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Albany Ring Road- Phase 1: Annual Project Sustainability Report 2020/2021

Prepared for: Main Roads Western Australia

Prepared by: Decmil Southern Pty Ltd

This annual report covers the period from 01 July 2020 – 30 June 2021.
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About this Report

This report has been prepared by Decmil Southern Pty Ltd “Decmil”, Albany Ring Project team (Project team herein). The report is for the current works - Albany Ring Road - Phase 1 (herein the Project). This report has been completed on behalf of Main Roads Western Australia (MRWA). This report forms part of Main Roads’ annual sustainability reporting which is integrated into its Annual Report. The report content is prepared in reference to the GRI and ISCA principals.

The reporting timeframes align with the Financial Year cycle for 2020/2021.

Introduction

Due to growth of the Albany Metropolitan Area, along with resources and agricultural industry, there is an anticipated increase in traffic congestion, reduced amenity, and serviceability of the current freight routes servicing Albany. The Albany Ring Road (ARR) is a key regional MRWA infrastructure Project, which aims to address the above concerns, in providing a 14km dedicated freight route to bypass the metropolitan urban commercial and residential areas of Albany.

The Project will also remove the need for these vehicles to travel through the City, improving road safety, and will become an important link in the State road network. The ring road will cater for travel demands associated with the continued growth in grain, woodchip and other agricultural industries, population, urban expansion as well as an expected increase in the number of tourists visiting the region.

The Project will be completed in three (3) stages. Design and construction of the ARR commenced in October 2020, with works on-site for Phase 1 only. Subsequent Phases will be designed built in stages over a period of approximately three (3) years:

- The first stage of the connection to get underway will be the new interchange at Albany Highway and Menang Drive, and construction of the section of the Ring Road south towards Lancaster Road
- The second stage of construction, from Lancaster Road to South Coast Highway will take place following completion of the detailed design
- Timing of the final stage of construction, from South Coast Highway to Princess Royal Drive is subject to State and Federal Environmental Approvals

The Project is currently in design and construct of Phase 1 (Menang Drive to Lancaster), with Phase 2 yet to be awarded. An overview of the current scope of works has been provided at Image 1 below, with additional information available on the MRWA website.

Online resources:

mainroads.wa.gov.au/projects-initiatives/projects/regional/albany-ring-road/

ALBANY RING ROAD - PHASE 1 WORKS

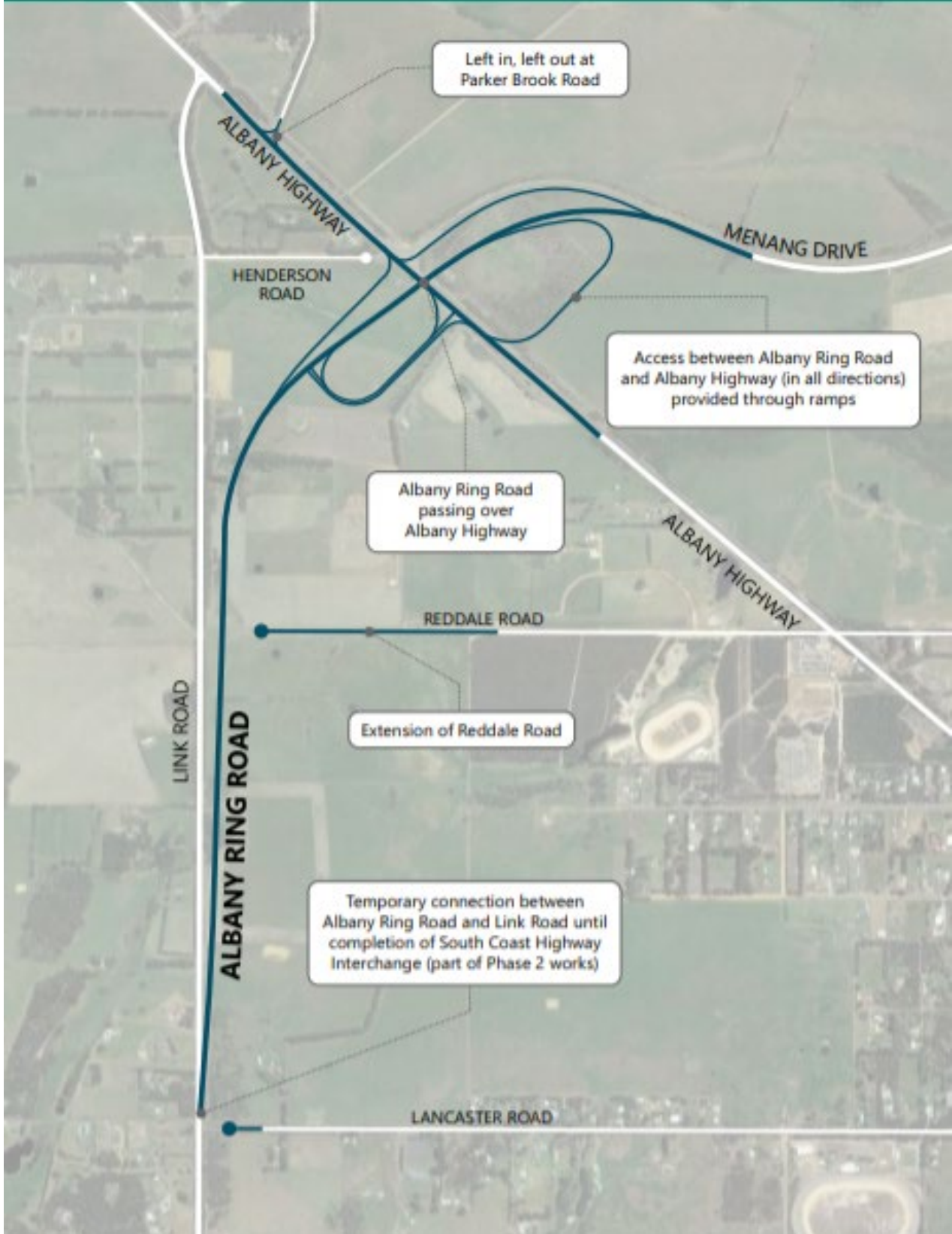







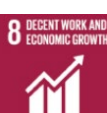





Image 1 Current works area – Phase 1

Highlights

Phase 1 of the Albany Ring Road has already delivered against key sustainability targets for the Project, which are highlighted at **Table 1** below.

Table 1 Project highlights 2020-2021

 	<p>Developing Positive Legacy</p> <p>The Project acknowledges the historical context of Albany, and the regional ties to ANZAC. In 2021 Decmil provided a donation to the annual Returning Servicemen League (RSL) – supporting the historical dawn service, and the mid-morning service.</p>
 	<p>Building environmental awareness for conservation species</p> <p>The Project recognises that construction has a role to play in providing opportunity for study and conservation of species, especially those that are impacted by urban development and ongoing habitat fragmentation. As such the Project has developed a Student Research Project in collaboration with the Albany UWA campus. The focus will be to monitor the movement of fauna during construction, as well as to establish the use of man-made connections in the landscape, such as dual use culverts and rope bridges.</p>
  	<p>Researching stories of place for heritage awareness</p> <p>The Project acknowledges the importance of place, and significance that the Great Southern Region represents to Menang Noongar People. Under guidance and experience of Albany UWA Research Centre, the Project is currently in discussions surrounding the funding of student research which is focused on preserving and sharing elder knowledge as permitted by Menang Noongar elders.</p>
  	<p>Indigenous employment and engagement in the community</p> <p>The Project has committed to engaging indigenous community through employment on Project. This is through partnering with local aboriginal businesses, as well as by ensuring that engagement happens through the appropriate means and are inclusive. This included specific traineeship program development.</p> <p>The Project has further commenced on a series of Cultural awareness seminars, to help build and explore, and better understand and respect local Aboriginal Culture.</p>
	<p>Making the most of site materials</p> <p>The Project continually seeks to rationalise design to reduce the impacts to program and environment, such as developing earthworks methodologies to achieve as close as possible a neutral cut/fill balance. Ground improvement works where uncontrolled fill locations on site were identified have also reduced material to landfill.</p>

Overview

General Project overview

The design and construction of the Albany Ring Road has been funded by Commonwealth and State Government, for Phase 1 and Phase 2. Phase 1, currently underway is characterised by a new interchange at Albany Highway and extension of the Ring Road south to Lancaster Road. Phase 2, yet to be commenced will comprise the remaining construction from Lancaster Road to Princess Royal Drive.

Overall, delivery of Phase 1 and Phase 2 will provide a freight route of 11.5 km, diverting heavy industry freight around the City of Albany. At its completion, the ring road will link the existing major roads and highways radiating from Albany, bypassing urban areas, improve access to the Mirambeena Strategic Industrial Area, reduce congestion and increase road safety.

The design and construct elements for the completed ring road will include:

- Approximately 11.5 km of predominately new single carriageway road
- Grade separated interchanges with key existing roads
- Bridges and culverts
- Water retention basins and other drainage structures
- Landscaping and revegetation works
- Modifications to local roads
- Road safety barriers
- Road lighting, and
- Noise and retaining walls

Funding and staging

Phase 1 was awarded in October 2020, with a budget of \$55 million. Phase 1 is anticipated to be completed by early 2022, and comprises the below key elements:

- Grade separated interchanges with key existing roads
- Bridges and culverts
- Water retention basins and other drainage structures
- Landscaping and revegetation works
- Modifications to local roads
- Road safety barriers
- Road lighting

Overall approach to Sustainability

Sustainability and sustainable development

The Project team seeks to successfully design and construct the ring road, in a sustainable manner. The team acknowledges that this means an ongoing commitment throughout delivery, to build a positive legacy for the Project. Central to the way the Project team will deliver Phase 1 are processes that demonstrate commitments to positive social, environmental, and economic outcomes. The Project's commitment to achieving these outcomes, is also supported through the application of the Infrastructure Sustainability (IS) framework in design and construction.

The Project team have committed to promoting a positive culture toward sustainability, through approaches described within Decmil overarching Sustainability Policy – as adopted by Project, as well as through Project specific plans such as the:

- Albany Ring Road Sustainability Management Plan: This plan describes how the Project team will deliver on sustainability aspects, including IS requirements, contract requirements as well as roles and responsibilities for implementing sustainability on the Project.
- Industry Sustainability Management Plan: This plan describes the minimum levels of engagement for local businesses within the region, local content spend as well as community participation goals.
- Infrastructure Sustainability Action Plan: This plan supports the existing sustainability management plans on Project, and provides a road map for the implementation of the IS rating on the Project.
- Project Sustainability Working Group Procedure: This procedure highlights the intent and structure of the working group; as a forum where the Project team meet to discuss targets, review goal setting, assess upcoming risks and opportunities as well as raise initiatives.

Policies and plans provide specific guidance to achieve the Project sustainability targets, in a framework that highlights the top Sustainability Development Goals (SDGs) that the Albany Ring Road is striving to achieve.

Further links to resources are below.

<https://decmil.com/about-us/our-approach/sustainability/>

<https://decmil.com/about-us/our-approach/environment/>

<https://decmil.com/about-us/our-approach/decmil-in-the-community/>

Infrastructure sustainability rating

The processes set out by the Infrastructure Sustainability Council of Australia (ISCA) strive to integrate social, economic and environmental outcomes into all processes of delivering infrastructure and assets. Subsequently, the Project is continually revising, enhancing, and seeking to improve sustainable aspects of design and construction applicable to the Project.

Phase 1 is currently undertaking a self-assessment process against the ISCA version 2.0 technical manual. This is for design and as-built stages of Phase 1; to assess the level of sustainable practices embedded within the Project delivery. Evidence will be progressively gathered throughout Phase 1 to demonstrate performance against IS credits targeted. Through materiality workshops, some IS credits were identified to be of high materiality to Phase 1 – such as:

- Con-1 Urban and Landscape design context
- Eco-1 Ecological Assessment and Management
- Env-2 Noise
- Sta-1 Stakeholder Engagement and Strategy Development
- Rso-1 Resource Strategy Development
- Sta-2 Stakeholder Engagement Strategy Implementation
- Rso-4 Resource Recovery
- Leg-1 Leaving a Lasting Legacy

Sustainability development goals and material sustainability issues

Through an extensive and collaborative review of risk, opportunities and material issues, i.e. those topics and aspects of great importance to Project performance, core SDGs have been identified and mapped to material issues for the Project. These are presented at Appendix 4- Project Sustainability Targets.

In addition to these SDGs, the Project will also aim to continually minimise environmental impact through design process, landscape and revegetate as soon as possible and in a manner suitable for the region, procure local goods and services and encourage training and up-skilling of the local workforce. The Project also seeks to undergo an Infrastructure Sustainability (IS) rating assessment, utilising the version 2.0 & 2.1 IS Tool.

Resourcing, reporting and forums

The Project has a nominated Environment Manager, and Sustainability Manager, who co-ordinate and assist the broader team in achieving sustainability goals on Project and provide advice on the IS process as trained Infrastructure Sustainability Accredited Professionals.

The Environment and Sustainability Managers regularly report on and discuss sustainability performance through weekly sustainability meetings, monthly ISCA meetings as well as workshops and presentations. In addition to this, the Project reports monthly to MRWA on sustainability, environment, and Project performance. Annual reports are also developed by Decmil and MRWA, which are shared publicly.

Further information can be found here: https://decmil.com/reports_category/annual-reports/

Environmental Aspects Performance

At a glance

Aspect	Year to 30 June	Total for Project
Forecast Clearing (ha)	7.93	16.18
Clearing permit allowance (ha)	16.18	16.18
Actual clearing to date (ha)	7.93	16.18
Rehabilitation/revegetation planned (ha)	0	0
Actual rehabilitation/revegetation to date (ha)	0	0
Environmental offset via Monetary contribution actual (\$)	Under assessment (MRWA)	
Total Water Consumption to date (kL)	16,473	16,473
Total water licence allowance (kL)	NA	NA
Total GHG emissions (scope 1, 2 & 3) to date (t CO ₂ e)	1034.4	1034.4
Total diesel imported (l)	353,268.62	353,268.62
Total energy consumption to date (mj)	13,424,207.56	13,424,207.56
Total quantity of recycled content used in Project (t)	0	0
Total imported materials used in Project (t)	7,417	7,417
Total waste generated by Project (t)	4.76	4.76
Total waste generated by Project (l)	34, 500	34, 500

*Source – MRWA monthly report



Image 2 Preclearing property checks

Environmental context

Vegetation and ecology

The Project impact on vegetation includes loss of approximately 11.6 ha of native vegetation (13 % of the Proposed Area), 60 % of which is in Degraded or worse condition. The remaining 40 % (4.6 ha) is comprised of Good or better-quality vegetation.

The loss of up to 3.5 ha of riparian vegetation associated with a wetland (marsh area) and minor nonperennial watercourse may occur.

During ecological surveys, it was identified that the Project could result in the loss of individuals from three Priority flora species consisting of:

- Four *Synaphea incurva* (Priority3, DBCA) individuals, estimated to represent less than 1% of the known population.
- 253 *Boronia crassipes* (Priority3, DBCA) individuals, estimated to represent 2.75% of the known population.
- One *Andersonia sp. Jamesii* (J. Liddelow 84) (Priority3, DBCA) individual, estimated to represent 0.05 % of the known population.

Impacted vegetation, other than non-forestry agricultural land use, provides remnant habitat for conservation significant species, such as all three species of Black Cockatoo (Carnaby's Black Cockatoo, Forest red-tailed Black Cockatoo and Baudins Black Cockatoo), as well as the Western Ringtail Possum and Southern Brown Bandicoot. See Appendix 1 and 2 for further information of protected areas and species.

Water Resources

Phase 1 falls outside of groundwater management areas, as confirmed the Regional office of Department of Water and Environmental Regulation (DWER).

The current Phase does not directly interact with any major surface water features, however upcoming works interface with 5 mile creek. Installation of culverts and new infrastructure will occur at this location.

A Beds and Banks Permit has been issued by the DWER for this purpose.

Environmental legislation

Current primary environmental approvals for Phase 1 include:

- CPS 818/15 (s51E)
- PMC203878(1) Permit to Obstruct or Interfere (s21A)
- PMC203985(1) Permit to Obstruct or Interfere (s21A)
- Licence to disturb native fauna
- Authorisation to disturb (TFA)

Additional information on Phase 1 (Referred to as Stage 3a during the EIA) can be found below from the EPA website: <https://www.epa.wa.gov.au/proposals/albany-ring-road-stage-3a>

Environmental Management

An Environmental Management Plan (EMP) has been developed for Phase 1. This EMP outlines management, mitigation and measurement required to implement environmental controls, and evaluate their effectiveness.

The EMP outlines legislative and contractual requirements and is consulted in the review of upcoming works during construction when developing methodologies. The EMP is in compliance with and supported by Decmil third party certified Environmental Management System (ISO 14001). This makes sure that environmental management requirements are central to the undertaking of site works, and follow a repeatable process to identify environmental aspects and impacts throughout design and construct.

Implementation of the EMP will:

- Assist in the prevention of environmental harm
- Fulfil the environmental requirements as defined in the Contract, including complying with relevant permits and approvals
- Comply with all relevant environmental legislation
- Support the achievement of Project objectives and targets
- Minimise negative impacts on the community that relate to the Project's environmental impacts
- Fulfil the Decmil environmental management system (EMS) requirements enabling continued certification to ISO14001.

During the design process, the Project seeks to reduce impacts upfront, prior to construction. For instance, preference has been given to primarily disturbed agricultural paddock for selection of the general alignment, with strict clearing limits provided for the Project works. This has already included shifting of the alignment to the east of Link road to avoid clearing of Link road verge vegetation, and the inclusion of dual use culverts and fauna bridge in upcoming Phase 2 of the works. The latter of which will assist to maintain urban linkages of native fauna, including the Western Ringtail Possum.

Water Management

The Project seeks to reduce dependency on water use, especially potable scheme water. To date, water sources for earthworks has been predominantly from groundwater supply. The Project has established 3 abstraction bores for earthworks purposes on site. At present, regulatory approval from DWER is not required for the use of groundwater.

Volumes abstracted are reported monthly in Project reports to MRWA and are additionally captured within MRWA Quarterly Dashboard Reports. Volumes are captured through the use of flow meters.

The use of additives such as Dustex have been implemented on the Project where site shut down periods occur over summer, to remove the continued need for dust suppression and resources associated with this activity during site shut down.

Source	Year to 30 June	Total for Project
Water purchased from the scheme in litres	258kL	258kL
Water pumped from bores in litres	14080	14080
Water pumped from rivers, lakes or harvested in litres	0	0
Recycled or waste water use (typically from another industry) in litres	0	0

Carbon Emissions & Energy

Project carbon emissions are largely associated with the operation of earthworks equipment, as well as electricity production from diesel generators.

Discussions are underway with Carbon Neutral Australia to devise the most effective option for Phase 1. Opportunities within Western Australia, and overseas have been provided for review by MRWA, all of which align with emission reduction outcomes, as well as SDGs. The Project will seek to undertake offset emissions from plant and equipment involved in earthworks, upon approval from MRWA.

The Project also aims to use mixed power solutions where these are available – such as solarpowered temporary lighting units.

Source	Year to 30 June	Total for Project
From fuel use (mj)	13,128,149.56	13,128,149.56
From electricity (generator) (mj)	296,058	296,058

*Source – based on 38mj per litre for diesel. 2020.2021 total fuel import was 353 268.62L, with 7 791L for electricity

Materials & Recycling

At present, the major waste streams are those from maintaining the Site Office Facilities:

- Food organics
- Cardboard
- Minor Plastics
- Septic waste

Notwithstanding the above, the Project is set to undertake a resource efficiency workshop in the coming financial year, to review and evaluate the management of upcoming materials and waste streams associated with construction of remaining works, which are to be generated during the remainder of Phase 1.

Current targets set for Project are described within the EMP waste and resource recovery sub-plan, and are focused on:

- Tracking of Project waste generated on site
- >75% of clean/inert fill re-used on site
- Diversion of office waste from landfill (70%)
- Diversion of inert materials from landfill (80%)

Material and Waste Statistics

Imported Materials	Year to 30 June	Total for Project
Sand (t)	4, 145	4, 145
Gravel (t)	0	0
Clay (t)	0	0
Limestone (including crushed) (t)	3, 272	3, 272
Crushed Rock (t)	0	0
Crusher Dust (t)	0	0
Aggregate (t)	0	0
Asphalt (t)	0	0
Concrete (t)	732.76	732.76
Steel (t)	72.37	72.37
Precast concrete (t)	151.5	151.5
Emulsion (t)	0	0
Bitumen cutter (t)	0	0
Bitumen (t)	0	0
Glass (t)	0	0
Paint (t)	0	0
Topsoil (t)	0	0
Mulch (t)	0	0
Other (t) Cement stabilised backfill	2229.6	2229.6
Other (t) Bedding sand	2434.5	2434.5
Other (t) Rock	100	100
Waste to Landfill	Year to 30 June	Total for Project
Unsuitable material (t)	0	0
Existing seal / asphalt (t)	0	0
Roadside litter / municipal solid waste (t)	4.76	4.76
Commercial / industrial waste (t)	0	0
Green waste (t)	0	0
Concrete / kerbing (t)	0	0
Construction / demolition waste (t)	0	0
Contaminated material (t)	0	0
Asbestos (t)	0	0
General/Green Waste (t)	0	0
Other (L) K210 Septic	34500	34500
Waste Recycled	0	0
Sand (t)	0	0
Road base (t)	0	0
Asphalt (t)	0	0
Timber (t)	0	0
General waste (site office / roadside litter) (t)	0	0
Steel (t)	10	10
Concrete (t)	120	120
Green waste / mulch (t)	0	0
Plastic (t)	0	0
Other (t)	0	0
Imported recycled content	Year to 30 June	Total for Project
Sand (t)	0	0
Road Base (t)	0	0
Crumbed Rubber (t)	0	0

Recycled asphalt (t)	0	0
Steel (t)	0	0
Concrete (t)	0	0
Crushed Glass / beads	0	0
Limestone (t)	0	0
Plastic (t)	0	0
Green waste / mulch (t)	0	0
Topsoil (t)	0	0
Unsuitable material (t)	0	0
Other (t)	0	0

*Source – based on MRWA monthly reporting

Noise and vibration

Construction

The Project is primarily set within an agricultural / urban setting, and near existing freight and transportation corridors. Regardless of this, Phase 1 seeks to maximise the use of general construction hours to prevent disturbance to nearby residents during the evening and night i.e. 'Out of Hours' works.

Any works that are completed Out of Hours, are subject to Local Government (City of Albany) approval; where specific Noise and Vibration Management Plans are reviewed and assessed by the relevant personnel. These Noise and Vibration Management Plans identify how the Project will seek to manage noise and vibration during Out of Hours works and includes notification process to affected nearby residents.

The program of works also seeks to provide respite from major earthworks activities, which are typical sources of noise and vibration during construction. For instance, during the winter months, earthworks are scaled back and less noise and vibration activities commence, such as shifting focus to structures.

With regards to vibration, a vibration logger is deployed prior to any vibration related works to locations, as advised by MRWA.

Operation

Design reviews for Phase 1, seek to identify potential treatments and noise wall locations along the alignment. Implementation of treatments and noise walls are discussed with MRWA, Design Consultants and Decmil to determine suitability of proposed options. This is expected to be an ongoing process through delivery of Phase 1 and Phase 2.

Contaminated sites

The Project does not interface with any known contaminated sites, however, due to previous land uses within the development area – substantial uncontrolled fill has been identified, through localised infilling practices.

The nature of the uncontrolled fill identified in Phase 1 was characterised through specific Environmental Technical Studies at the site level. This was undertaken by geotechnical consultants to the Project, who also provided alternative construction methodologies to typical excavation and replacement methods of unsuitable materials. This resulted in avoiding interfacing with potential contamination through excavation, as well as Project costs with disposal to landfill.

Clearing

Phase 1 interfaces with remnant vegetation along portions of the alignment. Prior to commencing clearing, a regionally experienced zoologist was engaged to undertake a site wide check of the clearing envelope for species of Black Cockatoo, Western Ringtail Possums and other fauna. The checks included ground survey on foot, as well as drone survey of potential habitat trees. These checks were completed immediately prior to clearing to ensure that field checks were completed prior to disturbance. Spotlight checks were also completed prior to each clearing event.

In addition to the zoologist checks, and pre-clear inspections, pre-clearing boundaries were pegged as per Project clearing permit requirements as well as completion of specific field toolboxes with operators and supervisors undertaking clearing.

The Project also sought engagement with regional conservation groups to undertake field checks where this possibility was present.

Case Study

Conservation biology and construction

The Albany Ring Road Project is seeking to partner with external research organisations within the region during the period of construction. The focus of the research will be within the area of Biodiversity and Conservation. It is expected that the studies will assist in broadening understanding of fauna movement within the built landscape. This research could potentially inform future road designs of fauna movement structures and add to the regional understanding of endangered species such as the Western Ringtail Possum.

This initiative also seeks to utilise local conservation group expertise where possible – to ensure positive lines of communication on Project to a broad stakeholder group, and also provide a means for independent checks on Project, relevant to fauna management.

Economic Aspects Performance

At a glance



Image 3 Scraper at ramp 3 – materials won stockpiled for use on Project

Economic Aspect	Year to 30 June	Total for Project
Funding	\$57.6M	\$57.6 M
Increase in cycling and pedestrian facilities (i.e. increase in PSP length)	0	0
<i>Workforce and Supply Chain</i>		
Number of people employed by supply chain at various stages of Project	177	177
Total number of suppliers engaged	162	162
Total number of Indigenous Enterprise	6	6
Indigenous Trainees employed on Project	2	2
Buy Local Spend (to date)	\$4,654,625.04	\$4,654,625.04

Economic context

The Albany Ring Road (ARR) Project is in Albany, within the Great Southern Region of Western Australia. The ARR is a heavy haulage freight route around the City of Albany for the transport of goods to and from the Port of Albany. When completed the project will provide safe, uninterrupted

access to the Port of Albany while also improving traffic flow on the existing road network by reducing the number of heavy vehicles on Albany Highway, South Coast Highway and Chester Pass Road. The ARR will bypass urban areas and link the existing major roads and highways radiating from Albany:

- Improving access to the Mirambeena Strategic Industrial Area whilst providing an alternative route
- Improve traffic flow on the existing network
- Reducing heavy vehicle traffic, reducing congestion and enhancing safety for local and tourist traffic.

Proposed routes were developed in consultation with the Ministry of Planning, City of Albany, Great Southern Development Commission, and the community, culminating in a Planning Study report and selection of the preferred route. In March 2001 the West Australian Planning Commission agreed to the proposed route for inclusion into the town planning scheme.

Following endorsement of the alignment, the Minister of Planning and Infrastructure advised the planning for this route should be reviewed in the context of an overall strategic plan for the region as a priority freight route. The ARR is part of the City of Albany 2019 Local Planning Strategy.

The first stage (Phase 1) of the works has commenced and is continuing. It has included design work, on-site investigation, procurement, and construction. The Project has provided opportunities for multiple suppliers, subcontractors and businesses.

The Works undertaken to date have been performed in such a manner as to minimise any impact to local landowners, local business, and any other relevant stakeholders.

Key Economic Outcomes

The Project Key economic outcomes for the Project include:

- To provide for the long-term transport needs of Albany
- A dedicated freight route around the City of Albany in the Great Southern region of Western Australia
- The ARR is intended to be the priority route for freight movement to and from the Port of Albany. Strategically, the ARR is to provide an alternative route for heavy vehicles accessing the Port of Albany and remove the need for these vehicles to travel through built up urban areas of the City
- The ARR will cater for travel demands associated with growth in grain, woodchip and other agricultural industries, continued population growth and urban expansion and an expected increase in the number of tourists visiting the region.

Sustainable Procurement and Buy local

The Sustainability Management Plan establishes a framework to guide the implementation of sustainability initiatives on the Project and to deliver on Policy commitments made by Decmil Senior Management.

This Management Plan further set-out the Project approach and commitment to a transparent, competitive, compliant, and sustainable procurement. Sustainable procurement is defined as having the most positive environmental, social and economic impacts possible over the entire life cycle. It considers the sustainability aspects related to goods or services along a supply chain, helps foster a circular economy and contributes to sustainable development.

Supply chain engagement, selection and management is described in the Procurement Procedure and the Project's Industry Sustainability Plan.

Aboriginal Engagement

Decmil's broader Reconciliation Action Plan commits to deliver positive community solutions through our engagement with Aboriginal businesses. Decmil is a member of Supply Nation and has established a database of Aboriginal and Torres Strait Islander businesses that should be invited to tender for packages of works, where relevant.

The Project has established the following targets for Aboriginal engagement, consistent with the Gnarla Bid Strategy:

- ≥2% of awarded contracts to registered Aboriginal businesses within FY2019/20. This has been achieved.
- ≥3% of awarded contracts to registered Aboriginal businesses within FY2020/21.

During Phase 1, the Project has also developed a specific Project Aboriginal Engagement and Participation Plan, which details the overarching commitments the Project will strive to achieve in delivery of the ARR. The Project has resourced an Aboriginal Participation Co-Ordinator, who has connections with the Great Southern Aboriginal community, and is authorised to achieve the requirements of the Aboriginal Engagement Participation Plan. The Project is currently on track to achieving these targets.

Local Participation

The Decmil Procurement and Participation Plan describes how the Project will comply with the requirements of the WA State Government's "Building Local Industry" Policy, the State Supply Commission Procurement Policy, and the Western Australian Jobs Act 2017.

The plan includes a communication strategy for the Contract and its supply chain which provides:

- Early identification of opportunities for Australian participation; and
- Transfer of information on opportunities for Australian industry participation through all tiers of supply

Decmil have identified numerous key local companies, and have engaged them within the Project with success, currently the Project is reporting > 10% local content spend on a monthly basis. And we are pursuing some further large work packages with local suppliers and subcontractors.

Climate Change Assessments

The Project did not undertake a Climate Change Assessment during this reporting period. A Climate Change Risk Assessment and Adaptation Workshop is scheduled to be undertaken in August 2021. The consolidated inputs from the workshop will be finalised prior to the issue of the risk register to the team for comment and feedback prior to issuing to external stakeholders for comment.

Sustainable Transport

Albany is the centre of the Great Southern district and regional roads that carry freight to Albany Port. Local and tourist traffic converge in the city, and the impact of heavy freight movements on communities and tourism, is significant. The management of potential road conflicts between heavy freight traffic and adjacent land uses is an important planning consideration for the City of Albany, and has been central to the planning undertaken for the ARR since 1997. While the Project does not have a Principal Shared Path in its scope, the removal and diversion of heavy vehicles from the existing road will enable the road to be more accessible and safer for the use of bicycles

and other active transportation.

Case Study

Decmil continue to pursue to reduce the economic impact of the Project through various avenues, this is evidentially shown through the Projects revised bulk earthworks methodologies.

By undertaking further detailed site investigation work, revising the bulk earthworks methodologies, and undertaking design value and optimisation and engineering activities. Decmil have successfully sourced 295,201 m³ of suitable material's from within the Project's Phase 1 site boundary, thus reducing the requirement and the need for importing external sources of bulk fill materials, or the need to export and dispose of excess fill materials and further reducing the transport haulage requirement for such material.

This has provided the below Project benefits:

- Reduction in the quantum requirement for importing non local gravel materials
- Reduction in the requirement to engage non local subcontractors and suppliers
- Reduction in the cost of production by engaging local earthmoving subcontractors to produce the material
- Reduction in haulage and transport requirements
- Reduction in heavy plant and machinery on local roads, thus contributing to less wear and tear to the existing road infrastructure
- Reduction in emissions, due to reduced haulage route and reduced plant requirements

Social Aspects Performance

At a glance

Social Aspect	Year to 30 June	Total for Project
Community Satisfaction to Project	NA	NA
No. of Stakeholders engaged with during Project development (groups)	10	10
No. of complaints	16	16
No. of known heritage sites in Project vicinity	0	0
No. of heritage sites significantly impacted	0	0
No. of traffic safety incidents within Project boundary	0	0
% work hours of local Aboriginal workforce on Project	24%	24%
LTIFR	0	0
No. of hours training during Project	10	10
No. of development employees and apprentices on the Project	2	2



Image 4 Decmil in the community and training on site

Social context

The City of Albany is located in the Great Southern Region of Western Australia, about 400 kilometres south-east of Perth. City of Albany has resident population of 38,296 (Australian Bureau of Statistics, 2020), with a population density of 0.09 persons per hectare. The population of Albany grew by 0.61% in 2020 whereas the State population retracted slightly

by -0.01% in the same period. The City of Albany has an unemployment rate of 3.1% for those people looking for fulltime employment with is lower that the state unemployment rate of 4.3%.

Traditionally a farming area, the main Industries in terms of employment are:

- Health Care and Social Assistance (13.1%)
- Retail Trade (12.1%)
- Education and Training (10%)
- Building and Construction (9.4%)
- Agriculture, Forestry and Fishing now represents 6.8% of the employment in the City of Albany

The City of Albany has a strong social fabric and is surrounded by areas of outstanding natural beauty which attracts many visitors to the region. A snap-shot of the most recent Australian Bureau of Statistics has been provided at the image below. Additional information can be found in the Community and Stakeholder Engagement Management Plan, which has been specifically developed for the Project.

Age-sex pyramid, 2016



Source: Australian Bureau of Statistics, Census of Population and Housing, selected years between 1991-2016 (Enumerated data). Compiled and presented in profile.id by .id, the population experts.



Image 5 Regional demographics for Albany, reproduced from ABS statistical information

Community and Stakeholder Engagement

The Project is committed to ensuring community support throughout construction, providing timely responses to community concerns. The Project also aims to keep impacted stakeholders engaged, as well as communicate with the broader community during design and construction. The Project has a Community and Stakeholder Engagement Management Plan, developed in conjunction with MRWA Community Engagement Policy and the Western Australian Government's Sustainability and Citizenship Strategies.

This plan is developed in alignment with the principals of the International Association of Public Participation (IAP2) community and stakeholder engagement spectrum for connecting, informing, and engaging with the community and key stakeholders.

The Project has developed forums for engagement during construction, such as the Construction Reference Group and Environmental Reference Group, where key stakeholders with particular interests are encouraged to provide feedback to the Project Team.

Addressing community concerns

The Project has a clear and concise means of communication via the Project Specific Enquiries line – Albany Ring Road Enquiries 138 138. The use of this tool ensures that an appropriate representative of the Project is able to address community concerns.

As required, specific Community Action Plans are developed to assist in the management of actions required to address specific concerns by groups and/or individuals, as well as regular information briefings and construction updates.

Further information can be found via the link below:

<https://www.mainroads.wa.gov.au/projects-initiatives/projects/regional/albany-ring-road/>

Heritage

Aboriginal and European Heritage surveys were completed for Phase 1. Due to the primarily disturbed nature of the current Project work area, there were no significant findings regarding Heritage for Phase 1.

To ensure awareness is maintained surrounding Aboriginal heritage, training sessions with a recognised Albany Aboriginal Business, Kurrah Mia, have been provided to Project Personnel. They are an Aboriginal art and crafts and unique cultural tours business. The awareness session was delivered by a Menang Noongar Elder.

Phase 2 of the works will seek to build on the educational awareness programs developed in Phase 1 of the Project.

Road Safety

The completion of the ARR will see road safety increase through the separation of heavy freight and public road users. A Project Traffic Management Plan is in place for the Project. To ensure that specific Road Safety requirements are met in design, the design undergoes a series of external Road Safety Audits.

In order to provide protection to workers and the general public, to manage potential adverse impacts on traffic flows and on road users the Project are implementing the following:

- Providing a sufficient number of traffic lanes to accommodate vehicle volumes
- Ensuring delays are minimised
- Ensuring all road users are managed including motorists, pedestrians, cyclists, people with disabilities and people using public transport
- Ensuring work activities are carried out sequentially to minimise adverse impacts
- Provision will be made for works personnel to enter the work area in a safe manner in accordance with safety procedures
- All entry and exit movements to and from traffic streams shall be in accordance with the requirements of safe working practices.

Traffic Management / Community Safety

The Project has a comprehensive design, review and approval process in place for all Traffic Management aspects. Where diversions for construction are required, these are developed by appropriately qualified Traffic Management consultants, in liaison with the City of Albany. These changes are communicated to the community through the use of the Project Construction Update.

Throughout the design, construction and operation phases of the Project, road safety audits in accordance with Austroads' Guide to Road Safety – Part 6: Road Safety Audit will be undertaken.

Stage Audit Was Undertaken	Date	Status of completion
15% Design	18/11/2020	Complete
85% Design	08/03/2021	Complete
100% Design	17/06/2021	Complete

Traffic audits are also undertaken immediately prior to the opening to the public of road for the continuous unrestricted passage of vehicles, and, within two weeks after the road being opened to the public for the continuous passage of vehicles.

There have been no traffic accidents during Phase 1 of the ring road in this reporting period.

Workforce Safety

Workforce health and safety is a core value, and a value that is never compromised. Appropriate resources are available or sourced to maintain a high standard and health and safety is raised and discussed as the initial agenda item of any meeting. The Project ensures hazards or non-compliance items identified are rectified as soon as practicable, and in accordance with the assessed level of risk. Compliance with safety standards and procedures is absolute.

The Project aims to promote, recognise and reward safe behaviours, and correct at-risk behaviours observed immediately. monitor, review and report on HS performance regularly, and implement changes as required, to ensure that HS objectives and targets set are achieved.

The Project has set several key objectives and associated targets to be achieved during the delivery of the Project. These are included in the table below.

KPI	Target
Compliance with Decmil's HSE Management System.	No Major Non-Conformances.
Safety Observations	Monthly targets for observations completed in accordance with KPI Matrix set.
Work Area HS Inspections	Inspections completed in accordance with KPI Matrix set. Actions raised closed out within timeframes set.
Alcohol and drug testing	Random monthly drug screen for personnel working at the site
HSE Training	All personnel inducted before starting work onsite.
Communication and Consultation	100% attendance of toolbox talks
	100% attendance of pre-starts
	100% attendance of Stop For Safety
Achieve a 'Goal Zero' Project.	Track no. of restricted work injuries per million hours worked.
	Track no. of medical treatment injuries per million hours worked.
	Track no. of recordable incidents per million hours worked.
	Track no of high potential incidents per million hours worked.

A Project specific Health and Safety Management Plan was developed for the Project capturing these objectives and targets. The plan outlines the method for monitoring and review of target achievements which are through audits, inspections, Key Performance Indicator tracking. The plan also outlines communication and consultation methods including forums, daily pre-start and toolbox meetings, and site alerts and noticeboards. The safety on the Project is managed through the Project Health and Safety Management Plan which receive reviews every 3 months from Decmil body corporate. Additionally the Workforce safety on Project is supported by the Critical Risk Program, and through continued operation and compliance with the AS/NZ 4801 certified Health and Safety Management System. Continual monitoring, inspection and improvement is monitored through the use of Decmil's SAI Global system.

Noting that safety is a matter for all Project personnel to be responsible for, ARR ensures the essential skills required to lead and work safely through training, education and coaching are provided. Project personnel recognise and are aware of the hazards and risks in their Project and act accordingly. Members of the Project team have dedicated responsibilities to ensure safety KPI compliance of each individual Project management team member. KPIs include monthly targets for one-on-one inspection & observation.

The Workforce safety on Project is supported by the Critical Risk Program, and through continued operation and compliance with the AS/NZ 4801 certified Health and Safety Management System.

The Project has been 275 days LTI free achieved on 31st July 2021. Total Injury Frequency Rate TRIFR is zero. Focus on high-risk tasks around bridge construction and Albany Highway traffic interface.

Workforce Development

The Project has committed to providing skills training appropriate to the region. This is anticipated to first be implemented 2021/2022 financial year, with a focus on a certification/diploma in Project Management skills for interested personnel on Project.

Decmil has also identified opportunities for continued awareness and development of staff skills through initiatives such as Mates in Construction.

The Project has currently accepted their first intake for training and onboarding for aboriginals in the local area. There are currently 12 applicants who will have three weeks attendance and training accruing skills and qualifications to better suit them for the construction industry.

Case Study

The Project has provided learning opportunities to the broader community and local industry, within the area of mental health and suicide response. This was undertaken through partnering with Mates in Construction (MIC) and the Master Builders Association.

Training delivered encouraged the uptake of skills in dealing with mental health first aid, providing awareness on regional resources for suicide and mental health resources, and about getting comfortable to ask questions of your fellow work mates surrounding emotional well-being, specifically suicide. Local contractors on the Project were also encouraged to attend; without cost.

Appendix 1 - List of Protected Areas Project interfaces with:

Phase 1 of the ARR does not interface with any known Protected Areas.

There are no Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) within the Project Area.

Appendix 2 - Protected fauna and flora species and habitat

Conservation significant fauna:

- Carnaby's Cockatoo (*Calyptorhynchus latirostris*)
- Baudin's Cockatoo (*Calyptorhynchus baudinii*)
- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)
- Western Ringtail Possum (*Pseudocheirus occidentalis*)
- Southern Brown Bandicoot (*Isodon obesulus subsp. fusciventer*)

Conservation flora:

No species of flora listed as a Matter of National Environmental Significance under the *Environmental Protection Biodiversity Conservation Act* or as Threatened under the *Biodiversity Conservation Act* have been recorded in the Project Area.

Three Priority listed species have been recorded in the Project area:

- *Synaphea incurva*
- *Boronia crassipes*
- *Andersonia sp. Jamesii*

All species are locally common and are either known from multiple records/locations or have been recorded in large numbers.

Appendix 3 – List of Stakeholders to the Project




Stakeholder	Relevance to Project	Engagement requirement
Federal Government Federal Minister for Infrastructure and Transport, Hon Michael McCormack	Providing 80% funding	Managed through Minister’s Office and Main Roads
State Government Minister for Transport, Hon Rita Saffioti	Providing 20% funding State Minister responsible for Project delivery	Ongoing updates provided via Main Roads. Direct interest in any ‘announceable’ opportunities / positive media etc. Requires advanced copies of key communication material
State Government Agencies Department of Transport Department of Planning, Lands and Heritage Albany Port Authority Great Southern Development Commission Public Transport Authority Department of Biodiversity, Conservation and Attractions Water Corporation Western Power other Service providers	Responsible for various elements of Project Endorsement in line with existing and future planning requirements Approvals (i.e. DBCA) Cost implications (services relocation if required)	Key representatives form part of Region’s stakeholder roundtable, which will meet periodically throughout Project. Contractor to manage at an operational level (to facilitate approvals etc).
Other Emergency Services St John Ambulance Department of Fire and Emergency Services (FESA) WA Police	Determine if the Project provides for emergency services Emergency vehicle operations may be affected by construction of Project	Contractor to manage at an operational level
Federal Local Members		Managed through Minister’s Office and






Stakeholder	Relevance to Project	Engagement requirement
Rick Wilson, Member for O'Connor		Regional Manager. Periodic updates provided
State Local Members Peter Watson, Member for Albany	Note that Peter Watson has indicated that he will retire at the 2021 State Election.	Managed through Minister's Office and Regional Manager. Periodic updates provided
Local Government City of Albany	Collaboration and engagement with LGA required around design development and communications	Updates to LGA executive and Council led by the GSR MR. Consideration given to a technical advisory committee with senior City of Albany personnel Contractor and Project team to form relationships at operational levels
Local Government Shire of Denmark Shire of Plantagenet		Updates to LGA executive and Council led by the GSR MR. Contractor and Project team to form relationships at operational levels as required
Freight and Logistics Council of WA WA Road Transport Association	Require support from industry to maximise Albany Ring Road usage Heavy vehicles may be impacted by construction and final design	Key representatives form part of Region's stakeholder roundtable, which will meet periodically throughout Project. Contractor to provide support on an ongoing basis and coordinate any proactive comms with MRWA and the Region.
Timber Resources Operations Group	Design (including intersections)	Key representatives form part of Region's stakeholder roundtable, which will meet periodically throughout Project. Contractor to provide support on an ongoing basis and coordinate any proactive comms with MRWA and the Region.
WA Farmers (CBH)	Freight cost implications	Key representatives form part of Region's stakeholder roundtable, which will meet periodically throughout Project. Contractor to provide support on an ongoing basis and coordinate any proactive comms with MRWA and the






Stakeholder	Relevance to Project	Engagement requirement
		Region.
Livestock and Rural Transporters Assoc WA	Require support from industry to maximise Albany Ring Road usage Heavy vehicles may be impacted by construction and final design	Key representatives form part of Region's stakeholder roundtable, which will meet periodically throughout Project. Contractor to provide support on an ongoing basis and coordinate any proactive comms with MRWA and the Region.
Albany Visitor Centre	Construction impacts	Contractor to keep AVC updated on an ongoing basis and share resources as required.
Albany cycling groups Bob's Bikes Passmore Cycles Impulse Cycles Southern MTB Albany Tri Club Albany BUG	PSP / cycling facilities and connections	Periodic updates to be provided following confirmation of scope Contractor to keep groups updated on an ongoing basis and share resources as required.
Businesses north and south of Lower Denmark Road (off Roundhay and Allerton Street)	Access concerns re. severance of access across Lower Denmark Road (through closure of level crossing)	Extensive engagement to-date (July 2020). Contractor to assume management of this group and ensure appropriate mechanism for information dissemination and engagement is identified.
Businesses (construction related)	Opportunities for involvement in construction	Industry Forum to engage with local businesses
Sporting groups/schools/churches etc	Information	Contractor to keep groups updated on an ongoing basis and share resources as required.
Local resident organisations Albany Residents and Ratepayers (FB page: Elizabeth Barton, Abigail Parker)	Information / feedback opportunities	Contractor to keep groups updated on an ongoing basis and share resources as required.
Local landowners Landowners and residents	Interest in design and connections	Extensive engagement to-date (July 2020). Contractor to assume management of this








Stakeholder	Relevance to Project	Engagement requirement
within locality		group and ensure appropriate mechanism for information dissemination and engagement is identified
Road users	Interest in connections and construction impacts	Contractor to manage through various communication mechanisms
Environmental Groups South Coast NRM Torbay Catchment Group Wildflower Society WA (Albany) Oyster Harbour Catchment Group Albany Community Environment Centre Denmark Environment Centre	Interest in environmental impacts	Engagement led by the GS Region – via Environmental Reference Group. Contractor to attend meetings and provide support to group as required.
Construction Reference Group (TBC)	Likely interest in detailed design and the impacts of Project construction	Nominations called in May 2020. Limited interest received to-date. Contractor to revive nomination process at appropriate time and/or when there is sufficient localised interest in the Project (Construction of Phase 1 / Detailed Design of Phase 2)






Appendix 4 – Project Sustainability Targets

Focus Areas	Sustainable Development Goals (SDGs)	Targets			Monitoring	Reporting framework	Responsibilities		SWTC Y/N?	IS related credit	
		Detailed Design	Construction	Operation			D&C	Operation			
<p>Sustainable Connected Communities</p> <p>Legacy</p> <p>Green Infrastructure</p> <p>Heritage</p> <p>Environment</p>		Investigate environmentally friendly dust suppressants above standard practice water carts	Apply selected suppressant(s) to exposed surfaces as required to prevent dust leaving the Project boundaries	N/A	Design & Construct: Construction monitoring records, SWTC compliance, Project audits (e.g. sustainability audits)	Design & Construct: Project audit reporting	Project Environment Manager / Sustainability manager	N/A	N	Pla-2 Env-4	
		Engage with key stakeholders and community via workshops or meetings to seek input on landscaping and urban design concepts to promote heritage.	Implement selected heritage landscaping/ urban design concepts	Maintain urban design features and soft landscaping	Design & Construct: SWTC compliance, design drawings, Project audits (e.g. sustainability management plan audits) ISCA verification of Con-2, Level 1 Maintenance: inspection of constructed urban design features and landscaped areas in accordance with regional maintenance schedule	Design & Construct: design reports, landscaping and urban design management plan, Project audit reporting Maintenance: inspection and maintenance records	Environment Manager / Sustainability Manager / Community Stakeholder Manager	Main Roads	10.5(d)		
											
											
			Maximise opportunities to reuse rocks/timber from the Project site within and outside the Project area	Implement at least one (1) opportunity to reuse rocks/timber inside the Project area and one (1) outside the Project area	Maintenance of the asset, including the area within the Project area containing the material reuse. N/A for outside uses	Design & Construct: SWTC compliance, design drawings, monthly sustainability reviews, Project audits Maintenance: Undertaken by asset owner	Design & Construct: design reports, monthly sustainability reporting, Project audit reporting Maintenance: inspection and maintenance reporting for MRWA asset only	Construction managers	Main Roads	4.12(f) iv E 9.4(r) ULDF 3.8	
		Climate change No residual high, very high, or extreme natural hazard and climate	Design is implemented without any variations which	Monitor and maintain the integrity of the highway,	Revised climate change risk assessment and adaptation report.	Design & Construct: design reports. Climate change risk assessment and	Design Manager	MRWA	SWTC	Res-2	

Focus Areas	Sustainable Development Goals (SDGs)	Targets			Monitoring	Reporting framework	Responsibilities		SWTC Y/N?	IS related credit
		Detailed Design	Construction	Operation			D&C	Operation		
		change risks to the operation of the highway are incorporated within the design.	see a natural hazard and climate change residual risk become high, very high or extreme	particularly after significant weather events.	Design reports. As Constructed Drawings. ISCA verification of Res-2, Level 2	adaptation report.				
Stakeholder involvement 	   	Conduct meeting/workshop with local community groups to establish volunteer interest for plant relocation	Local community groups to participate in relocation of plants (pre-construction) if they wish/have the capacity to be involved	Maintain revegetation sites	Design & Construct: SWTC compliance, design drawings, Project audits Maintenance: inspection in accordance with regional maintenance schedule	Design & Construct: design reports, landscaping and urban design management plan, Project audit reporting Maintenance: inspection and maintenance records	Environment Manage / Sustainability Manager / Community Stakeholder Manager	Main Roads	N	Sta- 1 Sta -2 Ecn-5
		Partnership with local schools / TAFE / university to organise youth employment opportunity/traineeship. Identify skills available in the region and number of persons.	Provide youth employment opportunities/traineeships from the Albany Region specifically	N/A	Design and Construct: Reporting on skills available, reporting on youth employment numbers	Design & Construct: monthly sustainability reporting	Project Director / Community Stakeholder Manager	Main Roads	N	
		Identify resources/tools for measuring economic spend (during construction) and the net positive economic impact from implementation of the Project	Measure and report to Main Roads economic spend within the local area. Communicate economic spend to community	N/A	Design & Construct: SWTC compliance, monthly sustainability reviews, Project audits	Design & Construct: Project audit reporting Operation: economic analysis reporting	Commercial manager	Main Roads	N	
		Investigate opportunities beyond standard to communicate regular Project updates to the community, incl cameras/webcams at interchanges during construction	Install cameras/webcams at interchanges. Provide information from cameras/other initiatives for website updates	N/A	Design & Construct: SWTC compliance, Project audits, webcam feed to Main Roads, website content	Design & Construct: Project audit reporting	Community stakeholder manager	N/A	10.7b	

Focus Areas	Sustainable Development Goals (SDGs)	Targets			Monitoring	Reporting framework	Responsibilities		SWTC Y/N?	IS related credit
		Detailed Design	Construction	Operation			D&C	Operation		
Ecology and environment  	  	Investigate opportunities to enhance the ecology of the area (e.g. noise berm instead of wall)	Undertake revegetation in accordance with the Project landscaping and urban design management plan and any suitable initiatives identified in detailed design stage.	Maintain revegetation sites	Design & Construct: SWTC compliance, Project audits, revegetation sites inspected and approved at completion Operation: revegetation sites maintained in accordance with UDLP. Revegetation sites surveyed at post revegetation ion accordance with defects period.	Design & Construct: design reports, landscaping and urban design management plan, Project audit reporting Maintenance: rehabilitation survey reporting,	Project Environment Manager / Sustainability manager	Main Roads	4.15(f)	Eco-1
		Landscape design to feature local provenance species representing the local landscape character based on the remnant vegetation communities of Albany, habitat and foraging potential, existing geological compositions, hydrological features, and climatic conditions.	Implement landscaping and urban design management plan	Maintain revegetation sites	Design & Construct: SWTC compliance, design drawings, Project audits Maintenance: inspection in accordance with regional maintenance schedule	Design & Construct: design reports, landscaping and urban design management plan, Project audit reporting Maintenance: inspection and maintenance records	Project Environment Manager / Sustainability manager	Main Roads	ULDF	Pla-2
		Design of noise walls and treatments as detailed in the SWTC to achieve noise attenuation for affected properties	Noise limits to comply with the requirements of WAPC State Planning Policy 5.4.	Maintain asset	SWTC compliance, Project audits,	Design & Construct: Monthly sustainability report, yearly sustainability report, sustainability achievement report	Design manager	Main Roads	4.15(a) 4.15(b)	Env -2

Focus Areas	Sustainable Development Goals (SDGs)	Targets			Monitoring	Reporting framework	Responsibilities		SWTC Y/N?	IS related credit
		Detailed Design	Construction	Operation			D&C	Operation		
<p>Resources and Waste</p>  <p>Resource</p>  <p>Energy</p>  <p>Water</p>	   	Investigate a 5% reduction in water and material use over the lifetime of the Project in comparison to the Base Case	Implement the reduction actions identified during detailed design	Maintain asset	SWTC compliance, Project audits ISCA verification results for Wat-1 and Rso-6. Investigation may be monitored using ISCA verification of Rso-1.	Design & Construct: Monthly sustainability report, yearly sustainability report, sustainability achievement report	Project Environment Manager / Sustainability manager	Main Roads	14.3(b)	Rso-1 Rso-6 Wat-1
		Contractor to meet the requirements of Rso-4 Level 1 as per the SWTC. This includes setting targets for resource recovery	Actions as identified for resource recovery to meet targets specified in detailed design	N/A	SWTC compliance, Project audits ISCA verification results for Rso-4	Design & Construct: Monthly sustainability report, yearly sustainability report, sustainability achievement report	Project Environment Manager / Sustainability manager	Main Roads	14 (pg 205)	Rso-4
		-	Implement the reduction actions identified during detailed design	Maintain asset	SWTC compliance, Project audits ISCA verification results for Ene-1.	Design & Construct: Monthly sustainability report, yearly sustainability report, sustainability achievement report	Project Environment Manager / Sustainability manager	Main Roads	14.3(b)iv	Ene-1
		Investigate the implementation of;	Implement vehicle and plant and equipment initiatives.	N/A	SWTC compliance. Project audits (e.g. sustainability audits)	Design & Construct: Monthly sustainability report, yearly sustainability report, sustainability achievement report	Construction Manager	N/A	Appendix 43	Ene-1
		-	>90% light vehicles will meet emissions Standard Euro 5							
	100% plant and equipment suppliers will be required to report emission standards during procurement process									

Focus Areas	Sustainable Development Goals (SDGs)	Targets			Monitoring	Reporting framework	Responsibilities		SWTC Y/N?	IS related credit
		Detailed Design	Construction	Operation			D&C	Operation		
Other  	  	Sponsor a 12-month Honours Project which will look into local Menang Noongar knowledge of Place.	Provide the financial means, access to resources, and industry support to the successful student.	N/A	Design & Construct: SWTC compliance, Project audits ISCA verification of Lea-2	Design & Construct: design reports, Project audit reporting, monthly sustainability reporting	Project Director	Main Roads	Appendix 43	Lea-2 Leg-1
		Sponsor a 12-month Honours Project which will compare the effectiveness of underpasses versus bridge crossing for WRPs	Provide the financial means, access to resources, and industry support to the successful student.	N/A	Design & Construct: SWTC compliance, Project audits ISCA verification of Lea-2	Design & Construct: design reports, Project audit reporting, monthly sustainability reporting	Project Director	Main Roads	Appendix 43	