

Sustainability Strategy

WestConnex M4-M5 Link Mainline Tunnels

October 2018

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Glossary/Abbreviations

Abbreviation	Expanded text
CAPEX	Capital Expenditure
CoA	Conditions of approval
CEMP	Construction Environmental Management Plan
CPTED	Crime Prevention through Environmental Design
D&C	Design and Construct
DP&E	Department of Planning and Environment
ERSED	Erosion and Sediment Control
FMC	Forest Management Certification
ISCA	Infrastructure Sustainability Council of Australia
IS	Infrastructure Sustainability
LSBJV	Lendlease Samsung Bouygues Joint Venture
OPEX	Operational Expenditure
SEMP	Site Establishment Management Plan
Sustainability objective	Overall goal, consistent with the sustainability policy, that an organisation sets itself to achieve.
Sustainability policy	Statement by an organisation of its intention and principles for sustainability performance.
Sustainability target	Detailed performance requirement, applicable to the organisation or parts thereof, that arises from the sustainability objectives and that needs to be set and met in order to achieve those objectives.
SWTC	Scope of Works Technical Criteria
Project, the	WestConnex M4-M5 Link Mainline Tunnels
REMM	Revised Environmental Management Measure as outlined in the project Submissions and Preferred Infrastructure Report
Roads and Maritime	Roads and Maritime Services
SMC	Sydney Motorway Corporation
VENM	Virgin Excavated Natural Material
WTP	Water Treatment Plant

Document control

Title	WestConnex M4-M5 Link Mainline Tunnels – Sustainability Strategy
Document No/Ref	M4M5-LSBJ-PRW-EN-MP01-PLN-0016-01
Document Path	

Version control

Revision	Date	Description	Approval
Rev A	June 2018	For review	
Rev B	17 July 2018	Response to SMC and RMS comments	
Rev C	24 July 2018	Response to SMC and RMS comments	
Rev 01	10 October 2018	Response to SMC and RMS comments	

Internal review

Role	Name	Position	Date	Signed / Authorised
Originator(s)	[REDACTED]	Sustainability Manager	10-10-18	[REDACTED]
Review	[REDACTED]	Environment and Sustainability Manager	10-10-18	[REDACTED]
Authorised	[REDACTED]	Project Director	10-10-18	[REDACTED]

Distribution of controlled copies

This Sustainability Strategy is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the Project website.

1 Introduction

1.1 Purpose

This Sustainability Strategy has been prepared to provide a high-level outline on how the M4-M5 Link Tunnel (the Project) will achieve a minimum “Excellent” ‘Design’ and ‘As built’ rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool, in accordance with the NSW Minister for Planning’s Conditions of Approval (CoA) E199 and E200.

Implementing this strategy as well as the Sustainability Management Plan will ensure that the Project meets the requirements of the CoA.

Table 1-1 CoA requirements

Approval Requirement	Requirement	Reference
CoA E199	A Sustainability Strategy must be prepared to achieve a minimum “Excellent” ‘Design’ and ‘As built’ rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	This Document
CoA E200	The Sustainability Strategy must be submitted to the Secretary for information prior to the commencement of works, and must be implemented throughout construction and operation.	Refer to Section 1.1
CoA E201	Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design. The sustainability initiatives identified must be implemented, reviewed, updated regularly throughout the design development and construction.	A Sustainability Management Plan will be prepared prior to the commencement of construction to address in detail how sustainability will be managed in accordance with the Project CoAs.

This Sustainability Strategy is an overarching strategic document identifying the credits to be targeted throughout the design and construction phase in order to meet the required ISCA rating. This document is not intended to address all CoA and Revised Environmental Mitigation Measures applicable to the Project. A Sustainability Management Plan will be prepared prior to the commencement of construction to address in detail how sustainability will be managed in accordance with the Project CoAs.

The Sustainability Strategy will be submitted to the Secretary for information prior to the commencement of works, and will be implemented throughout construction and operation as applicable.

1.2 Project description

The WestConnex M4-M5 Link project is being constructed in two stages:

- Stage 1 (the Project): M4-M5 Link Mainline Tunnels
- Stage 2: Rozelle Interchange and Iron Cove Link

SMC has engaged Lendlease Samsung Bouygues Joint Venture (LSBJV) to design and construct Stage 1 of the project. The key features of the mainline tunnel project include:

- Twin mainline motorway tunnels between the M4 East at Haberfield and the New M5 at St Peters. Each tunnel would be around 7.5 kilometres long and would generally accommodate up to four lanes of traffic in each direction
- Connections of the mainline tunnels to the M4 East project, comprising:
 - A tunnel-to-tunnel connection to the M4 East mainline stub tunnels east of Parramatta Road near Alt Street at Haberfield
 - Entry and exit ramp connections between the mainline tunnels and the Wattle Street interchange at Haberfield (which is currently being constructed as part of the M4 East project)
 - Minor physical integration works with the surface road network at the Wattle Street interchange including road pavement and line marking
- Connections of the mainline tunnels to the New M5 project, comprising:
 - A tunnel-to-tunnel connection to the New M5 mainline stub tunnels north of the Princes Highway near the intersection of Mary Street and Bakers Lane at St Peters
 - Entry and exit ramp connections between the mainline tunnels and the St Peters interchange at St Peters (which is currently being constructed as part of the New M5 project)
 - Minor physical integration works with the surface road network at the St Peters interchange including road pavement and line marking
- Construction of tunnel stubs to provide for future underground connection of the mainline tunnels to the Rozelle Interchange and Iron Cove Link
- A motorway operations complex at St Peters (Campbell Road) (MOC5). The types of facilities that would be contained within the motorway operations complexes would include substations, water treatment plants, ventilation facilities and outlets, offices, on-site storage and parking for employees
- Tunnel ventilation systems, including ventilation supply and exhaust facilities, ventilation fans, ventilation outlets and ventilation tunnels
- A new ventilation facility located at the Campbell Road ventilation facility at St Peters
- Fitout (mechanical and electrical) of part of the Parramatta Road ventilation facility at Haberfield (which is currently being constructed as part of M4 East project) for use by the M4-M5 Link project
- Drainage infrastructure to collect surface and groundwater for treatment at dedicated facilities
- Water treatment would occur at the operational water treatment facility at St Peters Interchange (Campbell Road) subject to further environmental assessments and approvals
- Ancillary infrastructure and operational facilities for electronic tolling and traffic control and signage (including electronic signage)
- Emergency access and evacuation facilities, including pedestrian and vehicular cross and long passages and fire and life safety systems
- Utility works, including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities
- Temporary construction ancillary facilities to facilitate construction of the project would be required at the following locations:
 - Northcote Street, Haberfield (existing M4 East site)

- Parramatta Road, Haberfield
- Parramatta Road, Ashfield
- Wattle Street, Haberfield (existing M4 East site)
- Pyrmont Bridge Road, Camperdown/Annandale
- Campbell Road, St Peters
- Parramatta Road Ventilation Facility, Haberfield
- White Bay, Rozelle.

An overview of the project footprint and ancillary facilities is presented in the Construction Environmental Management Plan and Site Establishment Management Plans.

1.3 Scope

The scope of this Plan is to describe how Lendlease Samsung Bouygues Joint Venture (LSBJV) propose to manage the Project to achieve the sustainability target required under the CoA during the design and construction.

It has been prepared to be compliant with the WestConnex Sustainability Strategy (2017) as discussed in Section 2.1.

2 Sustainability Strategy

2.1 SMC Sustainability Strategy

Sydney Motorway Corporation (SMC) was established to finance and deliver the WestConnex motorway, including this Project. Core responsibilities of SMC include procuring and managing contracts relating to the development, construction, funding, operation and maintenance of the Project.

The SMC Sustainability Strategy describes SMC's sustainability commitments, objectives and targets across a range of sustainability themes, including corporate activities as well as the projects delivered by SMC.

The SMC Sustainability Strategy, incorporating the SMC Sustainability Policy, includes a number of objectives and targets which are subsequently embedded into the contract with LSBJV. As a contractor engaged by SMC, the LSBJV are required to complete the contract works in accordance with the SMC strategy which is included herein as Appendix 1: SMC Sustainability Strategy, and to commit to:

- creating lasting value;
- caring for our community, the environment and our people; and
- being efficient.

2.2 Project Sustainability Policy

A Sustainability Policy will be developed following a series of workshop and collaboration sessions with the design and construction teams. The Policy will be consistent with Man -1 credit theme within the ISCA framework. The agreed Policy will be presented within the Construction Environmental Management Plan (CEMP).

2.3 Risks and Opportunities

Sustainability risks and opportunities for the WestConnex M4-M5 Link Tunnels (the project) will be integrated with the project's risk management approach as detailed in the Risk Management Plan (RMP).

LSBJV will monitor and review risks and opportunities on a regular basis, at key stages of the project and at least annually. Key stages of the project include significant changes to the proposed design, construction methodology, or any other aspect that would cause a change to the risk profile. Risks, treatment measures and responsibilities will be recorded in the Risk Register.

The Sustainability Manager will participate in the risk and opportunity process by attending the risk review meetings.

Risk & Opportunity (R&O) Workshops will be held during the Design and the Construction phases to address specific environmental and social risks involving a cross section of the project team including design engineers, community team members, environmental team members, commercial team members and construction engineers. The workshops will be used to:

- identify risks and opportunities;
- rate the risk in terms of likelihood and consequences;
- develop and agree measures to eliminate or control the risk, or capitalise on the opportunity;
- confirm that the residual risk (after application of measures) is acceptable;
- assign the appropriate risk or opportunity owner; and

- document all the above in a Risk Register.

The R&O owner will be responsible for taking the agreed actions to mitigate or eliminate the risk, or capitalise on the opportunity. The R&O owner will provide feedback to the Risk Manager, who will update the Risk Register accordingly to reflect the actions taken.

2.4 Roles and Responsibilities

To support the delivery of project sustainability objectives, LSBJV will appoint a sustainability management team comprising senior personnel. The sustainability team members will have substantial experience in the delivery of sustainability outcomes on large infrastructure projects. The Environment & Sustainability Manager, Sustainability Manager and Sustainability Analyst will be Infrastructure Sustainability Council of Australia (ISCA) Accredited Professions (ISAP). In addition, a representative from the LSBJV Senior Leadership team will be nominated as a Sustainability Representative. This role will be responsible for driving a strong sustainability culture and facilitating the delivery of sustainable aspirations from senior management level of the Joint Venture.

A summary of positions with responsibility for managing sustainability requirements and the overall implementation of SMC's sustainability objectives is presented in Table 2-1.

Table 2-1: Sustainability roles and responsibilities

Sustainability Roles & Responsibilities	
Project Director	
Responsibilities	<p>Overall delivery of the project including satisfaction of the contractual and Conditions of Approval (CoA) including the sustainability requirements.</p> <p>Ensuring that the Environment & Sustainability Manager has the resources they need to fulfil the requirements.</p>
Environment & Sustainability Manager	
Responsibilities	<p>Central responsibility for managing sustainability including accountability for environmental, social and economic aspects.</p> <p>Oversight of the implementation of the Sustainability Plan and achievement of an ISCA IS Tool Design and As Built 'Excellent' Rating.</p> <p>Interface with Project Director and other project executive level staff involved in the decision-making processes.</p> <p>Be a current IS accredited professional</p>
Sustainability Manager	
Responsibilities	<p>Champion the drive for sustainable outcomes for the project.</p> <p>Be the key contact between the Project and ISCA</p> <p>Be a current IS accredited professional</p> <p>Be the key sustainability professional in accordance with the requirements of the SWTC</p> <p>Provide sustainability advice to the project.</p> <p>Develop and monitor the implementation of the Sustainability Plan.</p> <p>Review and update of the Sustainability Plan.</p>

Sustainability Roles & Responsibilities	
	<p>Ensure Construction Environment Management Plan (CEMP), and its sub-plans incorporates sustainability requirements.</p> <p>Maintenance of documentation and records to evidence sustainability requirements.</p> <p>Facilitation of sustainability communications between key project parties including the SMC and RMS.</p> <p>Development of sustainability training materials.</p> <p>Maintenance of sustainability tracking records including monitoring of sustainability performance across all requirements.</p> <p>Management and coordination of ISCA IS Rating documentation.</p> <p>Communication with and coordination of, sustainability requirements with the SMC.</p> <p>Communicate sustainability requirements to relevant project personnel.</p> <p>Provide strategic support in relation to sustainability priorities and processes.</p>
Sustainability Analyst	
Responsibilities	<p>Collection of data relevant to sustainability requirements.</p> <p>Maintenance of sustainability records.</p> <p>Support for the development of ISCA IS Rating documentation.</p>

2.5 Governance Actions

Key sustainability actions and the allocation of responsibility are detailed in Table 2-2.

Table 2-2: Key sustainable actions and responsibility

Action	Responsibility
Register the project with ISCA	Environment & Sustainability Manager
Develop, implement and maintain governance structures, processes and systems, ensuring integration of all sustainability considerations, initiatives, monitoring and reporting.	Environment & Sustainability Manager
Develop, implement and maintain a sustainability assurance framework to track compliance with sustainability targets.	Environment & Sustainability Manager
Participate in regular sustainability knowledge sharing workshops during the D&C stages.	Environment & Sustainability Manager
Allow for and address sustainability objectives and requirements in design briefings, design documentation development processes, site inductions and D&C project plans.	Environment & Sustainability Manager

2.6 Initiatives

LSBJV has investigated sustainability initiatives to potentially be adopted during the delivery of the project. The costs, benefits and programme impacts are detailed in Table 2-3.

Table 2-3: Sustainability initiative options

Option Description	Costs CAPEX & OPEX	Benefits (whole of life economic, social and environmental)	Programme Impacts (if any)	Comments/Issues
Implementation of public facing internet based complaints system for mobile phones.	\$120,000 per annum OPEX. No additional CAPEX costs.	Social and community benefits to be achieved through improving connectivity outcomes for community members.	N/A	To provide external interface native to mobile phones to allow community members to provide timestamped, geolocated feedback on construction activities and attach photos.

2.7 Sustainability Targets

LSBJV will achieve or improve on the sustainability targets identified in Table 2-4.

Table 2-4 Nominated sustainability targets

No.	Category	Minimum Requirement	Contractor's Nominated Requirement	Comments
1	IS Design Rating	55/100	65/100	See Appendix 2 – ISCA Scorecard (v1.2) for planned Design Scenario
2	IS As-Built Rating	55/100	65/100	See Appendix 3 – ISCA Scorecard (v1.2) for planned As Built Scenario
3	Percentage of usable spoil (uncontaminated surplus excavated material) reused/recycled.	95%	95%	Wherever possible, VENM material excavated from tunnelling activities to be utilised for beneficial reuse. Spoil tracking systems to be implemented to ensure chain of responsibility maintained for all movements of spoil material off site.
4	Percentage of construction and demolition waste (uncontaminated material excluding spoil) reused/recycled.	80%	80%	Uncontaminated construction and demolition waste to be reused on site wherever possible. Where not possible, construction and demolition waste to be sorted (e.g. steel, timber, bricks) and sent to licenced recycling facility. Waste tracking systems to be implemented to ensure waste is being taken to appropriately licensed facilities. Auditing to be undertaken of waste sorting and tracking to ensure that waste reuse and recycling is being undertaken appropriately.
5	Percentage of construction stage energy sourced from renewable energy generated onsite and/or accredited GreenPower energy supplier.	20%	20%	20% of construction stage energy usage to be sourced from accredited GreenPower energy supplier. Cost-benefit to be analysed for installation of solar panels in construction compounds.

No.	Category	Minimum Requirement	Contractor's Nominated Requirement	Comments
6	Percentage of construction stage energy use offset (in accordance with the Australian Government National Carbon Offset Standard).	6%	6%	6% of construction stage energy usage to be offset in accordance with the Australian Government National Carbon Offset Standard.
7	Percentage of annual operational stage energy sourced from renewable energy generated onsite and/or accredited GreenPower energy supplier.	6%	6%	6% operational stage energy to be sourced from accredited GreenPower energy supplier.
8	Percentage of operational energy use offset (in accordance with the Australian Government National Carbon Offset Standard).	No minimum set	0%	Operational offsets to be determined by motorway Operator during Operational phase. No allowance has been made for the purchase of offset credits for Operational phase during Construction phase.
9	Percentage of non-potable water demand which is sourced from non-potable water sources during construction.	15%	15%	Water generated through water treatment processes at construction tunnelling compounds to be reused for dust suppression, wheel washing and other construction purposes that would otherwise require the purchase of potable water for non-potable uses.
10	Percentage of non-potable water demand which is sourced from non-potable water sources during operation.	15%	15%	Rainwater captured from roofs of operational structures to be reused where appropriate, such as in toilet flushing and landscape maintenance. Water captured in tunnel during operation and treated through WTP to be available for use in operational wash down facilities.

No.	Category	Minimum Requirement	Contractor's Nominated Requirement	Comments
11	Percentage of water (rainwater, stormwater, wastewater, groundwater, tunnel inflow water) generated/collected during construction which is reused, recycled or reclaimed.	15%	15%	Water captured in tunnel during construction to be treated through WTPs and reused for non-potable uses such as dust suppression, wheel washing and other non-potable construction purposes. Rainwater from roofs of construction compounds to be captured in rainwater tanks and reused where appropriate for non-potable uses such as toilet flushing and plant wash-down facilities.
12	Percentage of water (rainwater, stormwater, wastewater, groundwater, tunnel inflow water) generated/collected during operation which is reused, recycled or reclaimed.	5%	5%	Rainwater captured from roofs of operational structures to be reused where appropriate, such as in toilet flushing and landscape maintenance. Water captured in tunnel during operation and treated through WTP to be available for use in operational wash down facilities.
13	Percentage of non-potable water which is used during the operation of roadheaders/tunnelling machines.	No minimum set	15%	Dust suppression utilised by roadheaders during construction phase tunnelling activities to be reused from WTP outlets. Further water reuse in tunnelling equipment to be investigated during Construction phase based on water composition analysis.
14	Percentage of cement replacement material, measured by mass, used in concrete during the construction stage.	5%	5%	5% concrete replacement material, measured by mass, will be used in concrete during the Construction phase.
15	Percentage of recycled material used in road base and sub base during the construction stage.	10%	10%	10% recycled material will be used in road base and sub base during Construction phase.

No.	Category	Minimum Requirement	Contractor's Nominated Requirement	Comments
16	Percentage of timber to be sourced from either reused/recycled timber or from sustainably managed forests that have obtained Forest Management Certification (FMC).	100%	100%	100% per cent of all timber products used in the project will be sourced from either reused/recycled timber or from sustainably managed forests that have obtained Forest Management Certification (FMC).

3 Indicative ISCA V1.2 Scorecard

LSBJV will be targeting the indicative design phase ISCA credits as identified in Table 3-1, and indicative as-built ISCA credits identified in Table 3-2.

3.1 Design

Table 3-1: Indicative design phase sustainability targets

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Man-1	Sustainability leadership and commitment	2	3	1.12	Sustainability policies and objectives stated in the Environmental Impact Statement (EIS). Objectives included in the D&C Deed and SWTC. Sustainability requirements stated in tender returnables, D&C Deed and SWTC. Sustainability requirements (e.g. reporting) to be included in subcontracts. Sustainability objectives publicly available in EIS and on project website. Community education programs and development of workplace skills through training hub.
Man-2	Risk and opportunity management	2	2	1.12	Risk assessments will be conducted at the start of project and will include participation of senior leadership. Management plans will undergo at least annual revision. Opportunities to be assessed as part of development of Sustainability Plan. Risk and opportunities assessed to cover environmental, social and economic aspects.
Man-3	Organisational structure, roles and responsibilities	2	2	1.12	Sustainability to be centrally managed by Environment & Sustainability Manager. Environment & Sustainability Manager to be ISAP as will members of Sustainability team responsible for implementation of management plan. Monitor and review of sustainability systems to be undertaken by external sustainability professional every quarter during pre-construction.
Man-4	Inspection and auditing	2	2	1.12	Weekly environmental inspections specified in CEMP. Weekly sustainability inspections to take place as part of environmental inspections. Environmental and Sustainability audits of the management system will be conducted. Minimum of one external pre-construction (design) audit and four audits annually during construction with at least one being external. Additional audits to be undertaken include internal and external waste audits, annual stakeholder engagement audit and energy audits.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Man-5	Reporting and review	2	3	1.12	Annual sustainability report to be produced and provided to senior management for review. Quarterly reporting of sustainability outcomes to senior management as part of management systems with continual improvement processes driven by reporting outcomes. Reporting includes tracking against key sustainability targets and objectives as identified in sustainability strategy. External stakeholders to participate in reporting outcomes through community involvement groups. Annual sustainability report to be available on the project website.
Man-6	Knowledge sharing	2	2	1.67	Lessons learned from project to be reported internally between parent company projects as well as during the monthly RMS/SMC led sustainability forums. Knowledge added to ISCA database and database reviewed for lessons from other companies when developing sustainability management plan. Quarterly governance meetings to be conducted incorporating senior leaders from the parent companies, sustainability professionals, client representatives and project senior leadership.
Man-7	Decision making	2	2	2.42	Decision making to incorporate impacts beyond cost factors based on experience from previous projects and where relevant consider potential impacts on community. Consideration of lifecycle impacts when making material selection. Utilise multi-criteria analysis for subcontract evaluation and consideration of lifecycle analysis when making material selection.
Pro-1	Commitment to sustainable procurement	2	3	1.40	Environmental factors to be incorporated in procurement evaluation process. Sustainability factors to be incorporated in procurement evaluation process. Sustainable procurement commitments to be publicly available in the Project Environment policy and Sustainability policy available on project website and incorporated into targets as stated in EIS, D&C Deed and SWTC.
Pro-2	Identification of suppliers	2	2	0.93	Suppliers to be requested to provide environmental policy as part of tender process. Suppliers to be requested to provide sustainability policy as part of tender process.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Pro-3	Supplier evaluation and contract award	Scoped out			
Pro-4	Managing supplier performance	Scoped out			
Cli-1	Climate change risk assessment	2	2	1.86	Climate change model to be developed for final design as required by SWTC, inputs to be developed by multi-disciplinary team. Climate change model to be developed for final design covering direct and indirect climate change risks as required by SWTC, inputs to be developed by multi-disciplinary team. All climate change risks to be incorporated into risk and opportunity register as required by MAN-2.
Cli-2	Adaptation options	2	2	1.86	Recommendations from climate change model to be implemented as part of design process. Recommendations from climate change model to be implemented as part of design process where major redesign is not required. High and medium risks will be mitigated through design.
Ene-1	Energy and carbon monitoring and reduction	2	1.4	4.69	Monitoring of energy usage to take place as part of monthly reporting processes. Modelling of energy usage and emissions to take place as part of design process. To achieve a 6% reduction in emissions against base case through off-sets as required by deed. Potential further reductions to be achieved through reduction of transport distances for procurement items, use of renewable energy and implementation of design innovations to reduce energy use through Operation phase.
Ene-2	Renewable energy	2	2	1.12	Opportunities for renewable energy usage to be investigated throughout design and pre-construction phase. 20% of energy usage to be off-set via accredited GreenPower as required by SWTC.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Wat-1	Water use monitoring and reduction	2	2.5	4.19	Ongoing monitoring of water usage to be undertaken to compare against design usage modelling. Reduction of 15% water usage as required by SWTC. Reduction to be achieved through reuse of treated water in tunnelling equipment. Other potential initiatives that may be implemented include use of rainwater tanks attached to site compounds, smart metering of water usage and reuse of captured water for dust suppression.
Wat-2	Replace potable water	2	0.5	0.47	Reduction of 15% water usage as required by SWTC. Reduction to be achieved through reuse of treated water in tunnelling equipment. Other potential initiatives that may be implemented include use of rainwater tanks attached to site compounds, smart metering of water usage and reuse of captured water for dust suppression.
Mat-1	Materials footprint measurement and reduction	2	1.7	3.80	Monitoring and modelling to be undertaken utilising materials calculator throughout design and construction stages. 10% reduction in road base material used as required by SWTC. Potential opportunities to be explored include increasing the SCM content of concrete, use of recycled aggregates and sourcing materials locally.
Mat-2	Environmentally labelled products and supply chains	Scoped out			-
Dis-1	Receiving water quality	2	2	1.77	Monitoring of discharges to environment to take place as required by licence. Implementation of erosion and sediment (ERSED) controls. Reuse of water or disposal via trade waste agreement where not suitable for discharge. Weekly site inspections to be conducted of ERSED controls.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Dis-2	Noise	2	3	2.65	Mitigation measures implemented as per Construction Noise and Vibration Management Plan (NVMP) including monitoring programs. Operational design to have no exceedances of noise goals. Noise during Construction phase to be managed in accordance with NVMP. Frequent noise monitoring to be completed as per NVMP. Noise goals to be established based on out-of-hours noise modelling assessments. Operational design to have no exceedances of noise goals.
Dis-3	Vibration	2	3	2.65	Management measures to be implemented as per Construction NVMP including monitoring program. Monitoring of construction activities and modelling to confirm that no exceedances of vibration criteria. Design to create no exceedances of vibration criteria. No physical damage to be confirmed by Post completion property condition surveys. Design to create no exceedances of vibration goals. Frequent monitoring to be conducted to confirm no exceedance of vibration goals. Goals to be in line with DIN vibration guidelines.
Dis-4	Air quality	2	2	1.77	Management measures including monitoring to be implemented as per Air Quality Management Plan (AQMP). Monitoring and modelling to confirm no recurring or major exceedances of air quality goals. Mitigation measures to be incorporated throughout construction and operation of the project to reduce risk of exceedances. Incorporation of mitigation measures into final design to be considered during detailed design process.
Dis-5	Light pollution	2	1	1.12	Light spill will be minimised throughout construction initially through the implementation of the Site Establishment Management Plans (SEMP) and then through general good practice. Light spill to be considered as part of design process in accordance with relevant standards.
Lan-1	Previous land use	2	3	2.79	All land to be utilised by the project has been previously disturbed. Some areas to be utilised for the project contain landscaping features. Extent of previous land use to be demonstrated through aerial photos and sensitive area plans.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Lan-2	Conservation of on-site resources	2	2	0.75	Note - Expected that credit will be scoped out from project through initial discussions with ISCA Conservation of topsoil considered as part of Construction Soil and Water Management Plan (SWMP). Uncontaminated topsoil stripped on the project to be stockpiled and reused as the end to the project for landscaping.
Lan-3	Contamination and remediation	2	2	1.49	Remediation to be undertaken in accordance with relevant National Environment Protection Measure (NEPM) and utilising options selected utilising a sustainability hierarchy. Sustainability appraisals of remediation options will be undertaken against Table 1 of 'A Framework for Assessing the Sustainability of Soil and Groundwater Remediation'.
Lan-4	Flooding design	2	1	0.84	Flooding risk will be assessed to ensure that there is no increase in the flooding risk as a result of the project or its interface with other projects. Flood Mitigation Strategy to be completed and be in line with 'Flood Plain Management in Australia'.
Was-1	Waste management	2	2	2.23	Predictions of waste generation to be developed for construction and operation during Detailed Design phase. Waste minimisation measures to be implemented throughout Construction phase (e.g. re-use on site). All waste generated by project to be tracked. Waste auditing will be implemented. Findings of audits to be incorporated into monthly reports and reviewed to improve recycling outcomes.
Was-2	Diversion from landfill	Scoped out			This area will be reviewed and possibly targeted during delivery phase.
Was-3	Deconstruction/ Disassembly/ Adaptability	2	1	0.56	Deconstruction plan for project to be developed for construction and operation as part of design process. Deconstruction plan to be updated to reflect changes in technology and future infrastructure planning as required throughout the construction process. Plan to discuss all possibilities for recycling of tunnel components.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Eco-1	Ecological value	2	1	2.79	Note: Potential scope out due to the lack of existing ecological value within the project footprint The proposed landscaping of the previously disturbed sites would result in an increase to the ecological value of the site. Site rehabilitation to improve ecological value of land used for construction through landscaping as detailed in the Urban Design & Landscape Plan.
Eco-2	Habitat connectivity	2	1	1.12	Note: Potential scope out due to the current existing habitat connectivity being minimal Where offsets are required, they will be utilised to provide connectivity. The inclusion of final landscaping of the site to potentially improve the current connectivity within the project footprint.
Hea-1	Community health and well-being	2	1	0.93	Priority issues to be identified through the community involvement groups, with initiatives to be implemented based on one of the issues. This could potentially be an education program to target local schools.
Hea-2	Crime prevention	2	2	2.79	Key Crime Prevention through Environmental Design (CPTED) principles to be discussed and included in detail design reports. These to include all pedestrian underpasses to have end-to-end visibility, except for the mainline tunnel where it is not possible.
Her-1	Heritage assessment and management	2	2	1.86	Management measures for heritage issues to be identified in and implemented as per the Non-Aboriginal and the Aboriginal Heritage Management Plans. Studies undertaken as part of EIS assessment. Key stakeholders have been consulted as part of EIS heritage assessment and will be consulted as appropriate in further studies. Potential local heritage items which are not identified on government registers (e.g. Bank of NSW) have been identified as part of heritage studies for further assessment during detailed design phase. Signage to promote heritage values to be established around items. Heritage Interpretation Plan to be implemented where appropriate for potential local heritage items which will identify opportunities to improve local heritage outcomes. Incorporation of heritage items awareness into school education programs and heritage values to be promoted through cultural awareness education programs.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Her-2	Monitoring and management of heritage	Scoped out			-
Sta-1	Stakeholder engagement strategy	2	2	0.93	Community Consultation Strategy to be developed and implemented for project. Implementation of strategy will be monitored and assessed for the project through key performance indicators (KPIs). Plan to be audited during annual stakeholder audits required by STA-3 and STA-4.
Sta-2	Level of engagement	2	2	0.93	Community Consultation Strategy and other management plans to be available on the project website and consultation to be undertaken as part of development of plans through community engagement groups. Community consultation and involvement to be conducted for key issues such as noise hoarding visual impact within the consultation phase for the Urban Design & Landscape Plan. Community will be requested to provide feedback and designs to be altered pending the outcome of the design reviews.
Sta-3	Effective communication	2	2	1.40	Community communications to be provided on an ongoing basis through letterbox drops and will be available on the project website. Implementation of Community Consultation Strategy and communications provided to the community to be independently audited to verify effectiveness.
Sta-4	Addressing community concerns	2	2	1.40	Close out of community concerns to be tracked through CRM and closeout actions/response detailed. Implementation of Community Consultation Strategy and responses to community complaints to independently audited to verify effectiveness.
Urb-1	Urban design	2	2	2.98	Urban Design & Landscape Plan to be developed (where required) and implemented with consideration to relevant standards, guidelines and the long-term usage of the site. The Urban Design & Landscape Plan will be internally reviewed before approval.
Urb-2	Implementation	Scoped out			-

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Inn-1	Innovation	2	0	0.00	-
	Total			65.76	-
	Rating			Excellent	-

3.2 As Built

Table 3-2: Nominated as-built sustainability targets

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Man-1	Sustainability leadership and commitment	2	3	0.83	Sustainability policies and objectives stated in the EIS. Objectives included in D&C Deed and SWTC. Sustainability requirements stated in tender returnables, D&C Deed and SWTC. Sustainability requirements (e.g. reporting) to be included in subcontracts. Sustainability objectives publicly available in EIS and on project website. Community education programs and development of workplace skills through training hub.
Man-2	Risk and opportunity management	2	2	0.83	Risk assessments will be conducted throughout the Project delivery phase and will include participation of senior leadership. Management plans will have undergone at least annual revision. Risk and opportunities assessed to cover environmental, social and economic aspects.
Man-3	Organisational structure, roles and responsibilities	2	2	0.83	Sustainability to be centrally managed by Environment and Sustainability Manager. Environment and Sustainability Manager to be ISAP as will members of Sustainability team responsible for implementation of management plan. Monitor and review of sustainability systems to be undertaken by external sustainability professional every 6 months during the construction phase.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Man-4	Inspection and auditing	2	2	0.83	Weekly environmental inspections specified in CEMP. Environmental and Sustainability audits of the management system will be conducted. Minimum of one external pre-construction (design) audit and four audits annually during construction with at least one being external. Weekly sustainability inspections to take place as part of environmental inspections. Additional audits to be undertaken include internal and external waste audits, annual stakeholder engagement audit and energy audits.
Man-5	Reporting and review	2	3	0.83	Annual sustainability report to be produced and provided to senior management for review. Quarterly reporting of sustainability outcomes to senior management as part of management systems with continual improvement processes driven by reporting outcomes. Reporting includes tracking against key sustainability targets and objectives as identified in sustainability strategy. External stakeholders to participate in reporting outcomes through community involvement groups. Annual sustainability report to be available on the project website.
Man-6	Knowledge sharing	2	3	1.88	Lessons learned from project to be reported internally between parent company projects as well as during the monthly RMS/SMC led sustainability forums. Knowledge added to ISCA database and database reviewed for lessons from other companies when developing sustainability management plan. Quarterly governance meetings to be conducted incorporating senior leaders from the parent companies, sustainability professionals, client representatives and project senior leadership.
Man-7	Decision making	2	2	1.81	Decision making to incorporate impacts beyond cost factors based on experience from previous projects and where relevant consider potential impacts on community. Utilise multi-criteria analysis for subcontract evaluation and consideration of lifecycle analysis when making material selection.
Pro-1	Commitment to sustainable procurement	2	3	1.04	Environmental factors to be incorporated in procurement evaluation process. Sustainability factors to be incorporated in procurement evaluation process. Sustainable procurement commitments to be publicly available in Environment policy and Sustainability policy available on project website and incorporated into targets as stated in EIS, D&C Deed and SWTC.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Pro-2	Identification of suppliers	2	3	1.04	Suppliers to be requested to provide environmental policy as part of tender process. Suppliers to be requested to provide sustainability policy as part of tender process.
Pro-3	Supplier evaluation and contract award	2	2	0.69	Supplier evaluation procedure includes consideration of environmental criteria/performance of supplier. Supplier evaluation procedure includes consideration of sustainability criteria/performance of supplier.
Pro-4	Managing supplier performance	2	2	0.69	Suppliers are to be assisted in developing an environmental policy, if one is not already existing. Suppliers are audited against environmental performance criteria which can be included in supplier contracts. Suppliers are assisted to develop a sustainability policy if one is not already existing. Suppliers are audited against sustainability performance criteria, which can be included in supplier contracts. Non-compliances against sustainability performance criteria will be identified and managed with corrective and preventative actions where available.
Cli-1	Climate change risk assessment	4	2	2.78	Climate change model to be developed for final design as required by SWTC, inputs to be developed by multi-disciplinary team. Climate change model to be developed for final design covering direct and indirect climate change risks as required by SWTC, inputs to be developed by multi-disciplinary team. All climate change risks to be incorporated into risk and opportunity register as required by MAN-2.
Cli-2	Adaptation options	4	2	2.78	Recommendations from climate change model to be implemented as part of design process where major redesign is not required. High and medium risks will be mitigated through design.
Ene-1	Energy and carbon monitoring and reduction	3	1.4	5.25	Monitoring of energy usage to take place as part of monthly reporting processes. Modelling of energy usage and emissions to take place as part of design process. To achieve a 6% reduction in emissions against base case through off-sets as required by D&C Deed. Potential further reductions to be achieved through reduction of transport distances for procurement items, use of renewable energy and implementation of design innovations to reduce energy use through Operation phase.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Ene-2	Renewable energy	3	2	1.25	Opportunities for renewable energy usage to be investigated throughout design and pre-construction phase. 20% of energy usage to be off-set via accredited GreenPower as required by SWTC.
Wat-1	Water use monitoring and reduction	2	2.5	3.13	Ongoing monitoring of water usage to be undertaken to compare against design usage modelling. Reduction of 15% water usage as required by SWTC. Reduction to be achieved through reuse of treated water in tunnelling equipment. Other potential initiatives that may be implemented include use of rainwater tanks attached to site compounds, smart metering of water usage and reuse of captured water for dust suppression.
Wat-2	Replace potable water	2	0.5	0.35	Reduction of 15% water usage as required by SWTC. Reduction to be achieved through reuse of treated water in tunnelling equipment. Other potential initiatives that may be implemented include use of rainwater tanks attached to site compounds, smart metering of water usage and reuse of captured water for dust suppression.
Mat-1	Materials footprint measurement and reduction	2	1.7	2.83	Monitoring and modelling to be undertaken utilising materials calculator throughout design and construction stages. 10% reduction in road base material used as required by SWTC. Potential opportunities to be explored include increasing the SCM content of concrete, use of recycled aggregates and sourcing materials locally.
Mat-2	Environmentally labelled products and supply chains	2	0	0.00	-
Dis-1	Receiving water quality	3	2	1.98	Monitoring of discharges to environment to take place as required by licence. Implementation of ERSED controls. Reuse of water or disposal via trade waste agreement were not suitable for discharge. Weekly site inspections to be conducted of ERSED controls.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Dis-2	Noise	3	3	2.97	Mitigation measures implemented as per Construction NVMP including monitoring programs. Operational design to have no exceedances of noise goals. Noise during Construction phase to be managed in accordance with Construction NVMP. Frequent noise monitoring to be completed as per NVMP. Noise goals to be established based on out-of-hours noise modelling assessments. Operational design to have no exceedances of noise goals.
Dis-3	Vibration	3	3	2.97	Management measures to be implemented as per Construction NVMP including monitoring program. Monitoring of construction activities and modelling to confirm that no exceedances of vibration criteria. Design to create no exceedances of vibration criteria. No physical damage to be confirmed by Post completion property condition surveys. Design to create no exceedances of vibration goals. Frequent monitoring to be conducted to confirm no exceedance of vibration goals. Goals to be in line with DIN vibration guidelines.
Dis-4	Air quality	4	2	2.64	Management measures including monitoring to be implemented as per AQMP. Monitoring and modelling to confirm no recurring or major exceedances of air quality goals. Mitigation measures to be incorporated throughout construction and operation of the project to reduce risk of exceedances. Incorporation of mitigation measures into final design to be considered during detailed design process.
Dis-5	Light pollution	4	1	1.67	Measures to prevent light spill throughout construction to be identified and implemented as part of the SEMP and general good practice. Light spill to be considered as part of design process in accordance with relevant standards.
Lan-1	Previous land use	2	3	2.08	All land to be utilised by the project has been previously disturbed. Some areas to be utilised for the project contain landscaping features. Extent of previous land use to be demonstrated through aerial photos and sensitive area plans.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Lan-2	Conservation of on-site resources	2	2	0.55	Note - Expected that credit will be scoped out from project through initial discussions with ISCA Conservation of topsoil considered as part of Construction Soil and Water Management Plan. Uncontaminated topsoil stripped on the project to be stockpiled and reused as the end to the project for landscaping.
Lan-3	Contamination and remediation	4	2	2.23	Remediation to be undertaken in accordance with relevant NEPM and utilising options selected utilising a sustainability hierarchy. Sustainability appraisals of remediation options will be undertaken against Table 1 of 'A Framework for Assessing the Sustainability of Soil and Groundwater Remediation'.
Lan-4	Flooding design	Scoped out			-
Was-1	Waste management	2	2	1.67	Predictions of waste generation to be developed for construction and operation during Detailed Design phase. Waste minimisation measures to be implemented throughout constructions phase (e.g. re-use on site). All waste generated by project to be tracked. Waste monitoring to be audited by a suitably qualified professional on an annual basis and internal auditing of waste to final destination to be conducted every six months throughout construction. Findings of audits to be incorporated into monthly reports and reviewed to improve recycling outcomes.
Was-2	Diversion from landfill	2	2	1.95	Beneficial re-use of spoil strategy (application to land) to ensure diversion from landfill targets are met. Project recycling of construction waste materials: i.e. concrete, steel, timber Implementation of project office waste segregation and recycling program to ensure targets are met.
Was-3	Deconstruction/ Disassembly/ Adaptability	2	1	0.42	Deconstruction Plan for project to be developed for construction and operation as part of design process. Deconstruction Plan to be updated to reflect changes in technology and future infrastructure planning as required throughout the construction process. Plan to discuss all possibilities for recycling of tunnel components.

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Eco-1	Ecological value	1	1	1.04	<p>Note: Potential scope out due to the lack of existing ecological value within the project footprint.</p> <p>The proposed landscaping of the previously disturbed sites would result in an increase to the ecological value of the site. Site rehabilitation to improve ecological value of land used for construction through landscaping as detailed in the Urban Design & Landscape Plan</p>
Eco-2	Habitat connectivity	1	1	0.42	<p>Note: Potential scope out due to the current existing habitat connectivity being minimal.</p> <p>Where offsets are required, they will be utilised to provide connectivity. The inclusion of final landscaping of the site to potentially improve the current connectivity within the project footprint.</p>
Hea-1	Community health and well-being	2	1	0.69	<p>Priority issues to be identified through the community involvement groups, with initiatives to be implemented based on one of the issues. This could potentially be an education program to target local schools.</p>
Hea-2	Crime prevention	2	1	1.04	<p>Key CPTED principles to be discussed and included in detail design reports. These to include all pedestrian underpasses to have end to end visibility, except for the mainline tunnel where it is not possible.</p>
Her-1	Heritage assessment and management	4	2	2.78	<p>Management measures for heritage issues to be identified in and implemented as per the Non-Aboriginal and the Aboriginal Heritage Management Plans. Studies undertaken as part of EIS assessment. Key stakeholders have been consulted as part of EIS heritage assessment and will be consulted as appropriate in further studies. Potential local heritage items which are not identified on government registers (e.g. Bank of NSW) have been identified as part of heritage studies for further assessment during Detailed Design phase. Signage to promote heritage values to be established around items. Heritage Interpretation Plan to be implemented where appropriate for potential local heritage items which will identify opportunities to improve local heritage outcomes. Incorporation of heritage items awareness into school education programs and heritage values to be promoted through cultural awareness education programs.</p>

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Her-2	Monitoring and management of heritage	4	1	1.39	Inspections and monitoring of items of heritage significance can be included as a requirement in Heritage Management Plan and/or CEMP inspections program.
Sta-1	Stakeholder engagement strategy	3	2	1.04	Community Consultation Strategy to be developed and implemented for project. Implementation of strategy will be monitored and assessed for the project through KPIs. Plan to be audited during annual stakeholder audits required by STA-3 and STA-4.
Sta-2	Level of engagement	3	1	0.52	Community Consultation Strategy and other management plans to be available on the project website and consultation to be undertaken as part of development of plans through community engagement groups. Community consultation and involvement to be conducted for key issues such as noise hoarding visual impact within the consultation phase for the Urban Design & Landscape Plan. Community will be requested to provide feedback and designs to be altered pending the outcome of the design reviews.
Sta-3	Effective communication	3	2	1.56	Community communications to be provided on an ongoing basis through letterbox drops and will be available on the project website. Implementation of Community Consultation Strategy and communications provided to the community to be independently audited to verify effectiveness
Sta-4	Addressing community concerns	3	2	1.56	Close out of community concerns to be tracked through CRM and closeout actions/response detailed. Implementation of Community Consultation Strategy and responses to community complaints to independently audited to verify effectiveness.
Urb-1	Urban design	2	2	2.23	Urban Design & Landscape Plan to be developed (where required) and implemented with consideration to relevant standards, guidelines and the long-term usage of the site. The Urban Design & Landscape Plan will be internally reviewed before approval.
Urb-2	Implementation	2	0	0.00	-

Credit	Name of credit	Materiality Score	Target Level	Target Score	Comments
Inn-1	Innovation	2	0	0.00	-
	Total			65.07	-
	Rating			Excellent	-

4 Appendix 1: SMC Sustainability Strategy

5 Appendix 2: Draft ISCA Scorecard - Design

	Credit	Name of credit	Materiality Score	Score Possible	No. Levels	Target Level	Target Score	Working Level	Working Score
M	Total			110 pts			65.8 pts		65.8 pts
OE	Rating			Leading			Excellent		Excellent
Man	Man-1	Sustainability leadership and commitment	2	1.12	3	3	1.12	3	1.12
	Man-2	Risk and opportunity management	2	1.12	2	2	1.12	2	1.12
	Man-3	Organisational structure, roles and responsibilities	2	1.12	2	2	1.12	2	1.12
	Man-4	Inspection and auditing	2	1.12	2	2	1.12	2	1.12
	Man-5	Reporting and review	2	1.12	3	3	1.12	3	1.12
	Man-6	Knowledge sharing	2	2.51	3	2	1.67	2	1.67
	Man-7	Decision-making	2	3.63	3	2	2.42	2	2.42
Pro	Pro-1	Commitment to sustainable procurement	2	1.40	3	3	1.40	3	1.40
	Pro-2	Identification of suppliers	2	1.40	3	2	0.93	2	0.93
	Pro-3	Supplier evaluation and contract award	Scoped Out						
	Pro-4	Managing supplier performance	Scoped Out						
Cli	Cli-1	Climate change risk assessment	2	2.79	3	2	1.86	2	1.86
	Cli-2	Adaptation options	2	2.79	3	2	1.86	2	1.86
Ene	Ene-1	Energy and carbon monitoring and reduction	2	10.06	3	1.4	4.69	1.4	4.69
	Ene-2	Renewable energy	2	1.68	3	2.0	1.12	2.0	1.12
Wat	Wat-1	Water use monitoring and reduction	2	5.03	3	2.5	4.19	2.5	4.19
	Wat-2	Replace potable water	2	2.79	3	0.5	0.47	0.5	0.47
Mat	Mat-1	Materials footprint measurement and reduction	2	6.70	3	2	3.80	1.7	3.80
	Mat-2	Environmentally labelled products and supply chains	Scoped Out						
Dis	Dis-1	Receiving water quality	2	2.65	3	2	1.77	2	1.77
	Dis-2	Noise	2	2.65	3	3	2.65	3	2.65
	Dis-3	Vibration	2	2.65	3	3	2.65	3	2.65
	Dis-4	Air quality	2	2.65	3	2	1.77	2	1.77
	Dis-5	Light pollution	2	1.12	1	1	1.12	1	1.12
Lan	Lan-1	Previous land use	2	2.79	3	3.0	2.79	3.0	2.79
	Lan-2	Conservation of on site resources	2	1.12	3	2	0.75	2	0.75
	Lan-3	Contamination and remediation	2	2.23	3	2	1.49	2	1.49
	Lan-4	Flooding design	2	1.68	2	1	0.84	1	0.84
Was	Was-1	Waste management	2	2.23	2	2	2.23	2	2.23
	Was-2	Diversion from landfill	Scoped Out						
	Was-3	Deconstruction/ Disassembly/ Adaptability	2	1.68	3	1	0.56	1	0.56
Eco	Eco-1	Ecological value	2	8.38	3	1	2.79	1	2.79
	Eco-2	Habitat connectivity	2	3.35	3	1	1.12	1	1.12
Hea	Hea-1	Community health and well-being	2	2.79	3	1	0.93	1	0.93
	Hea-2	Crime prevention	2	2.79	2	2	2.79	2	2.79
Her	Her-1	Heritage assessment and management	2	2.79	3	2	1.86	2	1.86
	Her-2	Monitoring and management of heritage	Scoped Out						
Sta	Sta-1	Stakeholder engagement strategy	2	1.40	3	2	0.93	2	0.93
	Sta-2	Level of engagement	2	1.40	3	2	0.93	2	0.93
	Sta-3	Effective communication	2	1.40	2	2	1.40	2	1.40
	Sta-4	Addressing community concerns	2	1.40	2	2	1.40	2	1.40
rb	Urb-1	Urban design	2	4.47	3	2	2.98	2	2.98

6 Appendix 3: Draft ISCA Scorecard – As Built

Credit	Name of credit	Materiality Score	Score Possible	No. Levels	Target Level	Target Score	Working Level	Working Score	
M	Total		110 pts			65.1 pts		65.5 pts	
OE	Rating		Leading			Excellent		Excellent	
Man	Man-1	Sustainability leadership and commitment	2	0.83	3	3	0.83	3	0.83
	Man-2	Risk and opportunity management	2	0.83	2	2	0.83	2	0.83
	Man-3	Organisational structure, roles and responsibilities	2	0.83	2	2	0.83	2	0.83
	Man-4	Inspection and auditing	2	0.83	2	2	0.83	2	0.83
	Man-5	Reporting and review	2	0.83	3	3	0.83	3	0.83
	Man-6	Knowledge sharing	2	1.88	3	3	1.88	3	1.88
	Man-7	Decision-making	2	2.71	3	2	1.81	2	1.81
Pro	Pro-1	Commitment to sustainable procurement	2	1.04	3	3	1.04	3	1.04
	Pro-2	Identification of suppliers	2	1.04	3	3	1.04	3	1.04
	Pro-3	Supplier evaluation and contract award	2	1.04	3	2	0.69	2	0.69
	Pro-4	Managing supplier performance	2	1.04	3	2	0.69	2	0.69
Cli	Cli-1	Climate change risk assessment	4	4.17	3	2	2.78	2	2.78
	Cli-2	Adaptation options	4	4.17	3	2	2.78	2	2.78
Ene	Ene-1	Energy and carbon monitoring and reduction	3	11.26	3	1.4	5.25	1.4	5.25
	Ene-2	Renewable energy	3	1.88	3	2.0	1.25	2.0	1.25
Wat	Wat-1	Water use monitoring and reduction	2	3.75	3	2.5	3.13	2.5	3.13
	Wat-2	Replace potable water	2	2.08	3	0.5	0.35	0.5	0.35
Mat	Mat-1	Materials footprint measurement and reduction	2	5.00	3	2	2.83	1.7	2.83
	Mat-2	Environmentally labelled products and supply chains	2	0.83	3	0	0.00	1.7	0.47
Dis	Dis-1	Receiving water quality	3	2.97	3	2	1.98	2	1.98
	Dis-2	Noise	3	2.97	3	3	2.97	3	2.97
	Dis-3	Vibration	3	2.97	3	3	2.97	3	2.97
	Dis-4	Air quality	4	3.96	3	2	2.64	2	2.64
	Dis-5	Light pollution	4	1.67	1	1	1.67	1	1.67
Lan	Lan-1	Previous land use	2	2.08	3	3.0	2.08	3.0	2.08
	Lan-2	Conservation of on site resources	2	0.83	3	2	0.55	2	0.55
	Lan-3	Contamination and remediation	4	3.34	3	2	2.23	2	2.23
	Lan-4	Flooding design	Scoped Out						
Was	Was-1	Waste management	2	1.67	2	2	1.67	2	1.67
	Was-2	Diversion from landfill	2	2.92	3	2	1.95	2	1.95
	Was-3	Deconstruction/ Disassembly/ Adaptability	2	1.25	3	1	0.42	1	0.42
Eco	Eco-1	Ecological value	1	3.13	3	1	1.04	1	1.04
	Eco-2	Habitat connectivity	1	1.25	3	1	0.42	1	0.42
Hea	Hea-1	Community health and well-being	2	2.08	3	1	0.69	1	0.69
	Hea-2	Crime prevention	2	2.08	2	1	1.04	1	1.04
Her	Her-1	Heritage assessment and management	4	4.17	3	2	2.78	2	2.78
	Her-2	Monitoring and management of heritage	4	4.17	3	1	1.39	1	1.39
Sta	Sta-1	Stakeholder engagement strategy	3	1.56	3	2	1.04	2	1.04
	Sta-2	Level of engagement	3	1.56	3	1	0.52	1	0.52
	Sta-3	Effective communication	3	1.56	2	2	1.56	2	1.56
	Sta-4	Addressing community concerns	3	1.56	2	2	1.56	2	1.56
Urb	Urb-1	Urban design	2	3.34	3	2	2.23	2	2.23
	Urb-2	Implementation	2	0.83	2	0	0.00	0	0.00
Inn	Inn-1	Innovation	2	10.00	10	0	0.00	0	0.00