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Mitchell Freeway Extension (Hester Avenue to Romeo Road): Annual Project Sustainability Report 2021

This annual report covers the period from February 2021 to June 2021. This is the first sustainability report for the project

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About this Report

This report has been prepared by the Mitchell Extension Joint Venture (MEJV) for the Mitchell Freeway Extension Romeo Hester Avenue to Romeo Road Project (here in 'the Project') on behalf of Main Roads Western Australia (Main Roads). This report forms part of Main Roads' annual sustainability reporting which is integrated into its annual report. The report content is prepared in accordance with GRI principals. Material topics reported in this report have been determined through a materiality process that adheres to the Infrastructure Sustainability Council of Australia (ISCA). Sustainability Management for the project is formalised through a detailed Sustainability Management Plan. The framework of the Sustainability Management Plan is designed in line with the Infrastructure Sustainability (IS) Ratings Scheme administered by ISCA. The Project has been registered and will undergo formal verification for a Design and As Built rating using Version 2.0 ISCA rating scheme. This report includes information which will be used as part of the project's IS rating.

Additional annual reporting obligations are included for the following project approvals:

- EPBC Approval 2018-8367 (Ministerial Statement (MS) 629): 165 hectares of native vegetation;
- CPS 8753/1 for Romeo and Wanneroo Road Upgrades: 32.8 hectares of native vegetation;
- CPS 8826/1 for Nowergup Depot Access: 1.91 hectares of native vegetation; and
- CPS 8861/1 for Quinns Quarry Access: 0.48 hectares of native vegetation.

The annual compliance reporting period for the approvals noted above does not align with the timing for this Annual Sustainability Report, however data required for the compliance reports is also included in the Environmental section of this report and is up to date at the time of reporting.

Introduction

The Mitchell Extension Joint Venture (MEJV), a joint venture between BMD Constructions and Georgiou, will extend the Mitchell Freeway a further 5.6 kilometres (km) from Hester Avenue to Romeo Road, improving accessibility, travel times and road safety for Perth's northern suburbs and facilitating residential, business development and employment opportunities.

Infrastructure development provides immense benefit to communities but can also come at a cost if there are negative environmental, social or economic outcomes. The delivery of sustainable infrastructure requires projects to think beyond financial outcomes and program to also focus on achieving positive environmental, social and economic outcomes.

MEJV is committed to delivering best practice engineering solutions based on sustainable management principles and practices while proactively managing adverse environmental, social and economic impacts and promoting efficient use of resources. In demonstrating this, the Project will leave a lasting legacy.

In line with this commitment, MEJV considered the material sustainability topics to the project as well as how the project interacts with the United Nations Sustainability Development Goals (SDGs). These topics are expanded on further in the Overview section of this report.

MEJV aspires to the following objectives to achieve sustainable outcomes through the design, construction and commissioning phases of the Project:

- Sustainability leadership and improvement;

- A balanced consideration of the whole-of-life environmental, social and economic costs and benefits during decision making;
- Proactively managing adverse environmental, social and economic impacts;
- Undertaking restorative actions;
- Maximising equitable training and employment opportunities;
- Consideration of environmental, social and other aspects to be considered during the procurement process for suppliers and subcontractors.

Highlights

Key Sustainability metrics and highlights are tabulated below in Table 1.

Table 1: Sustainability Highlights

Sustainability Metrics	Highlight
Environmental	
Reduced Clearing Footprint	<ul style="list-style-type: none"> • The project liaised with the Department of Fire and Emergency Services (DFES) to rationalise existing firebreaks and avoid the installation of a firebreak adjacent to Romeo Road in order to reduce the clearing footprint within Neerabup National Park. This resulted in 0.2 ha clearing reduction.
Salvaging and relocation of Balga/ Grass trees and zamia palms	<ul style="list-style-type: none"> • A Yarning Circle at Quinns Rock Primary School has been completed, using 12 Balga trees and 3 zamia palms salvaged from the project as well as limestone pinnacles and salvaged logs.
Resource Efficiency and Use of Recycled Materials	<ul style="list-style-type: none"> • Up to 71,293 Eco blocks will be used for Noise walls. Eco blocks include recycled crushed concrete (CRC) in place of aggregate. • Up to 3360m³ of Recycled Asphalt for road surfacing. • Up to 200,000 m³ of excess cut material from the nearby Yanchep Railway Extension (YRE) will be used by the project to build future freeway embankment up to Romeo Road. • Up to 3420m³ of YRE Site Won limestone potentially to be used as basecourse in Principal Shared Path (PSP).
Social	
Indigenous Participation	<ul style="list-style-type: none"> • Cultural Awareness sessions provided from Traditional Owner to discuss heritage site of the project. • A Smoking Ceremony was undertaken prior to site works commencing. • Yarning Circle opening including smoking ceremony and cultural awareness session.

Community Health and Wellbeing	<ul style="list-style-type: none"> Enhanced connection to the Neerabup National Park for the local community, promoting awareness and community interaction with reserve.
Stakeholder engagement	<ul style="list-style-type: none"> Engagement with local schools for donating salvaged grasstrees including Quinns Rocks Primary (see Yarning Circle description in the Environmental section of this table); St James Anglican School (12 grass trees); Northshore Christian Grammar School (12 grass trees); Atlantis Beach Baptist College (12 grass trees). Removal of PSP access point in response to community concern and modification to local road network to facilitate access
Economic	
Local Industry Participation	<ul style="list-style-type: none"> Procurement of goods and services for the Project is currently tracking at 100% for engaging local industry
Workforce Development and Diversity	<ul style="list-style-type: none"> An Aboriginal Employment Target of at least 10% of MEJV's Total Project Work Hours undertaken by Aboriginal Persons has been established. An Aboriginal Business procurement target of at least 2% of the contract sum is to from Aboriginal Businesses.

Overview

The Mitchell Freeway Extension (Hester Avenue to Romeo Road) Project will improve accessibility, travel times and road safety as well as sustaining jobs and enabling regional development in Perth's northern suburbs. Funding for the \$232 million project is jointly allocated by the Federal and WA State governments. The Project will alleviate pressure on the local road network and improve connectivity for people living and working in the region now and into the future.

Design and construction of the Project was awarded in December 2020 to the Mitchell Extension Joint Venture (MEJV), with the aim to reach Practical Completion in July 2023.

Mitchell Freeway is the main arterial road that connects the northern suburban areas with Perth's central business district (CBD). The freeway currently terminates at Hester Avenue. People commuting to and from the northern parts of Greater Perth currently have access to limited public transport options (two bus routes and train services from Butler to Perth), and a road network comprising primary and secondary roads with heavily trafficked routes on Marmion Avenue, Wanneroo Road and Mitchell Freeway up to Hester Avenue.

The project will extend the Mitchell Freeway a further 5.6 km) from Hester Avenue to Romeo Road, as well as upgrading Wanneroo Road to a dual carriageway for 5.5 km from Dunstan Road to Trian Road.

Construction works for the Project include:

- Constructing a new 5.6 km four lane freeway (two lanes in each direction);
- Completion of northbound on ramp and southbound off ramp at Hester Avenue interchange;

- Bridge over the Nowergup Rail Depot access road and realign to Hester Avenue;
- Grade separated interchange at Lukin Drive and widen the road to Connolly Drive;
- Grade separated interchange at Butler Boulevard;
- Freeway bridge over rail to enable train exit from the freeway median to Butler train station;
- Terminate freeway at Romeo Road with an at grade intersection;
- Principal Shared Path (PSP) on the western side of the freeway;
- Romeo Road constructed as a dual carriageway with 2 lanes from Marmion Avenue to Wanneroo Road, including a bridge over the new Yanchep rail extension;
- New/upgraded at-grade intersections for Romeo Road at Wanneroo Road, Benenden Avenue and Marmion Avenue;
- Shared Path along Romeo Road; and
- Duplication of Wanneroo Road from south of Romeo Road north to Trian Road.

An additional works package has been granted for design and construction of a grade separated interchange at Butler Boulevard including:

- Construction of bridge no. 1879 over the Freeway;
- connection of Butler Boulevard to the Freeway;
- a PSP underpass (No. 9484) with shared path connection to the PSP; and
- Collector-Distributor Roads between Butler Boulevard and Romeo Road.

The project is located within the City of Wanneroo, approximately 35km north of Perth CBD situated on the northern edge of the Greater Perth Metropolitan area (Figure 1).

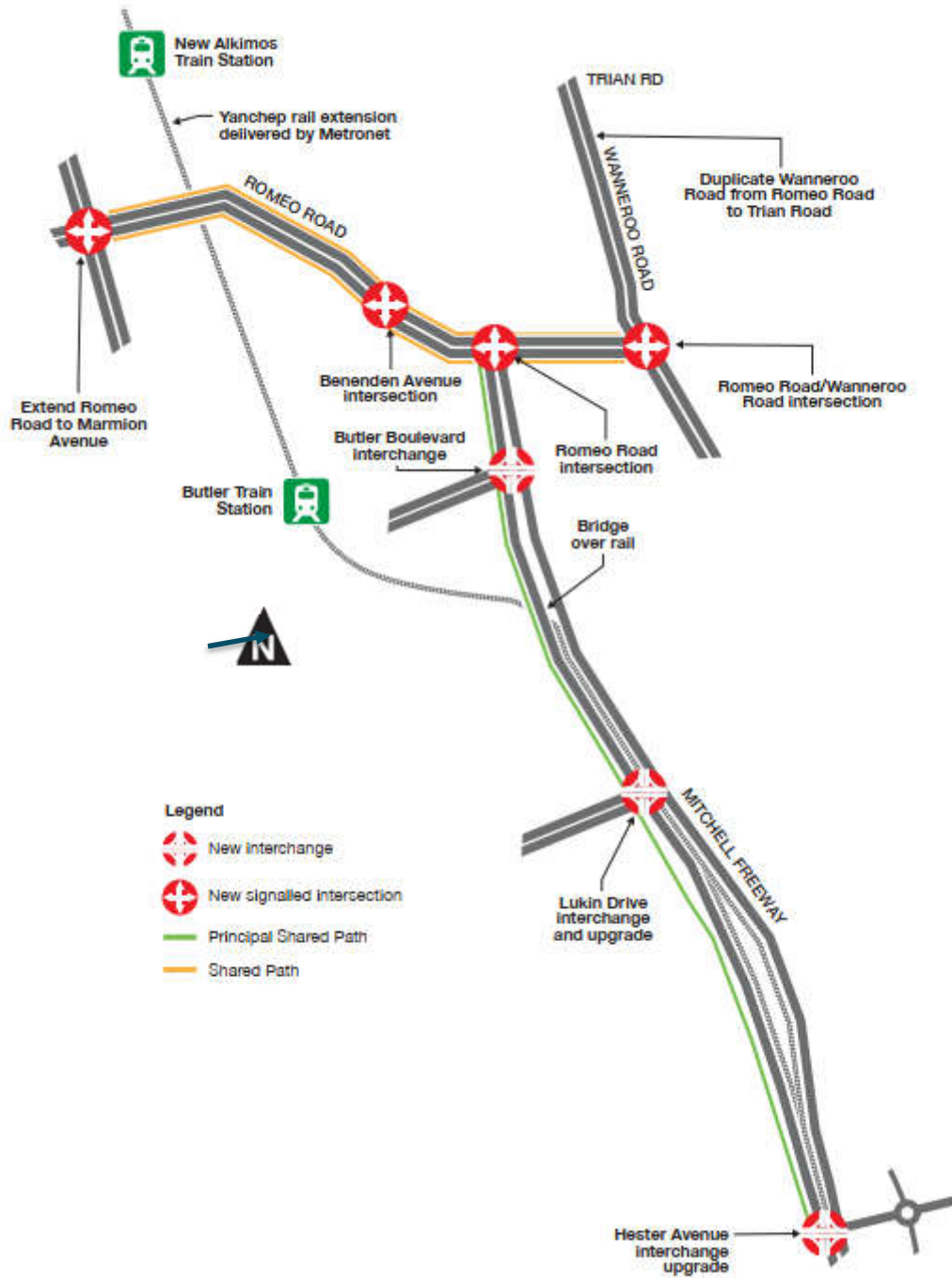


Figure 1: Project Scope

Overall approach to Sustainability

The MEJV participants (Georgiou and BMD Constructions) are each committed to promoting sustainability in infrastructure and demonstrate this commitment through their corporate sustainability policies.

BMD's Environmental Management System is accredited to the ISO14001 standard and has been adopted across all aspects and activities during the design, construction and commissioning phases of the project. The Georgiou policy is also utilised to further inform and enhance the project approach to sustainability. Sustainability Policies for Georgiou and BMD Constructions can be viewed via the links below.

<https://www.georgiou.com.au/wp-content/uploads/2018/10/Georgiou-Policies-RM-update-Aug-2018-Sustainability.pdf>

<http://bill.bmd.com.au/sites/BMS/BMS%20Library/Sustainability%20Policy.docx>

Sustainability workflows are embedded across all disciplines, particularly within the design, procurement, and construction management plans to innovate and recognise sustainable initiatives and performance that are specific and relevant to the works being performed.

Sustainability on the project is managed through a Sustainability Management Plan (SMP). The SMP specifies the management approach MEJV has adopted to meet and exceed its sustainability requirements. The SMP guides the project to manage sustainability in a systematic manner, and is applicable to all the project's activities, products and services that the project determines it can either control or influence from a life cycle perspective.

Led by the MEJV Project Manager, the leadership team is comprised of representatives from a range of disciplines within the project team who are each responsible for achieving sustainable outcomes as highlighted below. Input from representatives of Main Roads, major subcontractors and suppliers, MEJV engineers and field staff including foremen are utilised where appropriate.

Project personnel with key responsibilities for sustainability include:

- Project Manager
- Construction Manager
- Sustainability Manager
- Site Environmental Manager
- Design and Construction Interface Manager
- Design Manager
- Community and Stakeholder Manager

The Project is utilising the ISCA IS framework to guide the implementation of sustainability throughout project delivery and has been registered for formal verification of a Design and As Built rating. The Project is targeting a minimum achievement of a Silver Rating (40 points).

The Project is currently progressing to 85% design completion and bulk earthworks has commenced on site. Evidentiary documentations are being compiled for use in the sustainability rating submission to ISCA. IS credits within all four themes of Governance, Economic, Environmental and Social are being pursued

Material Sustainability Issues

The Project is being assessed for a formal Design and As Built sustainability rating utilising the Infrastructure Sustainability Council's (ISC) Infrastructure Sustainability (IS) framework. In line with the requirements of this formal rating, the MEJV team and Main Roads representatives undertook a workshop to identify the material sustainability issues facing the Project, as outlined below in Table 2:

Table 2: Material sustainability issues facing the project

High Materiality	Very High Materiality
Urban and landscape design	Noise
Climate and natural hazards	Vibration
Energy use and reduction; Renewable energy	Air Quality
Resource efficiency	Light Pollution
Resource recovery	Community and stakeholder engagement
Material lifecycle impact	Leaving a lasting legacy
Water use reduction; Appropriate use of water sources	Heritage
Ecological impact	

Environmental Aspects Performance

At a glance

The key environmental aspects of the project to date are provided below in table 3.

Table 3: Summary of Environmental Aspects

Aspect	Year to 30 June	Total for Project
Forecast Clearing (ha)	60.61	200.19 ³
Clearing permit allowance (ha)	200.19	200.19
Actual clearing to date (ha)	60.61	60.61
Revegetation planned (ha)	41.5	0
Actual rehabilitation/revegetation to date (ha)	0	0
¹ Environmental offset via Monetary contribution actual (\$)	15429	15429
² Total Water Consumption to date (kL)	43892	43892
Total water licence allowance (Bore water) (kL)	500000	500000
Total GHG emissions (scope 1, 2 & 3) to date (t CO ₂ e)	231.17	231.17
Total energy consumption to date (mj)	2132831.047	2132831.047
Total quantity of recycled content used in project (t)	0	0
Total imported materials used in project (t)	2102.2	2102.2
Total waste generated by project (t)	17.75	17.75

¹Note: This value is subject to further offset strategy under the EPBC 8367

²Note: Offsite Bore: 4000kL

³Forecast clearing area expected to be reduced, pending final design

Environmental context

The Mitchell Freeway Extension will add 5.6km to the northern extent of the Mitchell Freeway from Hester Avenue to Romeo Road, as well as upgrading Wanneroo Road to a dual carriageway for 5.5 km from Dunstan Road to Trian Road. The Project will result in the clearing of up to 200.19 ha of native remnant vegetation ranging from degraded to excellent condition and may impact species of conservation significance as outlined below. At the time of writing this report the final clearing footprint for the project had not been determined, however it is likely the final cleared area will be reduced from the full extent of clearing permitted under environmental approvals for the Project.

Potential significant direct and indirect impacts that may result from the project include:

- Clearing of conservation significant flora species, spread of dieback and weeds, loss of topsoil and/ or fire.
- Impacts to terrestrial fauna due to habitat loss and light pollution
- Impacts to subterranean fauna habitat due to disruption or damage to caves and karsts encountered during excavation and construction.
- Pollution resulting from stormwater drainage, erosion and sedimentation, hazardous materials and waste materials, and disturbance of acid sulfate or contaminated soils.
- Noise, vibration and dust
- Disturbance of Aboriginal heritage sites.

Potential environmental impacts are governed by environmental approvals for the project and managed via approved management plans.

Further detail on environmental context is provided below.

Neerabup National Park and Neerabup Nature Reserve

The Neerabup National Park (Class A Reserve, R 27575) is located along the entire eastern boundary of the Mitchell Freeway extension main alignment and extends east to border the Wanneroo Road upgrade works area. The project area also borders the Neerabup Nature Reserve (Class A Nature Reserve, R 24581) which is situated on the eastern side of southern section of Wanneroo Road.

Flora and Vegetation

An ecological survey of the project area has been completed, which identified 84.71ha of remnant native vegetation, comprising 10 vegetation types within the project area. Remnant vegetation of the project area is largely dominated by *Banksia* woodlands, mixed *Eucalyptus* woodlands and mixed heathlands. These vegetation types are generally associated with the landforms upon which they lie, with tall woodlands occurring in lower-lying areas with deep sandy soils, heathlands and shrublands on shallow soils on undulating dune systems, hilltops and ridges associated with limestone outcropping and *Banksia* woodlands in intermediate landforms associated with deep sandy soils.

From a flora perspective, two hundred and ninety-three flora taxa (including subspecies and varieties) representing 68 families and 177 genera are found in the project area. This total comprises 213 native taxa and 80 introduced flora taxa. Of the 80 introduced taxa, eight are listed as Declared Pests under the Biosecurity and Management Act 2007. Four of these taxa are also listed as Weeds of National Significance.

Protected flora species and ecological communities are listed in Appendix 2 of this report.

Terrestrial Fauna

Six broad fauna habitat types are located in the project area, including planted/highly degraded/cleared areas. The fauna habitat types consist predominantly of a combination of mixed eucalypt woodlands and *Banksia* woodlands dominated by an overstorey of *E. gomphocephala* (Tuart), *E. marginata* (Jarrah), *Corymbia calophylla* (Marri), *Banksia attenuata* and *B. menziesii* and were generally associated with grey sandy soils on plains or low undulating dune systems. The eucalypt and *Banksia* woodlands range from Degraded to Excellent condition and provide particularly high habitat value for fauna species due to the variety of microhabitats and various resource niches available (i.e. fallen logs, hollows, leaf litter, sandy soil).

Conservation significant fauna species recorded in the Project area include Carnaby's Black-Cockatoo, Forest Red-tailed Black-Cockatoo, Southern Brown Bandicoot (see Figure 3) and Western Brush Wallaby. A complete list of conservation significant fauna requiring on-going management throughout the course of the project are listed in Appendix 2 of this report.

The project has an Environmental Protection and Biodiversity Conservation (EPBC) Construction Environmental Management Plan and an EPBC Vegetation and Fauna Management plan which details control measures to manage flora and fauna values of the project area.

Further details on the environmental elements including monitoring and management are found under the Environmental Management section below.

Water Resources

There are no wetlands, watercourses or drainage lines located within the project area. A search of the Geomorphic Wetlands Swan Coastal Plain dataset identified 7 wetlands within 1 km to the project area. One geomorphic wetland, Lake Nowergup, is located approximately 200 m east of the

Wanneroo Road upgrade area. No wetlands of national or international importance (Ramsar) are present within the project area.

Groundwater is abstracted for construction purposes (in accordance with 5C licences issued by DWER) via three bores drilled in accordance with DWER supplied 26D licences. No surface water is used for construction.

Scheme water is used for the site compounds.

Cultural Heritage (Indigenous)

An aboriginal heritage survey was undertaken for the proposal, including consultation with representatives of the Whadjuk WC 2011/009 Native Title Claim group. The survey did not identify any sites of significance as identified under Section 5 of the Aboriginal Heritage Act 1972. No approval is required under the Aboriginal Heritage Act 1972 for the MEJV project, however representatives of the Whadjuk group have requested monitoring during clearing of dunes to manage the risk of uncovering skeletal remains. A previous archaeological desktop assessment reported no sites within a 200 m wide corridor and no ethnographic sites within a 1 km wide corridor centred upon the Mitchell Freeway Reserve.

A search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage enquiry System did not identify any occurrences of Aboriginal Heritage sites occurring within the project area. Ten heritage sites are within proximity to project area (refer to Appendix 1).



Figure 2: The Romeo West footprint has been realigned to avoid the culturally significant pinnacles

The presence of the Romeo Road Pinnacles (ID. 37478) site is noted as a significant site and required realignment of the design for Romeo Road to avoid impacting heritage values.

Legislative Requirements

The key environmental legislation impacting the project includes:

Commonwealth Government

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Environmental Protection and Biodiversity Conservation Regulations 2000*
- *National Greenhouse and Energy Reporting Act 2007*
- *National Greenhouse and Energy Reporting Regulations 2008*

Western Australia (WA)

- *Aboriginal Heritage Act 1972*

- *Aboriginal Heritage Regulations 1974*
- *Environmental Protection Act 1986*
- *Environmental Protection Regulations 1987*
- *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*
- *Environmental Protection (Controlled Waste) Regulations 2004*
- *Environmental Protection (Unauthorised Discharges) Regulations 2004*
- *Rights in Water and Irrigation Act 1914*
- *Waste Avoidance and Resource Recovery Act 2007*
- *Waste Avoidance and Resource Recovery Regulations 2008*

A full list of environmental legislation impacting the project is listed in Appendix 4.

Environmental Management



A trapping and relocation program was undertaken with a focus on conservation significant species (see Figure 3). All captured native fauna species were relocated into the nearby Neerabup National Park and released. More detail on the fauna relocation program is provided in the case study commencing on page 20 of this report.

Figure 3: Two Southern Brown Bandicoots (Isoodon fusciventer) listed as DBCA Priority 4 species recorded within the Project footprint and relocated prior to clearing activities.

The Environmental Management Plan (EMP) developed for the Project provides a framework for the management of all environmental aspects associated with design and construction of the Mitchell Freeway Extension (Hester Avenue to Romeo Road). The EMP prescribes all applicable procedures, processes and practices currently undertaken by MEJV and subcontractors in order to manage environmental risks and effectively minimise impacts throughout project delivery.

Environmental Management Sub-Plans (EMSPs) have been developed specifically for all environmental elements associated with the Project and include:

- Acid Sulphate Soils.
- Air Quality Management.
- Bushfire Management.
- Chemical Substances Management.

- Cultural Heritage (Indigenous) Management.
- Cultural Heritage (Non-Indigenous) Management.
- Energy Use and Greenhouse Gas Emissions Management.
- Erosion and Sediment Control.
- Groundwater Management.
- Flora and Fauna Management.
- Noise and Vibration Management.
- Soil and Land Management.
- Waste and Recycling Management.
- Environmental Sub-Plan - Water Quality Management.
- Environmental Sub-Plan - Weed, Hygiene, Pest and Dieback Management.

During construction MEJV will carry out environmental monitoring as per project requirements including for noise, vibration and dust, as well as regular site inspections to monitor clearing activities, and implementation of environmental controls.

Some of the key environmental considerations covered in the design phase include:

- Cultural monitors are engaged during clearing in dunes. Any disturbance of Aboriginal heritage sites/materials is undertaken in consultation with DPLH and in accordance with the requirements of the *Aboriginal Heritage Act 1972*;
- The fauna underpass design considers the use of rocks and concrete structures, inside and in the cleared areas up to the underpass, to allow for cover for smaller mammals;
- Fauna fencing is installed in accordance with Section 4.14 Fauna underpasses and fences of the SWTC;
- A copy of this Weed, Hygiene, Pest and Dieback Management Sub Plan must be onsite at all times;
- Topsoil is assessed for suitability for revegetation / landscaping and harvested with consideration to requirements specified in the Project Specific Revegetation Management Plan.

Water Management

The Project is located in the Perth Groundwater Area under the *Rights in Water and Irrigation Act 1914* and the Perth Coastal and Gwelup Underground Pollution Control Area public drinking water source area (Priority 3 Protection Zone) proclaimed under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*. Priority 3 areas are declared over land where water supply sources need to coexist with other land uses such as residential, commercial and light industrial developments. The Groundwater Management Sub-Plan has been developed to manage the project's construction activities with respect to groundwater management for the works on the Project. The key performance criteria under this Sub-Plan include maintaining existing groundwater levels and ensuring no impact on groundwater quality.

It is not anticipated that any dewatering will be required during construction of the project so impacts to groundwater quality or depth are unlikely to occur. A dewatering management plan will be prepared should groundwater dewatering be required during construction.

Water use for construction is tracked monthly for regulatory reporting purposes.

Water initiatives have been identified to assist the Project with achieving a 5% reduction in water use compared to a baseline estimate including:

- The use of chemical additives such as Dustex to reduce the amount of water used for dust suppression;
- Re-use of water from Water Corporation watermain testing;
- Use of bladder tanks to store pumped bore water instead of open-air Turkey Nests reducing evaporation.

The water use statistics on the project to date are provided below in table 4.

Table 4: Water use on the Project

Source	Year to 30 June	Total for Project
Water purchased from the scheme in litres	24417	24417
Water pumped from bores in litres	19475	19475
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

Energy use and associated carbon emissions for the project are predominantly associated with diesel and electricity use during design and construction, land clearing for construction and street lighting during operation of the Project. An Energy Use and Greenhouse Gas Emissions environmental management Sub-Plan has been developed to manage the energy use and greenhouse gas emissions for the construction phase of the Project.

The key performance criteria under this Sub-Plan include reducing electricity and fuel use onsite and accurately collecting monthly National Greenhouse and Energy Reporting (NGER) data. Reductions in energy use through project lifecycle will result in reductions in carbon emissions and associated potential to contribute to climate change.

Carbon and energy saving initiatives have been developed to assist the Project to achieve a 5% reduction in energy use compared to a baseline estimate:

- Use of LED lights for the Main Roads WA freeway lighting;
- Use of electric vehicles on the project;
- Reduce the removal of vegetation;
- Solar panels installed on site facility for office use.

In addition, the project will contribute to long term energy and carbon reduction through enabling future infrastructure to support increased use of Electric vehicles and by reducing vehicle congestion that will reduce CO2 emissions

A breakdown of the energy use statistics for the project to date are provided below.

Table 5: Energy use on the Project

Source	Year to 30 June	Total for Project
Energy usage by source in mega joules	3,229,018.95	3,229,018.95
From fuel use (mj)	3,217,589.58	3,217,589.58
From electricity (mj)	11,429.37	11,429.37
*Energy saved (mj)	0	0

*Yet to be measured

Materials & Recycling

A Waste and Recycling Management environmental management Sub-Plan has been developed to manage waste and recycling for the construction phase of the project. The following waste and recycling streams have been identified as likely to be generated during construction:

- Wanneroo Road Landfill Site including asbestos;
- General office waste;
- Commingled recyclables (plastic and glass bottles, aluminium cans);
- Paper and cardboard;
- General construction waste;
- Concrete and steel;
- Oil and hydrocarbons;
- Mulch.

Key performance criteria for the project include:

- The waste minimisation hierarchy of principles shall be integrated into all construction activities: Avoid; Reduce; Reuse; Recycle; and Dispose;
- Any opportunities to reuse or recycle construction materials to be identified and implemented;
- Disposal of hazardous or contaminated wastes to be tracked and documented;
- No complaints related to waste management or disposal from the local community.

Major materials used for the construction of the project include aggregate, asphalt & bitumen, cement and concrete, steel, fill (sand and limestone), limestone, acrylic plastic sheet and white lining and paint.

Initiatives developed for the project that contribute to circular economy includes:

- Use of Eco Block for noise walls which include CRC in place of traditional limestone blocks;
- Use of YRE excess cut to build future freeway embankment up to Romeo Road;
- Use of YRE limestone as basecourse in PSP ;
- Number of pavement and surfacing sustainability opportunities being explored including Full Depth Asphalt Seal Binder, Warm Mix Asphalt, Recycled Plastic in Asphalt, Bitumen Stabilised Limestone;
- Use of cleared vegetation as mulch, logs for foraging habitat for fauna, timber seating along PSP;
- Use of Site-Won Limestone in pavements;
- Use of on-site cut to fill for earthworks.

A break-down of the material and waste statistics for the project to date is provided below in table 6.

Table 6: Material and Waste Statistics

Imported Materials	Year to 30 June	Total for Project
Sand (t)	0	0
Gravel (t)	0	0
Clay (t)	0	0
Limestone (including crushed) (t)	2032	2032
Crushed Rock (t)	0	0
Crusher Dust (t)	0	0
Aggregate (t)	30	30
Asphalt (t)	0	0
Concrete (t)	33.2	33.2
Steel (t)	7	7
Precast concrete (t)	0	0
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)- Ballast	30	30

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)	0	0
Commercial / industrial waste (t)	0.15	0.15
Green waste (t)	0.95	0.95
Concrete / kerbing (t)	0	0
Construction / demolition waste (t)	4	4
Contaminated material (t)	0	0
Asbestos (t)	0.55	0.55
General Waste (t)	5.22	5.22
Other (t)	0	0
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)	1.1	1.1
Concrete (t)	0	0
Green waste / mulch (t)	0	0
Plastic (t)	3.44	3.44
Other (t)-Paper	0.72	0.72

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

Sensitive Receptors



Figure 4: Cut to fill operations adjacent to Butler (Zone 1)

The Project is directly east (<30 metres) of the Ridgewood, Butler and Alkimos residential areas with Neerabup National Park directly adjacent to the west. Sensitive receptors in these areas may be impacted by noise, vibration, air quality and dust during construction of the Mitchell Freeway Extension Project.

Periodic physical monitoring of noise, vibration and dust will be undertaken when works are undertaken in close proximity to sensitive receptors and in response to

complaints. A Weekly Safety and Environmental Checklist has been created to document potential nuisance and issues such as noise and vibration, stockpiles, access tracks, site access points, exposed earthworks, spills and other environmental issues.

Figure 4 shows a view across cut to fill operations in Zone 1 toward Butler, showing housing in close proximity to the project.

Noise and Vibration (from construction and future operation)

A Noise and Vibration Management Sub-Plan has been developed to manage potential noise and vibration impacts from construction. Noise modelling has been completed to assess operational noise and has been used in the design to identify locations that noise walls or other noise mitigation will be required. The operational phase of the project is not expected to result in vibration impacts to sensitive receivers.

An independent assessor agreed by Main Roads completed property condition surveys prior to

construction commencing for all properties located within 100 metres (m) of construction activities. Sensitive receivers are regularly consulted with and given advance warning of any out of hours or high-risk work activities. A complaints register has been established and maintained consistently.

A range of control measures have been put in place to minimise noise disturbance including:

- Ensuring equipment is well-maintained to reduce noise emissions;
- Vehicles fitted with a low-noise reversing croaker, instead of beepers, are used where possible;
- Reducing number of vehicle movements through careful planning scheduling noisy works at less-sensitive hours, where possible notifying residents after-hours or particularly noisy works;
- Using the quietest equipment reasonably available.

Air Quality and Dust

An Air Quality Management Sub-Plan has been developed to manage potential air quality and dust impacts from construction.

The main dust sources from construction are likely to be excavation, loading of excavated material into trucks, heavy vehicle movement on unsealed areas and wind erosion on exposed surfaces.

To help minimise the impact of dust, a range of measures are being implemented, including:

- Utilising water trucks and water sprays to suppress dust (see figure 5);
- Careful selection of machinery;
- Limiting on-site vehicle speeds;
- Monitoring environmental factors influencing dust, including wind levels;
- Postponing dust producing activities during high winds;
- Regular surveillance and responding to feedback from residents and businesses;
- Applying dust suppression crusting agents to stockpiles and areas that will not be accessed for long periods of time to stabilise surfaces.

As part of road construction, a road sealing product is used to bind the road base material (aggregate) together and assist in enhancing the roads long term durability and performance. This product is not harmful to health but can smell like diesel to some people when being laid on the road, as an active ingredient is kerosene. If wind levels are low, the smell may linger. The team will apply as little as possible to minimise potential discomfort to sensitive receivers.



Figure 5: Water truck spraying water for dust suppression

Discharges & Spills

Environmental emergency incidents identified for the Project that have the potential to contaminate waterways, the marine environment, soil and groundwater include:

- Major Oil or Fuel Spill;
- Major Chemical Spill;
- Major Sediment Discharge.

A spill response procedure had been prepared and implemented for all waste spills and at least one spill response kit is provided at every current work area including hazardous waste storage areas.

Light spill

Modelling is used in the design to minimise horizontal and vertical light spill in line with standards and specifications. A lighting audit was previously completed during the project development phase to establish existing conditions. Light poles will be constructed and positioned so as to prevent artificial light spilling to the fauna underpass. Construction lighting is positioned to be task oriented and avoid light spill that may impact sensitive receivers, while temporary lighting for road diversions is positioned to avoid light glare for oncoming traffic.

Contaminated sites

There are no contaminated sites associated with the current scope of the project. A Contaminated Sites Management Plan (CSMP) has been developed to address potential contamination issues and unexpected finds for the Project.

Dieback



Figure 6: Dieback mapping

The risk of indirect impacts from the spread of dieback has the potential to significantly impact flora and fauna.

A Weed, Hygiene, Pest and Dieback Management Sub-Plan has been prepared to manage the project's construction activities with respect to weeds, pests and dieback on the Mitchell Freeway Extension. Figure 6 shows there are several areas listed as uninterpretable for dieback infestation as shown by the red areas. Dieback clean areas are shown as green in Figure 6. Clean on Entry points will be required on the border of the green clean areas to prevent spread and provide protection from Phytophthora Dieback as shown by the yellow squares.

On-going checks will be carried out for vegetation dieback

Case Study

MEJV engaged a specialist organisation to undertake a fauna relocation program across the clearing footprint of the Project, including an additional section of Wanneroo Road from Dunstan Road to Trian Road. The fauna relocation program included a pre-clearing trapping program and relocation of fauna, with an on-call zoologist/ecologist available during vegetation clearing activities, a briefing for construction personnel on fauna spotting during vegetation clearing activities, and conducting black cockatoo breeding tree hollow inspections.

As part of the program the following conditions were required to be met:

- For three consecutive days immediately prior to logging or vegetation clearing activities the areas should be trapped and surveyed by an appropriately licenced and experienced ecologist to remove and relocate any conservation significant fauna (including Southern Brown Bandicoot, Western Brush Wallaby, Black-striped Snake, Jeweled Southwest Ctenotus) that may be directly impacted by clearing and site disturbance activities.
- All relocation of conservation significant species will be as approved by Department of Biodiversity and Conservation & Attractions (DBCA)
- Fauna encountered in the construction area will be given the chance to move on if there is no threat to the person's safety in doing so. The Environmental Management Representative (or qualified delegate) will be licenced (under Biodiversity Conservation Act) and available at all times during the construction phase to interact with fauna that cannot move away freely.
- Immediately prior to undertaking any vegetation clearing, the Contractor must arrange for all black cockatoo nesting trees [trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater (30 cm or greater for Eucalyptus salmonophloia or E. wandoo) that contain hollows suitable for nesting by Carnaby's Black Cockatoo, Baudin's Black Cockatoo or Forest Red-tailed Black Cockatoo] within the Site to be inspected by a fauna specialist for evidence of current or past breeding by black cockatoos.
- The fauna specialist must conduct the black cockatoo nesting tree inspection and record the relevant information in accordance with clearing permit approval conditions.

Fauna Trapping

The trapping and relocation program was undertaken in accordance with Department of Biodiversity Conservation and Attractions (DBCA) Standard Operating Procedures (SOP), other best practice guidelines for relocating fauna and the conditions imposed under the approved DBCA Fauna Taking Licence and Authorisation to Take or Disturb Threatened Species. The trapping and relocation program made use of cage traps and pitfall traps installed in suitable habitat with a focus of capturing the conservation significant species. All traps were set for a minimum of three nights. Pitfall traps were installed in transects, each containing two to three 20 L buckets with a 30 cm tall flywire drift fence installed passing over the top. Cage traps were spaced evenly throughout the Survey Area and installed in areas deemed to be suitable for the Southern Brown Bandicoot. Cage traps were placed under vegetation and were covered with both a plastic cover and hessian sack to provide shelter to any captured individuals. Cage traps were baited with universal bait (rolled oats and peanut butter). All captured native fauna species were relocated into the nearby Neerabup National Park and released at one of two sites (Figure 8). A breakdown of total captures for the MEJV project are shown below in

Table 7.

Table 7: Breakdown of Fauna Captures Throughout the Survey Area

Family	Scientific Name	Common Name	Total Captures	Capture Method
Felidae	Felis catus	Cat	1	Cage
Muridae	Mus musculus	House Mouse	8	Pitfall, Cage
Muridae	Rattus rattus	Black Rat	1	Cage
Peramelidae	Isodon fusciventer	Quenda	52	Cage
Scincidae	Tiliqua rugosa	Bobtail	3	Cage
Scincidae	Ctenotus sp	-	1	Pitfall

Scincidae	Hemiergis quadrilineata	Two-toed Earless Skink	1	Pitfall
Limnodynastidae	Limnodynastes dorsalis	Western Banjo Frog	8	Pitfall



Figure 7: Survey Area Boundary (Red) and Fauna Relocation Sites (Yellow) within the Neerabup National Park

Black Cockatoo Surveys

A previous survey undertaken in 2019 identified 20 trees within the Survey Area which contained hollows that were of a suitable size or demonstrated signs of historical use by black cockatoos. These trees were reinspected utilizing a DJI drone prior to clearing to ensure there were no nesting species present and photographic evidence of each hollow was taken (examples shown in figure 8 and figure 9). No black cockatoos or any other avian species were found to be utilizing these hollows immediately prior to tree felling. Further inspections of all suitable black cockatoo trees within the clearing area (Tuart, Marri and Jarrah species with a diameter at breast height > 500 mm) were undertaken as part of best practice fauna management strategies. These reinspected trees showed no signs of recent use by black cockatoos immediately prior to felling.



Figure 8: Potential Black Cockatoo Tree With Hollow



Figure 9: Potential Black Cockatoo Hollow

Economic Aspects Performance

At a glance

Table 8: Summary of Economic Aspects

Economic Aspect	Year to 30 June	Total for Project
Funding	*\$232m	\$232m
No. of vehicles per day	0	0
Travel Time Saving	N/A	**up to 15 mins
Increase of vehicle capacity	N/A	50%
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	225	225
Total number of suppliers engaged	26	26
Total number of Indigenous Enterprise	11	11
Total number of Disability Enterprise	0	0
Buy Local Spend (to date)	\$10,934,727	\$10,934,727

*\$116m each from Federal Government and WA State Government

** estimated time saving Narrows Bridge to Alkimos during afternoon peak period

Economic context

The City of Wanneroo is the fastest growing local government area in WA and the seventh fastest in Australia. People commuting to and from the northern parts of Greater Perth currently have access to limited public transport options (two bus routes and train services from Butler to Perth), and a road network comprising primary and secondary roads with heavily trafficked routes on Marmion Avenue, Wanneroo Road and Mitchell Freeway up to Hester Avenue, where it currently terminates.

The Neerabup Industrial Area is an emerging industrial area to the south east of the Project. It includes 1,005 ha of land, almost double the size of the Wangara Industrial Area and has the potential for up to 20,000 jobs. It is the largest single industrial complex in the Perth Northern Metropolitan region and the second largest in the Perth Metropolitan Area.

Table 8 above provides a summary of economic aspects for the project.

Key Economic Outcomes



Figure 10: View West across current Hester Avenue Interchange

It is expected the project will realise the following benefits that will positively contribute to economic outcomes:

- Mitigate congestion on the freeway and local roads;
- Improve safety, accessibility and connectivity now and into the future;
- Improve efficiency and network reliability;
- Generate employment from project;
- Sustaining local businesses;
- Contribute to economic development of the local area;
- Provide travel time savings;
- Provide freight efficiency outcomes.

Sustainable Procurement and Buy local

MEJV recognises the importance and value that major infrastructure projects provide to the wider WA economy. MEJV seeks to maximise engagement with local WA companies and suppliers maximising the benefit to WA.

Procurement is a key function to facilitate the delivery of sustainability objectives in the planning, design, construction and operation of infrastructure projects and assets. The achievement of Industry Sustainability for the Project requires the proactive engagement and contribution of suppliers at different tiers of the supply chains, during the design and implementation stages of the Project.

Industry sustainability is a crucial element of supplier selection for all material goods and services. Material goods and services for the Project have been defined those that carry a procurement value in excess of \$3 million dollars. Considering this definition, material goods and services for the Project are listed in Table 9 below.

Table 9: Material Goods and Services for the Mitchell Freeway Extension

Material Goods	Material Services	Material Goods & Services (i.e. supply and install/ operate)
Tee-Roff supply	Concrete installation (fix rebar pour – FRP)	Plant hire – wet (i.e with operator)
Crushed rock	Lead Designer	Limestone noisewall supply and install

	Watercorp – installation	Asphalt supply and install
		Electrical, communication & ITS supply and install

An industry Sustainability Plan has been prepared to provide guidance on the management processes that facilitate the successful implementation of all Industry Sustainability activities in accordance with the Contract and Western Australian Industry Participation Strategy (WAIPS) requirements.

- Subcontractor engagement and management is critical to achieve Industry Participation (IP) targets and initiatives. The Project ensures that:
- Specific sustainability requirements are communicated to critical supplier packages prior to going to market.
- Critical Material Supplier packages are identified and evaluated, with sustainability being part of the weighting criteria.
- Unsuccessful suppliers for critical material packages are provided feedback on their sustainability performance.

Climate Change Assessments

A key sustainability objective for MEJV through design and construction is to deliver a project with increased resilience to future climate conditions. A climate change and natural hazard risk assessment was undertaken in April 2021 through a workshop with a multidisciplinary Project Team and Main Roads.

Climate projection modelling was undertaken for the years 2030 and 2090 with the model producing climate change projections for a range of selected climate impacts including air temperature, rainfall, storm, solar radiation and fire. Related direct and indirect risks and opportunities have been assessed, and both treatment options and implementation actions have been identified and implemented such that there are no residual extreme or high priority risks or opportunities.

The long-term effect of the climate and natural hazard impacts was taken into account in the design of the project. For instance, a durability assessment and report has been prepared as part of the 15% design, considering the potential impacts of climate change in future scenarios. Fire resistant species are used as part of the landscaping design to reduce the risk of and potential impact from fires. A selection of species which exclude “limb dropping” eucalypts are considered in proximity to pedestrian paths and residential properties to reduce the risk of property damage and injury in times of high wind gusts.

Other significant considerations for design of the Mitchell Freeway Extension include drainage capacity allowing for potential increased rainfall intensity, potential for high wind gusts causing damage to signage and electrical infrastructure, and future maintenance needs for the asset.

Sustainable Transport

The Project forms an integral part of the City of Wanneroo's Cycle Plan to create a cycle friendly environment that is desirable, accessible and attractive to a variety of users and provides a credible alternative to vehicle use for trips up to 10 km. Important aspects of the cycle plan that will be addressed by the Project include:

- Linking key transport nodes to the City's activity centres and natural environment attractions such as beaches and parks;
- Ensuring cycle facilities are considered in the planning process;
- Off-street bidirectional principal shared paths adjacent to the extended Mitchell Freeway.

As part of the contractual obligation, MEJV is required to implement the use of two new electric car vehicles on the project. This aims to reduce emissions by the project.

Initiatives developed for the Project that contribute to sustainable transport and improve cycling and pedestrian facilities include:

- Provision of rest stops incorporating seating, shade and access to water;
- Enhanced connection between local community and National Park via the Butler boulevard to freeway connection, promoting awareness and community interaction with the reserve, and including a PSP underpass with shared path connection to the PSP.

Social Aspects Performance

At a glance

Table 10: Summary of Social Aspects

Social Aspect	Year to 30 June	Total for Project
Community Satisfaction to Project	NA	NA
No. of Stakeholders engaged with during project development	67	67
No. of complaints	10	10
No. of legacy commitments	3	3
No. of heritage sites in project vicinity	1	1
No. of heritage sites significantly impacted	0	0
No. of traffic safety incidents within project boundary	0	0
% of women in workforce	9%	9%
% indigenous in workforce	5.8%	5.8%
LTIFR	0	
No. of hours training during project	780	780
*No. of development employees and apprentices on the project	0	0
No. of employees (FTEs) sourced from local community	140	140

*Project is investigating opportunities to engage development employees and apprentices onto the project

Social context

The Project includes the suburbs of Alkimos, Butler, Ridgewood, Nowergup and Carabooda. Land to the west of the project is zoned as residential or urban development and a Bush Forever site (Neerabup National Park) is located between the proposed Mitchell Freeway extension and Wanneroo Road. Land to the east of Wanneroo Road is zoned general rural, rural resource, special rural and rural community with general industrial and industrial development zoning to the south-east in Neerabup.

The needs and expectations identified by the Project are outlined within the Project's Community and Stakeholder Management Plan. This plan also allows for ongoing effective, efficient, and timely communication and engagement by the Project team with the local community and interested stakeholders.

The MEJV social sustainability objective is to contribute to liveable communities. The following positive social outcomes are expected from the project:

- Reduce road congestion and travel times;
- Maintain, relocate or improve pedestrian and cycle paths and connections;
- Create new access to and enhance public open space at Neerabup National Park;
- Leave a lasting legacy by improving access to and community connection with Neerabup National Park via providing PSP connection, car parking facilities and upgrading sections of the Yaberoo Budjara Access trail;
- Improving safety and connectivity for people living and working in the region now and into the future;
- Generating employment from project;

- Contributing to Economic Development of the local area;
- Providing travel time saving.

Community & Stakeholder Engagement

Market research surveys are undertaken monthly to measure the effectiveness of project communications. Results of the survey have been approved by Main Roads and added to the project web page for Mitchell Freeway Extension (see Table 11 below).

Table 11: Effectiveness of Project Communications

Key Performance Indicators (KPIs) (to 30 June)	This month	YTD	Target
Number of days to close complaints / enquiries (average)	2.2	2.5	< 3
Number of days for MRWA approval of comms	5	12.2	< 5
Number of days to close alleged damage	0	0	< 90
Number of Project Communications Meetings	5	22	-
Number of Reviews of Community Engagement Plan (CEP)	0	0	3
Percentage of staff and contractors inducted	100%	100%	100%
Number of toolbox presentations / training	0	1	6
	YTD	YTD %	Target
Number of complaints escalated	0	0.0%	<5%

Tactical Communications Plans are prepared to manage the community engagement process for campaigns that require different messages over differing timeframes using multiple communication channels. These are usually used for engaging with community and stakeholders about complex or high profile works such as noise wall construction, closure of rail line or for any major traffic impacts such as road closures or detours. 2 Tactical Communications Plans have been completed to date

- Project commencement;
- Commencement of noise wall construction.

Examples of engagement on the Project

- Responding to enquiries and complaints through Main Roads Customer Information Centre;
- Direct consultation with residents impacted by noise wall construction;
- Pre-construction property survey process;
- Engagement with road users on traffic changes;
- Managing expectations of residents in relation to construction impacts;
- Meetings with City of Wanneroo (staff and councillors);
- Meetings with businesses impacted by the design and proposed works;
- Meeting with Quinns Rocks Environmental Group Meeting – provide overview on project scope, update group on track closures, sustainability focussed goals for the project and Q&A;
- Two meetings of the project’s Construction Reference Group .

Stakeholder engagement outcomes the project has achieved

- Removal of PSP Access Point next to accommodation facility in response to request for Department of Communities and centre's management;
- Risk assessment and management of works in proximity to accommodation facility;
- West Cycle Meeting 210121 – access point validation and connectivity for path users resulting in review of PSP access point;
- Removal of PSP access point in response to community and stakeholder concern and modification to local road network to facilitate access;
- Relocation of grasstrees to local schools;
- Creation of a yarnning circle at Quinns Rocks PS to celebrate indigenous heritage and cultural connection;
- Construction Reference Group review of the Environment Management Plan and the Communications and Engagement plan.

MEJV is committed to effective community consultation and stakeholder engagement to inform its decision making and deliver the objectives detailed above (which incorporate Main Roads overarching objectives). We believe consultation and open dialogue helps to identify issues of concern and opportunities for innovation, provides access to new skills and experience, aligns divergent expectations, streamlines and improves decision-making, and promotes greater stakeholder ownership, support, and legitimacy.

The Community & Stakeholder Management Plan (C&SMP) has been developed for the Project and is an essential project management tool that outlines the processes for effective, efficient, and timely communication and engagement by the project team, while complying with all contractual, corporate, and regulatory systems requirements. The C&SMP includes a comprehensive assessment of the key issues and potential communication risks and opportunities faced by the project, and presents managements strategies to mitigate the potential impacts.

The Project objectives in relation to the community and stakeholders are:

- Delivery of information - to ensure a constant flow of accurate and timely information and to provide stakeholders with a choice in information delivery that suits their needs;
- Consulting stakeholders - Communities expect a voice in public policy and decision-making;
- Managing Feedback - Regular information exchange helps to minimise project risks by alerting project decision-makers to inconsistencies and lack of alignment between stakeholder expectations and project decision making;
- Creating awareness of stakeholder needs – The C&SMP includes creating awareness among project staff and contractors of the needs of stakeholders and how their activities can contribute to positive stakeholder outcomes.

Key community stakeholders identified for the project and their engagement are listed in Appendix 3.

Addressing community concerns

Members of the community can utilise the Main Roads governed CONNECT system to express any concerns they may have. The Project Communication and Engagement Manager is responsible to present community related information and messages during scheduled toolbox box meetings. Over the duration of the Project, these toolbox presentations reinforce the proactive measures to support the development of a shared culture around impact mitigation.

To date, two separate toolboxes have been delivered covering the following items:

- The role everyone plays as project ambassadors.
- Mitigation of vibration impacts.

Table 9 on page 26 of this report provides a breakdown of the effectiveness of MEJV communications with the community and stakeholders in response to any issues raised.

Community Reference Group (CRG) meetings are conducted on an approximate quarterly basis, dependent on the project program, to provide a project update, identify and discuss community opportunities and issues associated with the project. The group can raise any concerns, indicate preferences, share information with other community members and review processes and outcomes where appropriate. The group was formed in early 2020. So far, three CRG meetings have been conducted. Minutes for CRG Meetings can be found via the links below:

<https://www.mainroads.wa.gov.au/globalassets/projects-initiatives/projects/metro/mitchell-freeway-extension/mitchell-freeway-extension-crg-meeting-minutes.pdf>

<https://www.mainroads.wa.gov.au/globalassets/projects-initiatives/projects/metro/mitchell-freeway-extension/mitchell-freeway-extension-crg-meeting-minutes-210304.pdf>

<https://www.mainroads.wa.gov.au/globalassets/projects-initiatives/projects/metro/mitchell-freeway-extension/mitchell-freeway-extension-crg-meeting-minutes-3.pdf>

Heritage

Extensive on-going consultation with the Community Aboriginal Representative for the Project and recognised Traditional Owners on decisions relating to Aboriginal engagement and heritage is undertaken for the Project. The discovery of the pinnacles in Alkimos at Romeo Road, the Yaberoo Budjara Heritage Trail and the presence of Balga Trees are of significant importance to the surrounding Alkimos community.

The following measures for maintaining and enhancing cultural heritage on site include:

- Development and implementation of the Project's Aboriginal Heritage Management Plan;
- Cultural heritage finds process in place during the Project as part of the Environmental Management Plan for construction;
- Romeo Road West designed to avoid the Alkimos pinnacles ensuring their preservation for future generations;
- Salvaging of Balga / Grass trees from within the Project area for distribution to other locations
- Creation of a Yarning Circle at Quinns Rock Primary School including pinnacles, Balga Trees & Zamia Palms salvaged from the Project area. Smoking ceremony to be completed as part of opening ceremony;
- Upgrading sections of the Yaberoo Budjara Access trail in line with the increased patronage and use associated with development of the surrounding area;
- Installation of Fauna underpass on Romeo Road to ensure fauna egress from north to south and vice versa. Fauna species such as kangaroo and emu were important food sources to the local Wadjak people.



Figure 11: Yarning circle at Quinns Rock Primary, grass trees salvaged and relocated from the clearing footprint

One of the positive community impacts achieved by the Project so far is the relocation of grass trees and development of a yarning circle at a local school (shown in Figure 8).

This contributes toward creating a legacy for the Project.

Road Safety

As governed by Main Roads policy, this Project aligns with the WA State Government 'Road Safety Strategy 2021-2030'. The 'Road Safety Strategy 2021-2030' can be viewed via the link below:

<https://www.rsc.wa.gov.au/New-Road-Safety-Strategy#:~:text=Michelle%20Roberts%20MLA%20on%20November,and%20to%20zero%20by%202050>

Road safety will automatically be improved upon completion of project in the following ways:

- Removal of traffic from the local road network;
- Improved travelling times reducing driver fatigue;
- Noise mitigation, street lighting and safety barriers as required;
- Impact of climate change incorporated into design consideration.

Traffic Management / Community Safety

A Traffic Management Plan (TMP) for the Project has been prepared to ensure:

- The safety of the road workers;
- All road users, including vulnerable road users, are safely guided around, through or past the work site;
- The performance of the road network is not unduly impacted and the disruption and inconvenience to all road users are minimised for the duration of the works;
- Impacts on users of the road reserve and adjacent properties and facilities are minimised.

To help meet the objectives of the TMP, MEJV aims to incorporate best practice traffic management methods and devices into the works. The following identifies some of the best practice methods being used on this project:

- Trailer mounted variable message signs (VMS) to be extensively used during the works to provide warning, information, advice and direction to road users;
- Vehicle mounted attenuators (rate at minimum TL3 represents global best practice for the

- deployment and operation of traffic management);
- Concrete and Steel Barriers to segregate traffic and workers.

To ensure ongoing compliance regular auditing and road safety inspection are carried out on implemented Traffic Control Plans (TCP). All reports are filed and Non-Conformance Report (NCRs) and Corrective Action Request (CARs) raised within 24 hours and closed out within 7 days. Auditing of TCPs are carried out through compliance auditing, road safety inspections and road safety audits. When conducting audits, auditing personnel must vary the TCPs they inspect.

Road Safety audits are undertaken throughout the design and construction.

Workforce Safety

MEJV has implemented a Safety Management Plan that has been prepared in line with legal and contractual requirements and operates in line with a documented management system which meets the requirements of AS 4801:2001 'Occupational Health and Safety Management Systems – Specification with guidance for use.

Health and Safety (H&S) targets and expected performance have been established for the Project and are shown in Table 10 below.

Table 12: Health and Safety objectives and performance expectation

H&S Objectives	Percentage of Project Lifecycle
Toolbox Talks must be completed weekly (attended by all Line Management)	90%
Safety Committee Meetings to be held monthly	95%
Activity Based Conversation per Line Management per week	100%
All Subcontractors Plant to be registered on Project Plant Register	100%
All Subcontractors Plant Risk Assessments to be prepared and approved prior to commencing work	100%
All Subcontractors Plant Pre-Start Checks to be completed and recorded prior to commencing work	100%
No. of traffic safety incidents within project boundary	100%
Traffic Management Checklists completed twice daily	100%

High risk activities and hazards have been considered as a management priority when establishing objectives and targets. MEJV provides a Monthly Safety Indicators (MSI) report to Main Roads.

A Project Risk Register has been developed to assist the Project to determine which Project activities involve levels of risk requiring formal documented controls.

MEJV ensures all prescribed and high-risk activities conducted on the Project are performed by authorised personnel holding the relevant certification to perform the activity issued by the relevant legislative authorities. High Risk Construction Work (HRCW) and designated hazardous activities is work identified by MEJV as work involving a significant health and safety risk or work in certain hazardous areas on site. Some of the HRCW activities identified for the project include the following:

- Working in an excavation > 1.5 metre deep;
- Working around penetration;
- Using or handling a hazardous substance/ material;

- Lifting and crane operations (falling of suspended loads, contact with power lines/structures etc)
- Working at height where a person could fall > 1.8 metre or where a person could be struck by falling objects.

Effectiveness of controls is monitored and reviewed on an ongoing basis during:

- Activity Based Conversations (ABC);
- Workplace Inspections;
- Toolbox Talks and Pre-Start Talk and Site Attendance Record;
- Health Safety and Environmental (HSE) Committee Meetings;
- Audits.

Seven incidents and no lost time injury frequency rate (LTIFR) have been reported within the reporting period.

Community Amenity

The Project will provide important contributions to improved community amenity through delivering the urban and landscape design vision and objectives and improving road safety. The landscape character will predominantly reflect the natural environment of the Neerabup National Park, being the dominant natural feature associated with the Project, and will enhance the rural landscape character of Wanneroo Road. Visual amenity will also be provided through connections to Local Government road landscapes. Design for the Project is nearing completion, with the following principles featuring in the urban and landscape design:

- Providing for connectivity from the community to the PSP, including future connectivity to the Alkimos City Centre.
- Creating design finishes for structures that are informed by the natural environment and create a sense of place.
- Creating Local Government landscape connections that enhance the City of Wanneroo Street Tree Masterplan.
- Retaining trees and providing enhanced planting on Wanneroo Road to retain the roads 'Landscape Enhancement' character.
- Providing tree planting within the road reserve to provide visual amenity.

As described in the Social Context section of this report (see pp 25-26), the MEJV social sustainability objective is to contribute to liveable communities. Delivering the positive social outcomes that are expected from the project will contribute significantly to social amenity, in particular the enhanced connection to Neerabup National Park.

Diversity and Workforce Development

Through delivery of the Project MEJV explores the opportunity to increase diversity and participation in the workforce.

The industry participation resource developed as part of the project establishes, monitors and implements strategies relating to workforce development and industry participation.

To support employment of Diversity & Inclusion Groups, MEJV has established targets to increase:

- Aboriginal employment – at least 10% of MEJV's Total Project Work Hours undertaken by Aboriginal Persons;
- Aboriginal Business procurement – works and/or services to a value of at least 2% of the Contract Sum undertaken by Aboriginal Businesses.

An Aboriginal Participation Plan has been developed with the key requirements and visions to:

- Build and drive beneficial relationships with the local Aboriginal Traditional Owners and greater Aboriginal Communities;
- Engage the local Noongar Wadjuk Traditional Owner community in developing a greater understanding of local Aboriginal protocols, heritage and culture through events and cultural engagements;
- Meet or exceed the Aboriginal employment target of at least 10% of the Contractor's Total Work Hours are undertaken by Aboriginal Persons;
- As appropriate, support and promote continued employment of Aboriginal Project employees, beyond the initial scope of their employment;
- Meet or exceed the Aboriginal Business procurement targets – works and/or services to a value of at least 2% of the Contract Sum are undertaken by Aboriginal Businesses;
- As appropriate and where possible, continue engagement of Aboriginal project businesses on future projects, supporting BMD's approach to mutually beneficial and long-term relationships.

MEJV recognises that the provision of meaningful employment opportunities for the Whadjuk and possibly the surrounding communities, may require an investment in pre-employment training as well as one-on-one support (mentorship). By providing pre-employment training and mentorship, MEJV bolsters project employment opportunities to the Whadjuk community, as well as contributes to maximising project employment outcomes, possibly shaping careers or changing the lives.

MEJV provides continued training opportunities to its workforce through:

- Training provided by external service providers;
- Onsite training provided by the Project delivery and Management team;
- Traineeships;
- MEJV Online Training Learning Modules.

BMD and Georgiou are active in promoting and raising awareness of local industry capability.

Examples include:

- Membership of CCF and Construction Contractors Association of WA;
- Georgiou membership of Noongar Chamber of Commerce and Industry;
- Women in Engineering/ Women in Construction – promoting diversity of women in engineering and construction.

These platforms are intended to be used to raise awareness of local industry capability, as well as key project initiatives such as open days, briefings, and presentations to industry associations.

Appendix 1 - List of Protected Areas

Project interfaces with:

Three heritage sites are located within a 1 km of the Project area

- Orchestra Shell Cave (ID 4404); Artefacts
- Nowergup Lake (ID 17450); Mythological
- Jindalee (ID 20772); Mythological.

Seven other heritage places are in proximity of the Project area:

- Lake Neerabup (ID 3693) – adjacent to the south-eastern extent of the Project area
- Romeo Road Pinnacles (ID. 37478) – overlays the western end of Romeo Rd
- SBJ09 (ID 20769)
- Butler-FS04 (ID 20600)
- Butler-FS03 (ID 20598)
- Butler-FS02 (ID 20597)
- Butler-FS01 (ID 20596).

Appendix 2 –Protected fauna and flora species and habitat

Flora and Vegetation

The following flora and vegetation values have been identified as environmentally sensitive:

- Melaleuca huegii – Melaleuca systema shrublands on limestone ridges (Floristic);
- Community Type (FCT) 26a): Threatened Ecological Community (TEC);
- Banksia dominated woodlands of the Swan Coastal Plain IBRA region P3 PEC listed by DBCA);
- Three Priority (P)3 Priority Ecological Communities (PEC);
- One Priority (P)1, one P2 and four P3 flora species, as per below:

Species	Priority status listed by DBCA	No. plants within DE approved via MS629	No. plants within survey area	No. plants within extended survey area
<i>Baeckea</i> sp. Limestone (N. Gibson & M.N. Lyons 1425)	Priority 1	174	354	83
<i>Acacia benthamii</i>	Priority 2	2	15	2
<i>Leucopogon</i> sp. Yanchep (M. Hislop 1986)	Priority 3	370	425	1341
<i>Hibbertia spicata</i> subsp. <i>leptotheca</i>	Priority 3	50	73	141
<i>Pimelea calcicola</i>	Priority 3	88	125	67
<i>Styliidium maritimum</i>	Priority 3	292	944	281

The project area is also located adjacent to Neerabup National Park and Neerabup Nature Reserve and Threatened flora, *Eucalyptus argutifolia*, recorded in Neerabup National Park.

Terrestrial Fauna

The following fauna values have been identified as environmentally sensitive or protected that require on-going management throughout the course of the project:

- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) – Schedule 2 (Endangered) under the *Biodiversity Conservation Act 2016*, Endangered under the *Environmental Protection and Biodiversity Conservation Act (EPBC) 1999*;
- Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*); – Schedule 3 (Vulnerable) under the *Biodiversity Conservation Act 2016*, Endangered under the *EPBC Act 1999*;
- Southern Brown Bandicoot (*Isodon fusciventer*); – Priority 4 listed by DBCA
- Peregrine Falcon (*Falco peregrinus*); – Schedule 7 (Other Special Protection) under the

Biodiversity Conservation Act 2016;

- Western Brush Wallaby (*Notamacropus irma*) - Priority 4, listed by DBCA.

There are two priority fauna species likely to be found in the Project area:

- Black-striped Snake (*Neelaps calonotos*) – Priority 3, listed by DBCA; &
- Jewelled southwest Ctenotus (Swan Coastal Plain population) (*Ctenotus gemmula*) – Priority 3, listed by DBCA.

Matters of National Environmental Significance (MNES)

The project likely to have a significant impact on Matters of National Environmental Significance (MNES) including:

- Banksia Woodlands of the Swan Coastal Plain Threatened Ecological Community (BWSCP TEC);
- Carnaby's Cockatoo (*Calyptorhynchus latirostris*);
- Forest Red-tailed Black Cockatoo (FRTBC, *Calyptorhynchus banksii naso*).

Appendix 3 -List of Stakeholders to the project

State Government Departments and Agencies

- Department of Water and Environment Regulation
- Department of Biodiversity, Conservation & Attractions
- Main Roads Western Australia
- Main Roads Customer Information Centre

Local Government Authorities

- City of Wanneroo

Public Utility Providers/Services

- Western Power
- Telstra
- Water Corporation

Leisure/Recreation

- West Cycle

Community

- Members of the Construction Reference Group
- Quinns Rocks Environmental Group

Local Residents

- Residents on western side of freeway on road reserve boundary
- Residents likely to be impacted by construction activities

Local businesses/schools

- Businesses on Wanneroo Road / Romeo Road Intersection
- Business on Butler Blvd
- Quinns Rocks Primary School
- St James Anglican School
- Northshore Christian Grammar School
- Atlantis Beach Baptist College

Road Users

- Local road users
- Taxi and public transport
- Cyclists and other active transport network users

Appendix 4 – Environmental Legislation

Environmental legislation impacting the project includes: **Commonwealth Government**

- *Aboriginal and Torres Strait Island Heritage Protection Act 1984*
- *Aboriginal and Torres Strait Island Heritage Protection Regulations 1984*
- *Biosecurity Act 2015*
- *Biosecurity Regulations 2016*
- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Environmental Protection and Biodiversity Conservation Regulations 2000*
- *National Environmental Protection Council Act 1994*
- *National Greenhouse and Energy Reporting Act 2007*
- *National Greenhouse and Energy Reporting Regulations 2008*

Western Australia (WA)

- *Aboriginal Heritage Act 1972*
- *Aboriginal Heritage Regulations 1974*
- *Biodiversity Conservation Act 2016*
- *Biosecurity and Agriculture Management Act 2007*
- *Biosecurity and Agriculture Management Regulations 2013*
- *Conservation and Land Management Act 1984*
- *Conservation and Land Management Regulations 2002*
- *Contaminated Sites Act 2003*
- *Contaminated Sites Regulations 2006*
- *Dangerous Goods Safety Act 2004*
- *Dangerous Goods Safety (General) Regulations 2007*
- *Environmental Protection Act 1986*
- *Environmental Protection Regulations 1987*
- *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*
- *Environmental Protection (Controlled Waste) Regulations 2004*
- *Environmental Protection (Unauthorised Discharges) Regulations 2004*
- *Heritage of Western Australia Act 1990*
- *Heritage of Western Australia Regulations 1991*
- *Litter Act 1979*
- *Litter Regulation 1981*
- *Rights in Water and Irrigation Act 1914*
- *Planning and Development Act 2005*
- *Planning and Development Regulations 2009*
- *Waste Avoidance and Resource Recovery Act 2007*
- *Waste Avoidance and Resource Recovery Regulations 2008*
- *Waterways Conservation Act 1976*
- *Waterways Conservation Regulations 1981*