the design, the Contractor must keep a record of implementation costs and outcomes (in terms of actual reductions / improvements achieved). This shall be provided to the Principal at 100% design.

11 Hold Points

- 11.1 The following is a summary of Hold Points referenced in this Part:

Table PC-ST1 11-1 Hold Points

| Document Ref. | Hold Point | Response Time |
|---------------|---------------------------------|-----------------|
| 3.1 | Preliminary Sustainability Plan | 10 Working Days |