


STEPHENSON AVENUE EXTENSION PROJECT - PHASE TWO DESIGN AND AS-BUILT SUSTAINABILITY TARGETS

| SDGs | FOCUS AREA | OBJECTIVES | TARGETS | | | MONITORING METHOD - DESIGN AND CONSTRUCTION | REPORTING PERIOD | RESPONSIBILITY | | | RELATED ISC CREDIT(s) |
|--|-----------------------------------|--|--|--|--|---|------------------|---|-------------------|------------|-------------------------|
| | | | DESIGN | CONSTRUCTION | OPERATION | | | DESIGN | CONSTRUCTION | OPERATION | |
|    | Sustainable infrastructure design | Design infrastructure to have minimal impact on the environment and align with social, economic and ecological principles. | Investigate and provide two opportunities to improve urban design in accordance with the City of Stirling Controlled Roads Urban and Landscape Design Concept (R2018-13-LA01). | Implement at least one of the investigated opportunities during construction. | Maintain the installed option. | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | Pla-2 Res-1 |
| | | Innovative investment to help transition towards sustainable infrastructure | Design to include the appropriate infrastructure that caters to at least one Electric Bus Charter. | Implement the design and install proposed infrastructure for future ESVE to be installed to charge Electric Bus Charter. | Maintain the installed options. | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | PTA | |
| | | | Design option to include a number of Weather proof double power points to accommodate future ESVE for E-Bikes and E-Scooters (NB: unknown number at this stage). | Implement and install Weather proof double power points to accommodate future ESVE for E-Bikes and E-Scooters as per the design. | | | | | | | |
| | | | Design to include all the necessary electrical infrastructure and equipment to cater for four (4) parking bays that include electric car charging facilities. | Implement and install the electrical infrastructure as per the design, the facility to include infrastructure for [7-8kW, Type 2 chargers], however will not include the chargers at this stage. | | | | | | | |
|  | Resilience | Implement adequate urban design to adopt to climate change and mitigate its effect | Minimise clearing footprint for permanent design and seek opportunities to improve canopy cover by 10% from the existing canopy cover | Implement opportunities to that will achieve a 3:1 ratio of tree replacement. | Conduct infill or replacement planting in the first year. Maintain vegetation areas and canopy cover | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | Res-1 |
| | | | Implement green and blue infrastructure principles into urban design, considering water sensitive cities principles. | Install and construct infrastructure adopting the design option that considers WSUD principles. | Maintain the installed option. | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | |
|     | Energy and carbon emission | Reduce energy demand by implementing energy save options. | Prepare a lighting feasibility assessment for use of adaptive lighting on the PSPs. | Implement at least one outcome from the feasibility assessment. | Maintenance of the asset. | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | Ene-1 Ene-2 Ecn-1 |
| | | | Design for the installation of LEDs (opposed to HPS) along the Stephenson Ave section of Mitchell Freeway (1.5kms). | Implement installation of LEDs (opposed to HPS) along the Stephenson Ave section of Mitchell Freeway (1.5kms). | | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | |
| | | Reduce contribution to climate change and dependence on fossil fuels through good energy management. | Final design demonstrates at least 5% reduction in Scope 1 and 2 emissions from energy consumption compared with the Base Case. | Final as built and modelled operational data demonstrates at least a 5% reduction in Scope 1 and 2 emissions compared with the Base Case. | Monitor and maintain energy saving technology implemented in the infrastructure | Monthly Board Project Report | Monthly | Design Manager Deputy Alliance Director | Alliance Director | MRWA / CoS | |

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| | | | DESIGN | CONSTRUCTION | OPERATION | | | DESIGN | CONSTRUCTION | OPERATION | | | |
|   | Waste reduction | Put in place best practice waste management systems to reuse, reduce and recycle materials. | Utilize 22KT of recycled crushed concrete for temporary platforms for the CMC rig and reuse the concrete as foundation for the embankments. Seek Opportunities and perform any testing required on recycled crushed concrete to utilise additional 37KT in the Permanent Works, including the "LTP" load transfer platforms which sits on top of the CMC's. | Implement opportunities to reuse excess waste and concrete. | Monitor and maintain the asset | Monthly Board Project Report | Monthly | Design Manager/ Deputy Alliance Director | Alliance Director | MRWA / CoS | Ene-1 Rso-1 Rso-4 Rso-6 Pla-2 | | |
| | | | At a minimum, all pavement materials will be used as fill and will not be removed from the site. | Unless existing pavement can be up-cycled, all existing pavement to remain on site and be reused as general fill and verge material. | | | | Monthly Board Project Report | Monthly | | | Design Manager/ Deputy Alliance Director | Alliance Director |
| | | | Select materials to ensure they can be left in place. Recover and reuse temporary quarry materials in place and incorporate them into permanent works. | Incorporate construction materials from temporary works into final works diverting excess material from landfill. | | | | Monthly Board Project Report | Monthly | | | Design Manager/ Deputy Alliance Director | Alliance Director |
| | | | Identify the opportunities to use precast retaining wall panels made from recycled materials instead of limestone block walls. | Implement opportunity into the project. | | | | Monthly Board Project Report | Monthly | | | Design Manager/ Deputy Alliance Director | Alliance Director |
| | | | Seek design opportunities to reduce disposal of spoil from landfill by 15%. The project has significant volumes (>20,000bcm) of Class III Landfill Waste, acid sulfate soils and contaminated materials. | Spoil waste destined for landfill reduced by 15% by adopting value engineering principles - reuse existing material as non-structural fill. | | | | Monthly Board Project Report | Monthly | | | Design Manager/ Deputy Alliance Director | Alliance Director |
|   | Water Resources | Manage the water consumption (portable and non-portable) as efficiently and responsibly as possible. Improve water quality through good water management. | Implement opportunities during design to reduce water demand/needs across asset Lifecycle by at least 5% based on water use modelling for the final design in reference to the Base Case. | At least 5% reduction in water use during construction only compared to the Base Case. | Monitor and maintain the asset | Monthly Board Project Report | Monthly | Alliance Director | Alliance Director | MRWA / CoS | Env-1 Wat-1 Wat-2 | | |
| | | | Investigate three opportunities to improve surface water quality and provide a feasibility assessment /options assessment on these opportunities for incorporation into the project design. | Implement at least one opportunity to improve surface water quality during construction | | | | Maintain and monitor the surface water quality | Monthly Board Project Report | | | Monthly | Alliance Director |
|    | Stakeholders engagement | Actively collaborate with stakeholders to deliver infrastructure that meets society needs | Identify and consult with government agencies or projects in the local area on at least 3 resource efficiency opportunities (e.g. source/share resources such as fill). | Implement at least 1 resource efficiency opportunity to source/share resources (e.g. fill) with other government agencies or project in the area. | Identify opportunities for ongoing resource efficiency during maintenance activities | Monthly Board Project Report | Monthly | Community and Stakeholder Engagement Manager | Alliance Director | MRWA / CoS | Ecn-1 Rso-1 Rso-4 Sta-1 Sta-2 | | |
| | | | Identify community priorities and provide consultation for at least 3 issues where stakeholders input is considered the most valuable. Provide the consultation during design and construction. | A monitoring program is implemented to measure the success of initiatives implemented to solve priority issues. | | | | Ministerial media statement and social media announcing completion Update the MRWA project page | Monthly Board Project Report Consultation summary notes | | | Monthly | Community and Stakeholder Engagement Manager Design Manager |
|   | Sustainability Awareness | Empower and support people to contribute to sustainability aspirations in their roles and daily activities. | Deliver at least three awareness sessions to improve understanding of infrastructure sustainability in the sector. | Deliver quarterly awareness sessions to Alliance Project Team. | Maintain sustainable reporting | Monthly Board Project Report | Quarterly | Alliance Director Sustainability Environmental Manager | Alliance Director | MRWA / CoS | Wfs-1 Wfs-2 | | |