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# **HIGH STREET UPGRADE: Annual Project Sustainability Report 2020**

Prepared by Georgiou Group

**Georgiou**

# Contents

|  |    |
|--|----|
| <b>About this Report</b> .....   | 3  |
| <b>Introduction</b> .....  | 3  |
| <b>Highlights</b> .....  | 5  |
| <b>Overview</b> .....  | 6  |
| <b>Project Overview</b> .....  | 6  |
| <b>Sustainability Policy</b> .....   | 7  |
| <b>Strategic Approach</b> .....  | 7  |
| <b>Environmental Aspects Performance</b> .....                             | 11 |
| <b>Water Management</b> .....  | 14 |
| <b>Noise (from construction and future operation)</b> .....                | 15 |
| <b>Vibration</b> .....   | 19 |
| <b>Dust</b> .....  | 19 |
| <b>Clearing</b> .....  | 20 |
| <b>Materials</b> .....   | 20 |
| <b>Economic Aspects Performance</b> .....                                  | 23 |
| <b>At a Glance</b> .....   | 23 |
| <b>Economic Context</b> .....  | 23 |
| <b>Key Economic Outcomes</b> .....   | 25 |
| <b>Sustainable Procurement and Buy local</b> .....                         | 26 |
| <b>Social Aspects Performance</b> .....                                    | 30 |
| <b>Appendix 1 – List of Protected Areas Project interfaces with:</b> ..... | 36 |
| <b>Appendix 2 – Protected fauna and flora species and habitat</b> .....    | 37 |
| <b>Appendix 3 – List of Stakeholders to the project</b> .....              | 39 |
| <b>Appendix 4 – Project Sustainability Policy</b> .....                    | 41 |
| <b>Appendix 5 – Georgiou Company Sustainability Policy</b> .....           | 43 |
| <b>Appendix 6 – Glossary of Terms</b> .....                                | 40 |

# About this Report

This report has been prepared by the Project team on behalf of Main Roads Western Australia (MRWA). The report forms part of Main Roads' annual sustainability reporting which is integrated into its Annual Report. The material (most important) topics captured within this report have been guided by MRWA through contractual sustainability commitments and determined through a preliminary IS V2.0 SDG Materiality Assessment with key Project stakeholders.

## Introduction

The High Street Upgrade Project has been introduced to improve safety, efficiency and traffic flow for road users travelling to and from Fremantle. The project will also significantly improve connectivity for pedestrians and cyclists accessing Fremantle and surrounding suburbs. The Project Works includes construction of:

- New roundabout at the intersection of High Street and Stirling Highway;
- Wide median on High Street to separate east and west bound carriageways and preserve a number of mature native trees;
- Single lane one-way service road for residents on the northern side of High Street;
- New underpass at the junction of Forrest Street and Stirling Highway; and
- New underpass at the junction of Montreal Street and High Street.

The Project will provide a meaningful improvement in travel times for those travelling to and from Fremantle, whilst providing significant improvements in safety for road users; by eliminating the multiple right hand turns that currently congest the stretch of road between Carrington Street and Stirling Highway. Pedestrians and cyclists will benefit from the greater connectivity both across and along High Street and Stirling Highway and safer passage, thanks to the introduction of the underpasses. Without the introduction of this Upgrade, congestion within this area would continue to build to saturation levels. Scope inclusions specified by Main Roads WA will ensure that the amenity and quality of living for residents will be maintained and, in many cases, be improved, through the introduction of such things as the noise walls, service road, improved path connectivity, increased lighting and new soft landscaping.

The Project is committed to managing its operations to promote positive environmental, social, and economic impacts. The Project is advancing its management of sustainability through the adoption of the Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability (IS) V2.0 Design & As Built Rating Scheme and self-assessment with MRWA. The application of this IS rating scheme is invaluable in allowing the Project to appreciate and realise sustainability outcomes across the infrastructure value chain. The IS rating scheme allows the Project to assess the infrastructure's contribution to the Sustainable Development Goals (SDGs) and align with the global pursuit of The United Nations' 2030 Agenda for Sustainable Development, and adhere to the delivery of quality, reliable, sustainable and resilient

infrastructure.

Through depiction of material sustainability topics based on the Project's context, the Project has been able to set clear environmental, social and economic objectives to achieve. The preliminary materiality assessment completed with key Project stakeholders identified the following Sustainable Development Goals (SDGs) as having very high materiality to the project:

- SDG 3: Good Health and Well-being;
- SDG 13: Climate Action; and
- SDG 15: Life on Land.

When evaluated within the IS V2.0 Scorecard the following ISCA IS V2.0 credits indicated a very high materiality:

- Res-2: Climate and Natural Hazard Risks;
- Env-2: Noise;
- Env-3: Vibration;
- Env-4: Air Quality;
- Env-5: Light Pollution;
- Eco-1: Ecological Assessment and Risk Management; and
- Eco-2: Ecological Monitoring.

The Project has applied an integrated management system to manage the material issues identified above and integrate quadruple bottom line principles where applicable to the infrastructure. Figure 1 outlines a number of key sustainability opportunities identified and implemented on the Project to exceed its commitment to sustainability.



# Highlights



## Leaving a Lasting Legacy

- The Project recognises the opportunity to create long-term positive outcomes for the community through infrastructure. Enhancing connectivity and accessibility through the area for road users, pedestrians and cyclists, environmental design, and heritage features, have been heavily considered throughout the Project's planning and design. The Project team have adopted ongoing consultation with key stakeholders including the local community, to ensure these opportunities are realised and embodies the needs and interests of the community long-term.



## Resilience

- Recognising the importance of building resilient infrastructure, the Project lead a collaborative Resilience, Climate and Natural Hazards Assessment with MRWA, City of Fremantle and Fremantle Port Authority. This workshop detailed future shocks and stresses, consideration of climate change risks on the Project through current climate projections and long-term solutions. Addressing these risks is pivotal to delivering sustainable infrastructure and is managed in accordance with the MRWA Guidelines Climate Change Risk Assessment (Version 2, August 2019).



## Improving Safety

- The Project is designed to provide significant improvements to safety of all road users of this critical traffic network, including the Perth Freight Link and the Restricted Vehicle (RAV) Network. Developing a more efficient route for road users, pedestrians and cyclists, will reduce overall incidents, congestion, traffic flow and travel time. Traffic modelling predicts continual growth in traffic utilising this network and the Project provides a solution to ensure the network can safely account for this demand.



## Reduce Energy

- There is an opportunity for infrastructure to reduce energy and emissions through more efficient processes, new technologies and adapting traditional behaviours. The Project has committed to reducing energy across the infrastructure lifecycle and is pursuing avenues to reduce energy and introduce energy efficient alternatives. This includes reducing waste generation through prevention, reduction, recycling and re-use. A recent example is the consideration of staging construction works to reduce the need for temporary lighting whilst ensuring the safety of road users is retained.



## Innovation

- By assessing opportunities through the quadruple bottom line principles of sustainability, the Project is able to realise valuable opportunities for advancement and adaptation of the infrastructure. As stated in our Project Sustainability Policy, Georgiou is committed to facilitating the sharing of ideas, knowledge and innovation. The Project team is empowered to share opportunities to enhance design and methodology for the benefit of key Project stakeholders and community; see Economic Aspects Case Study for the Project's current focus.



## Sustainable Procurement

- The Project has recognised the opportunity for procurement processes to proactively address direct and indirect governance, social, economic and environmental risks and opportunities. The Project has opted for local vendors, sustainability labelled products, and adopted targets to both increase employment opportunities for Indigenous and Torres Strait Islander persons and increase Indigenous business participation. Georgiou demonstrates its commitment to Aboriginal Participation and the Project's targets within its Indigenous Relations Policy and Reconciliation Action Plan (RAP).

Figure 1: Key Sustainability Metrics & the United Nations SDGs

# Overview

## Project Overview

This Annual Sustainability Report has been prepared for the High Street Upgrade Project (the Project). The Project is valued at \$118 million and is jointly funded by the Australian (\$76.62 million) and State (\$44.38 million) governments and is part of the road and rail infrastructure package to improve Perth’s transport network.

The High Street upgrade will deliver a more efficient route for locals and visitors travelling to and from Fremantle, as well as improve road safety in the area. Construction on the Project commenced in early 2020, with completion scheduled for mid-2021. The Project is likely to create approximately 700 jobs, with the scope of works including (not limited to):

- A new roundabout at the intersection of High Street and Stirling Highway;
- Widened median on High Street to separate traffic lanes and maximise mature tree preservation;
- Single-lane one-way service road for residents on the northern side of High Street;
- New underpass at the junction of Forrest Street and Stirling Highway; and
- New underpass at the junction of Montreal Street and High Street.

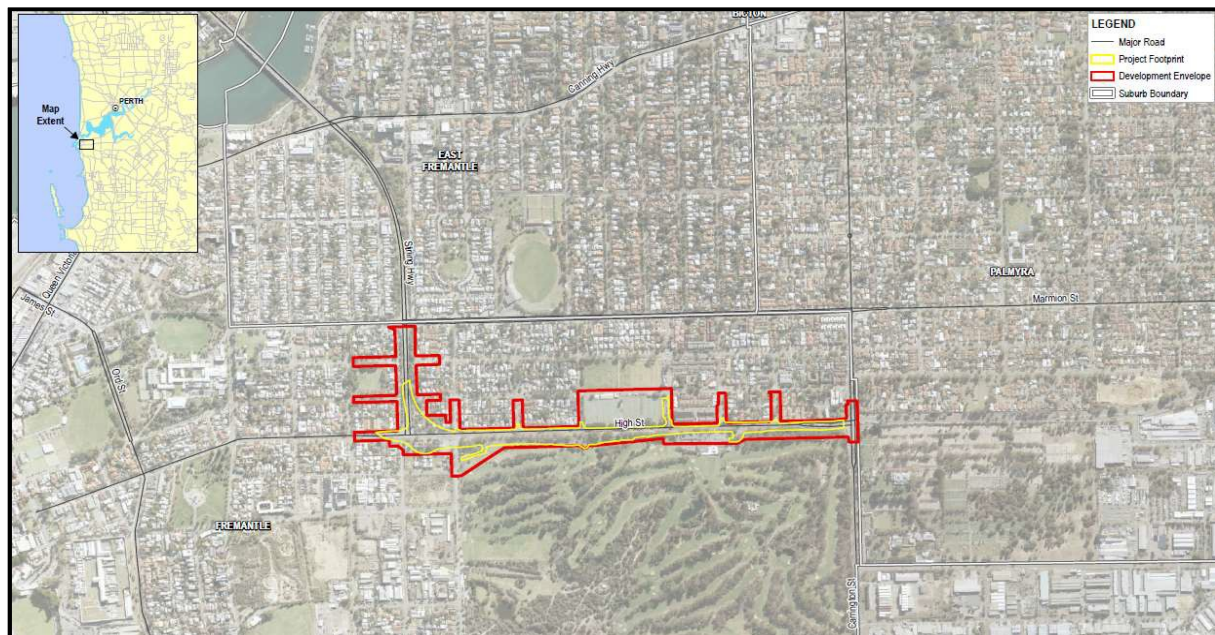


Figure 2: The above aerial shows the Project Footprint (yellow) and development envelope (red) and adjoining land uses.

The project is being delivered on behalf of MRWA in line with their current strategic direction, Keeping WA Moving. This means that when planning for and designing the project works, Georgiou must simultaneously consider social, environmental and economic matters to ensure the works are consistent with sustainability principles.

## **Sustainability Policy**

Georgiou is committed to promoting a culture of sustainability. We manage our operations in a manner that minimises our environmental and social impacts, while enabling the integration of sustainability principles and practices into everything we do. Georgiou's Corporate Sustainability Policy is provided in Appendix 5, and commitments detailed below:

- Focus on integrating sustainability initiatives throughout the business;
- Be ethically responsible in managing the projects we construct, the materials we procure and the people we employ;
- Set sustainable objectives and targets applicable to our projects prior to commencement and facilities on a yearly basis;
- Engage with local communities to achieve shared and lasting outcomes;
- Support our workforce in being diverse, engaged, motivated and competent - together working towards the sustainable success of our business;
- Facilitate the sharing of ideas, knowledge and innovation, internally and externally, that create financial savings and benefit to society and the environment in which we operate;
- Implement risk and hazard management principles to maintain the health and safety of our people, the surrounding community and the environment; and
- Drive to deliver sustainable profitable growth while satisfying our social, legal and contractual obligations.

All employees who work for Georgiou have a personal responsibility for implementing the above Policy commitments. For further information, please refer to [www.georgiou.com.au/responsibility/sustainability/](http://www.georgiou.com.au/responsibility/sustainability/)

## **Strategic Approach**

The High Street Upgrade Project shall manage its operations to promote positive environmental, social and economic outcomes. This will be done by applying the principles of sustainable development to everything we do. In order to achieve this commitment the Project has generated a Project Sustainability Policy in consideration of the MRWA and Georgiou Corporate Sustainability Policies aforementioned. It provides a framework for the

objectives set in this plan and includes a commitment to going beyond the mitigation of negative impacts to restorative actions (i.e. net positive benefits for society and the environment) and to sustainable procurement.

As part of a self-assessment with MRWA, the Project has adopted the ISCA Infrastructure Sustainability (IS) V2.0 Design & As Built Rating Scheme. ISCA is a peak industry body in Australia and New Zealand, enabling sustainability outcomes in the planning, design, construction and operation of infrastructure assets. The adoption of a self-verification against the IS V2.0 Design & As-Built rating scheme has allowed the Project to make decisions that optimise environmental, social, economic and governance outcomes beyond the business as usual (BAU) approach and exceed sustainability performance in infrastructure. The Project aims to achieve a minimum IS V2.0 Design and As-Built rating score of 50 through self-assessment of MRWA.

## Material Sustainability Issues

A preliminary materiality assessment has been undertaken for this project. The completion of the Project's preliminary materiality assessment identified the most important (material) sustainability issues for the Project using the IS Rating Tool framework, adjusting the value of certain items within the IS rating tool to best reflect the projects context. During the assessment each IS topic is categorised as one of the following:

- 0 = not material (scoped out)
- 1 = Low materiality (half as moderate as important as moderate)
- 2 = Moderate materiality
- 3 = High materiality (more than 50% more important than moderate)
- 4 = Very high materiality (twice as important as moderate)

A further materiality assessment workshop has been undertaken with key external stakeholders indicating the following SDGs as having very high materiality to the project:

### Very high

- SDG 3 Good Health and Well-being
- SDG 13 Climate Action
- SDG 15 Life on Land

When the findings of the materiality assessment workshop are evaluated within the IS V2.0 Scorecard, the following credits indicated a very high materiality;

### Very high

- Res-2 Climate and Natural Hazard Risks



- Env-2 Noise
- Env-3 Vibration
- Env-4 Air Quality
- Env-5 Light Pollution
- Eco-1 Ecological Assessment and Risk Management
- Eco-2 Ecological Monitoring

The results of the preliminary materiality assessment are detailed in the figure overleaf.

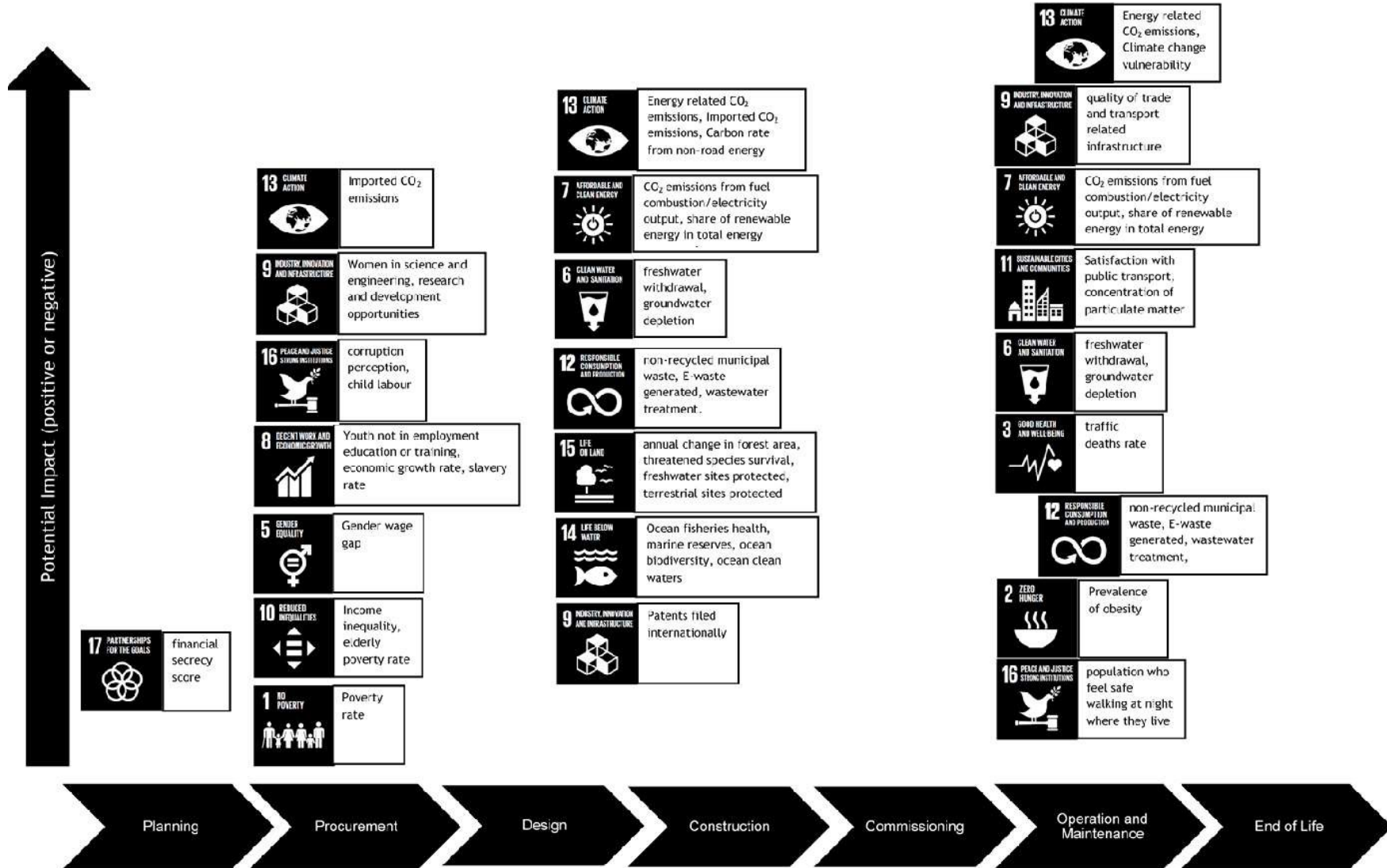


Figure 3: Mapping of Material SDG's for this Project

# Environmental Aspects Performance

## At a Glance

Table 1: Environmental Snapshot

| Aspect  | Year to 30 June | Total for Project |
|---|-----------------|-------------------|
| Forecast Clearing (ha)  | 4.5             | 6.4               |
| Clearing permit allowance – native vegetation (ha)                  | 0.63            | 0.63              |
| Actual clearing to date – native vegetation (ha)                    | 0.25            | 0.25              |
| Rehabilitation/revegetation planned (ha)                            | 0               | TBC               |
| Actual rehabilitation/revegetation to date (ha)                     | 0               | TBC               |
| Environmental offset via Monetary contribution actual (\$)          | TBC             | TBC               |
| Total Water Consumption to date (kL)                                | 678             | 16,660            |
| Total water licence allowance (kL)                                  | 31,250          | 75,000            |
| Total GHG emissions (scope 1, 2 & 3) to date (t CO <sub>2</sub> -e) | 10,960.20       | TBC               |
| Total energy consumption to date (mj)                               | 960,204.78      | TBC               |
| Total quantity of recycled content used in project (t)              | 600             | 39,000            |
| Total imported materials used in project (t)                        | 923             | 44,977            |
| Total waste generated by project (t)                                | 13,617          | 51,297            |

## Environmental Context

The project is located in a historically disturbed urban environment. The majority of the project area is currently road reserve, surrounded by residential, recreation and commercial properties. The environment is highly modified and has undergone extensive land clearing. Past and current land uses in the surrounding region include:

- Road and road reserve;
- Residential;



- Service station;
- Golf course;
- Industrial; and
- Quarry and landfill.

The majority of the project is located in the City of Fremantle, a major port city in WA. Fremantle is characterised by a Mediterranean climate, cool wet winters and hot dry summers.

Climate data was sourced from the nearest Bureau of Meteorology station in Swanbourne, 11 km north of the project. The highest monthly average maximum temperature is 30.5°C (February), and the lowest monthly average minimum temperature is 9.7 °C (July). Swanbourne averages 730 mm of rainfall a year, with the highest rainfall in July.

The project is 2.5 km from the coast and as such is not considered susceptible to the risk of climate change events. Decreases in annual rainfall and increases in flood producing rainfall are expected. The Project has undertaken a Climate Change and Natural Hazard Risks Assessment as detailed in 'Economic Aspects Performance'. This assessment falls under ISV2.0 credit Res-2.

No significant impacts are expected to surface water or drainage. There are no water courses, drainage lines or wetlands present within the project area.

The project area is situated approximately 1.2 km south of the Swan River, within the Swan Coastal catchment. The project is located within the Swan/Canning Estuary surface water allocation sub-areas. Stormwater runoff will be captured in drainage basins adjacent to the road and therefore will not flow offsite or towards the Swan River.

No geomorphic wetlands were identified during the survey. However the Swan River Estuary, classified as an Estuary-Waterbody, is situated 900m north of the project area.

**Key Environmental Legislation Impacting the Project**

The statutory requirements for this site have been identified within the Company HSE Legal and Obligations Directories and have been incorporated into the Project’s approved Environmental Management Plan (EMP). Legal and other requirements specific to this contract, which are not otherwise captured in the Company HSE Legal and Obligations Directories are as follows:

*Table 2: Legislative and other requirements outlining how Georgiou will comply with listed requirements*

| Legislation / Other requirement                                   | How will Georgiou comply with the requirement   |
|---|---|
| Environment Protection and Biodiversity Conservation Act 1999 (C) | <p>The EMP implements processes to minimise impact on the Environment</p> <p>The EMP implements processes to minimise impact on the Environment</p> |

|  |  |
|--|--|
| Environmental Protection Act 1986 (WA)   |  |
| Environmental Protection Regulations 1987 (WA)                                 | The EMP implements processes to minimise impact on the Environment |
| Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)       | Waste Management Environmental Sub Plan                            |
| Aboriginal Heritage Act 1972 (WA)  | Culture & Heritage Management Environmental Sub Plan               |
| Aboriginal Heritage Regulations 1974 (WA)                                      | Culture & Heritage Management Environmental Sub Plan               |
| Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA) | Compliance with Flora and Fauna Management Sub Plan                |
| Rights in Water and Irrigation Act 1914 (RIWI Act) (WA)                        | Water Management Environmental Sub Plan                            |
| Environmental Protection (Controlled Waste) Regulations 2004 (WA)              | Waste Management Environmental Sub Plan                            |
| Environmental Protection (Noise) Regulations 1997 (WA)                         | Noise & Vibration Management Environmental Sub Plan                |
| MRWA Environmental Policy  | Environmental Management Plan                                      |
| Environmental Protection Act 1986 (WA) approval; Ministerial Statement 1096    | Environmental Management Plan                                      |

## Environmental Management

The Project has developed an Environmental Management Plan (EMP), which sets out to describe how environmental aspects are to be managed so that the site and those engaged onsite will:

- Comply with Georgiou Policy, Client, legal and other obligations;
- Minimise the impacts on the environment; and
- Achieve the Company, client and site objectives and targets.

This Management Plan is written in accordance with Georgiou’s health, safety and environment management system that is 3rd party certified to AS/NZS ISO 14001. The development of this Management Plan has been based upon the risks and opportunities identified, and specifically address client, contractual, legal and other obligations.

## Project Environmental Commitment Statement

Georgiou is required to develop a contract specific Environmental Commitment Statement. The Project's commitment statement is as follows:

“From the design phase, to practical completion of the High Street Upgrade Project Georgiou is committed to minimising where reasonably practical any foreseeable impacts on the natural environment and social surroundings. The High Street Upgrade Project has many adjoining stakeholders, these include (not limited to); the Fremantle Golf Course, local road users and the City of Fremantle. Georgiou will endeavour to keep impacts generated by construction activities to a minimum for these stakeholders while delivering an asset that can be utilised and enjoyed by future generations.

In order to achieve these commitments, Georgiou will:

- Generate and implement a Project specific Environmental Management Plan (MRWA approved) with mitigation measures that promote adjoining stakeholder adhesion (eg: noise, vibration and dust management measures);
- Track and report on waste being sent to landfill on a monthly basis and reach a target of 60% recycling at practical completion (diversion from landfill);
- Complete monthly Detailed Hazard Inspections (Environmental) for the lifetime of the Project;
- Endeavour to respond to any complaint regarding the environment within 24 hours, after the complaint has been received; and
- Ensure that clearing is kept to a minimum through design and construction, as well as ensure that trees to be retained and respected and protected to ensure their ongoing survival. This will ensure that the City of Fremantle maximises its tree canopy cover of the area, which will in turn combat the urban heat island effect.

## Water Management

Water Management is outlined within the projects formally approved EMP. The EMP includes a Water Management Sub Plan. This Sub Plan outlined the need for water to be conserved, reused and recycled where practical.

The Project has identified areas of construction that can utilise the use of non-potable water sources (groundwater). The Project does not fall within a Public Drinking Water Source Area (DWER 2018), but does fall within a proclaimed Perth Groundwater Area (DoW 2010). The Project has been issued a License to Construct and Alter a Well and License to Take Water by the Department of Water and Environmental Regulation (DWER). Part of this licensing involves tracking the usage of groundwater in accordance with the annual entitlement to take water under the License to Take Water. Water usage is tracked monthly and reported to MRWA as part of monthly reporting requirements for the Project.

Table 3: Water Consumption

| Source  | Year to 30 June | Total for Project |
|---|-----------------|-------------------|
| Water purchased from the scheme (kL)              | 52              | 312               |
| Water pumped from bores (kL)                      | 626             | 15,868            |
| Water pumped from rivers, lakes or harvested (kL) | 0               | 0                 |
| Recycled or waste water use (kL)                  | 0               | 0                 |

### Noise (from construction and future operation)

The Project is bounded by sensitive receptors in all directions, with residential properties to the North, West and East of the Project site. The Royal Fremantle Golf Course is also to the South of the Project site and is sensitive to environmental emissions from the Project

Due to the high traffic count of High Street and Stirling Highway, the Project is endeavouring to reduce added congestion due to construction works. As such many activities to date have been scheduled and executed during 'out of hours' operations.

The Project submits monthly (or as needed) Noise and Vibration Plans (NVMP) to the Local Governing Authority (City of Fremantle). Once approved, the Plans are also made available to MRWA for publication on its website for public reference. The monthly NVMP's set out how the Project will manage noise and vibration during out of hours works activities as to best ensure that noise caused by construction activities impacts on adjoining sensitive receptors as little as is practicable. As part of this approval process the Project has been notifying residents of upcoming out of hours activities no later than 48 hours prior to the beginning of scheduled out of hours works.

The below sub-plan is indicative of noise control measures when working out of hours (demonstration purposes only);

| <b>Noise Management Plan</b> |  | <b>Responsibility</b> |
|------------------------------|--|-----------------------|
| Objectives & Targets         | Refer to the Site HSE Objectives & Targets Document  | Project Manager       |
| Performance Criteria         | 100% Compliance with Client & legal requirements<br>100% achievement with Project Objectives & targets   | Project Manager       |
| Mitigation Measures          | General<br>Compaction activities that have the potential to impact external stakeholders shall consider: <ul style="list-style-type: none"> <li>- Letter drops to local residents (following agreement with Client)</li> <li>- Pre &amp; During Construction noise monitoring where required</li> <li>- Perimeter fencing will have contact details of the person responsible for the site</li> </ul>  | Project Manager       |
|                              | Training and Competency<br>Workers will be informed of the Site specific controls required for noise management including: <ul style="list-style-type: none"> <li>- Choice of plant and equipment</li> <li>- Efficient use of plant and equipment</li> <li>- Use of monitoring equipment (as required)</li> </ul>  | Project Manager       |
|                              | Hours of Operation<br>Any out of hours work required will be carried out in accordance with (Local Governing Authority) requirements.  | Project Manager       |
|                              | Out of hours Noise Mitigation measures<br>Georgiou will implement the following controls where deemed necessary, these include; <ul style="list-style-type: none"> <li>- Practical Engineering Controls</li> <li>- Maximizing the distance between operating equipment and sensitive receptors,</li> <li>- Plant will be switched off when not in use,</li> <li>- Monitoring noise levels for out-of-hours work near sensitive receptors if required,</li> </ul> | Project Manager       |



- |  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"><li>- Work will be scheduled away from sensitive receptors as much as reasonably possible</li><li>- Undertake effective community consultation where there is a need to undertake work out of hours,</li><li>- All plant, equipment and vehicles are to be regularly monitored and maintained and records kept of maintenance,</li><li>- Use of non-tonal reversing beepers (broadband based)</li><li>- Providing respite periods where possible,</li><li>- Engine covers will be kept closed when the item is in use, and</li><li>- Any abnormalities in expected noise emissions will be recorded in the plant's daily prestart and reported to the plant department to be corrected.</li></ul> |  |
|--|---|--|

In addition Georgiou may implement following measures to control the spread of noise from site where required.

- Increasing the distance between noise sources and sensitive receptors where practical.

## Vibration

Similar to noise, all out of hours vibration generated through construction activities are managed through an approved NVMP. There is a contractual requirement to adhere to a limit of 5mm/s. To adhere to this strict threshold Georgiou is currently using a 'Saros Roving Unit' to collect real time data. Prior to this, Georgiou has used a third party consultant to collect vibration data during activities likely to generate vibration on the Project. To date there have been no significant exceedances in vibration levels.

Vibration monitoring has been conducted at locations based on their sensitivity to vibration activities. Sensitive receivers in close proximity to construction activities were selected in consultation with the construction team. Vibration monitoring points are reassessed on an ongoing basis into the future to ensure vibration monitoring is as effective as possible and is a true indication of vibration levels generated by construction activities. It is not anticipated that the proposed construction activities will create vibration at a level that will cause damage to nearby structures or create a nuisance to nearby residents. However, where applicable the following measures will be put in place where practicable to reduce and monitor the level of vibration.

- Use of alternative compaction techniques where practicable – including but not limited to oscillating and static rolling;
- The use of vibration monitoring equipment in the way of Portable Saros Roving Units (or similar).
- Maintaining accurate records of vibration levels at sensitive receptors when construction activities are in close proximity.
- When compaction works are taking place next to sensitive receptors rollers shall operate parallel to receptors and not perpendicular.
- Disengage 'vibration' function when rollers have come to a complete stop, not allowing vibratory energy to build up.

## Dust

Air quality refers to the state of the air around us. An air pollutant is a contaminant in the air that can harm humans and/or the environment. Air pollution can adversely impact human health, particularly that of people with pre-existing respiratory conditions (such as asthma) and cardiovascular diseases, young children and the elderly. Impacts range from mild airway irritations to major organ damage and can be short or long term.

Large infrastructure Projects like this have the potential to generate dust. Dust has the ability to cause health issues within the community, impact on flora and fauna and cause visual disturbances. To date Georgiou has implemented all dust control measures as outlined within the EMP, that being (not limited to);

- Dust/wind fencing;
- Dust monitoring equipment (where applicable);
- The use of water carts;
- Application of Dustex to open areas;
- Reschedule dust generating activities (where possible) to avoid adverse weather conditions (adverse weather is defined as greater than 60km/hr winds with no associated rainfall); and
- Cessation of works in adverse weather conditions.

## Clearing

The majority of clearing on the project has been completed to date in strict accordance with MRWA issued clearing permits. No over clearing or incidents involving clearing activities have been recorded on the Project. Clearing activities are a significant environmental risk for the Project that requires careful planning and stringent controls to ensure that no over clearing occurs due to the sensitive nature of the works.

Clearing has been and will implement the following measures to mitigate risks in regards to clearing (not limited to);

- Implementation of tree protection zones, within the drip line of retained tree canopies;
- The clearing envelope will be clearly pegged out by a suitably qualified surveyor prior to clearing;
- Clearing must be restricted to only those areas where works are to be constructed. The extent of clearing of the road alignment must not exceed 0.5 m from the limit of earthworks;
- An arborist must inspect all trees to be retained, in accordance with 'Appendix 22 – Tree Protection Plan' (as referenced within the SWTC), prior to the commencement of earthworks, in order to assess the health and long-term survivability of each tree;
- The pruning of trees has been undertaken in a way that they are to be protected, it will be done by suitably qualified personnel only. Where branches are trimmed an assessment of the trees ability to survive should be conducted by a suitably qualified person and adequate area around the tree in accordance with AS4970:2009 Protection of trees of development sites.

Georgiou has liaised and made available felled trees/timber to the City of Fremantle as well as the greater surrounding community for re-use.

## Materials

The Project tracks all waste (landfill) and recycling generated by the Project over the

construction period. Aligned with our commitment to resource efficiency, a waste recycling target of 60% was set for the Project. The main method for disposal is the use of designated waste and recycling bins on site with comingled waste bins being collected by a subcontractor and a monthly report is generated to provide recycling and waste streams as well as tonnages for both recycling and waste.

*Table 4: Imported Materials*

| <b>Imported Materials</b> | <b>Year to 30 June</b> | <b>Total for Project</b> |
|---------------------------|------------------------|--------------------------|
| Sand (t)                  | 0                      | 2,000                    |
| Crushed Rock (t)          | 0                      | 3,000                    |
| Aggregate (t)             | 200                    | 2,000                    |
| Asphalt (t)               | 298.4                  | 25,810                   |
| Concrete (t)              | 6.4                    | 5,085                    |
| Steel (t)                 | 65.46                  | 176                      |
| Precast concrete (t)      | 3.5                    | 3,876                    |
| Emulsion (L)              | 0                      | 80,000                   |
| Bitumen cutter (L)        | 0                      | 15,000                   |
| Bitumen (t)               | 0                      | 1,030                    |
| Paint (L)                 | 0                      | 6,000                    |
| Limestone (t)             | 350                    | 2,000                    |

*Table 5: Waste to Landfill*

| <b>Waste to Landfill</b>                    | <b>Year to 30 June</b> | <b>Total for Project</b> |
|---|------------------------|--------------------------|
| Unsuitable material (t)                     | 750                    | 3,000                    |
| Existing seal / asphalt (t)                 | 210                    | 2,500                    |
| Roadside litter / municipal solid waste (t) | 0                      | 0                        |
| Commercial / industrial waste (t)           | 0                      | 0                        |
| Green waste (t)                             | 30                     | 30                       |

|                                     |       |        |
|-------------------------------------|-------|--------|
| Concrete / kerbing (t)              | 75    | 200    |
| Construction / demolition waste (t) | 0     | 0      |
| Contaminated material (t)           | 0     | 0      |
| Asbestos (t)                        | 9,687 | 10,000 |
| General Waste (t)                   | 2.84  | 12.6   |

Table 6: Waste Recycled

| Waste Recycled                                    | Year to 30 June | Total for Project |
|---|-----------------|-------------------|
| Sand (t)  | 2,500           | 2,500             |
| Road base (t)                                     | 0               | 1,000             |
| Asphalt (t)                                       | 0               | 1,000             |
| General waste (site office / roadside litter) (t) | 1.39            | 4.49              |
| Steel (t)   | 0.44            | 0.88              |
| Concrete (t)                                      | 312.48          | 1,000             |
| Green waste / mulch (t)                           | 293.1           | 293.1             |
| Green waste / timber (t)                          | 30              | 30                |
| Plastic (t)                                       | 0               | 2                 |
| Sand/Limestone (t)                                | 0               | 30,000            |

Table 7: Recycled Materials

| Imported recycled content               | Year to 30 June | Total for Project |
|---|-----------------|-------------------|
| Sand (t)                                | 0               | 0                 |
| Crumbed Rubber (t)                      | 0               | 0                 |
| Recycled asphalt (t)                    | 0               | 15,000            |
| Internal cut to fill Sand/Limestone (t) | 600             | 7,000             |
| CRC (t)                                 | 0               | 17,000            |

# Economic Aspects Performance

## At a Glance

Table 5: Economic Snapshot

| Economic Aspect   | Year to 30 June | Total for Project                   |
|---|-----------------|-------------------------------------|
| Funding   | N/A             | \$118M                              |
| No. of vehicles per day   | N/A             | 25,000                              |
| Travel Time Saving  | N/A             | N/A                                 |
| Increase of vehicle capacity  | N/A             | N/A                                 |
| Increase in cycling and pedestrian facilities (i.e. increase in PSP length) | N/A             | 1.55km plus 2 new underpasses/ramps |
| Workforce and Supply Chain  |                 |                                     |
| Number of people employed by supply chain at various stages of project      | 700             | N/A                                 |
| Total number of suppliers engaged   | 134             | TBC                                 |
| Total number of Indigenous Enterprise                                       | 4               | TBC                                 |
| Total number of Disability Enterprise                                       | 0               | TBC                                 |
| Buy Local Spend (to date)   | N/A             | N/A                                 |

## Economic Context

The High Street Upgrade Project recognises the growing importance of this road network and its need to enhance the safety of road users, freight efficiency and support traffic flow travelling to and from Fremantle, including Fremantle Ports. Fremantle is regarded as one of the state's most popular tourist destinations and is home to the state's busiest and most important cargo port (City of Fremantle, Strategic Community Plan 2015-25). The economy consists of port related industries, commercial services, manufacturing, recreation, tourism, entertainment, business services and marine industries. Through engagement with key Project stakeholders and community throughout development, the Project aims to support economic development as a strategic focus area of the City of Fremantle (City of Fremantle, Strategic Community Plan 2015-25), in diversifying and strengthening Fremantle's economic capacity. Key Project stakeholders are Main Roads WA, City of Fremantle and Fremantle Port Authority.

The Project forms part of the road and rail infrastructure package to improve Perth's transport network and at completion will enhance the connectivity throughout the City of Fremantle and other strategic economic hubs and population centres. Over a duration of 15 months the Project is estimated to provide up to 700 jobs including the various supply chains and subcontractors. The infrastructure is intended to maximise the design life and suitability of the infrastructure to meet the needs of the growing industry and minimise maintenance required. Below entails the design life of the infrastructure's key components:

Table 6: Component design life (Scope of Works and Technical Criteria – Contract 33/18)

| Component   | Minimum design life |
|---|---------------------|
| bridge works (including underpasses)                                      | 100 years           |
| retaining walls   | 100 years           |
| drainage structures   | 100 years           |
| noise barriers (attenuation devices)                                      | 50 years            |
| asphalt fatigue   | As per ERN 9        |
| Pavements (excluding any Asphalt Wearing Course and bituminous surfacing) | 40 years            |
| protective coatings to steelwork  | 25 years            |
| lighting  | 20 years            |
| public art works  | 20 years            |
| paint finishes to walls   | 10 years            |

The Project has determined the interested parties that are relevant to the Project; the relevant needs and expectations of these interested parties, and which of these needs and expectations become its compliance obligations with regards to sustainability. As per the Project SMP, an overview of these is provided in the table below and further detail to facilitate negotiable issues on the Project is obtained as additional stakeholder engagement is undertaken.

Table 7: Project specific interested parties, needs and expectations and compliance obligations

| Interested Party                                 | Needs and Expectations  | Applicable Compliance Obligations                              |
|--|---|--|
| MRWA   | Quality project to time and budget with a positive legacy<br>Compliance | Contract IS V2.0 Technical Manual<br>Legislation and Approvals |
| Department of Water and Environmental Regulation | Compliance and positive legacy  | Legislation and Approvals                                      |
| Department of Planning, Lands and Heritage       | Solution that meets design intent                                       | Reference Design   |
| Concept Developer - GHD                          | Quality project to time and budget                                      | Internal Systems   |

|  |                               |                           |
|--|-------------------------------|---------------------------|
| Users – Public   | New or enhanced functionality | Contract                  |
| Users – Fremantle Ports Freight  | Efficiency of operation       | Contract                  |
| Neighbours – Residents, Fremantle Netball Association, Royal Fremantle Golf Course | Good neighbours               | Legislation and Approvals |
| Wider Community – City of Fremantle  | Positive Legacy               | Contract                  |
| Value Chain  | Economic Opportunities        | Contract                  |

During the execution phase of the Project, the following stakeholders are industries engaged at various stages of delivery to provide essential materials or services:

- Civil Construction including earthworks, concrete works and civil works such as installation of drainage, masonry retaining walls;
- Design Consultancies;
- Utility Providers (Water Corp, Western Power, Telstra, NBN, Optus, TPG, Atco Gas, Vocus);
- Steel Fabrication;
- Precast Concrete Fabrication;
- Traffic Management; and
- Security Staff.

The Project recognises the development of infrastructure can result in surrounding minor economic impacts. Through the use of detailed traffic management plans and multiple review processes with impacted stakeholders, the Project is able to deliver works alongside due diligence of affected stakeholders. Alternative routes are to be maintained and provide continued connectivity for impacted road users. The Project has accounted for the following anticipated minor impacts during construction staging:

- Minor traffic disruption to the freight network (however connectivity will be maintained at all times);
- Minor disruption anticipated to small businesses during construction of the western ramps of the Forrest St Underpass; and
- Closure of High St / Montreal St intersection will cause some inconvenience to the light industrial area.

## Key Economic Outcomes



As a whole, the Project facilitates the underlying need to improve the safety and traffic network to account for the multifaceted needs of the local area. Key enhancements of the Project include:

- Increased safety for road users and pedestrians (resulting in reduced incidents);
- Improvement to the Perth Freight Link and the Restricted Access Vehicle (RAV) network;
- Reduced congestion; and improvement of traffic flow;
- Reduced travel time and improved accessibility; and
- Improved connectivity for pedestrians and cyclists through the area.

High Street is a major freight route and has a mix of vehicle types with lots of turning movements and many rear end and other crashes reported. Safety and efficiency are key drivers for this project as a medium-term congestion solution to 2031. Traffic modelling shows that freight and other traffic will grow significantly over time and the Project will ensure the network has the capacity for these demands.

### **Sustainable Procurement and Buy local**

Sustainable Procurement is a substantial Project commitment, recognised within the Project's Sustainability Policy and Georgiou's Corporate Sustainability Policy. Subcontractor and supplier resources will be allocated to fulfil applicable sustainability requirements and proactively address direct and indirect social, economic, governance and environmental risks and opportunities. Satisfactory completion of all applicable sustainability requirements by prospective and actual suppliers/subcontractors shall be managed in accordance with the Georgiou procurement management procedures, and contract specified Industry Participation guidelines.

The Project remains in early stages of the works and procurement is ongoing, however local vendors are favoured and only a few packages have had non-local supply considered. An example of buy local on the Project is Acute Fabrications, providing the underpass skylight steel. The local fabrication firm is approximately 15 minutes from the Project site and utilises Australian sourced steel.

The Project is identifying procurement packages that have material sustainability risks and/or opportunities and reviewing material packages supplier responses to sustainability requirements. Sustainability labelled products are being pursued and the Project is aiming to use up to 5% of sustainability labelled products based on value. These products provide greater transparency through the supply chain and capture invaluable environmental impact data.

Georgiou is committed to achieving the objectives of increasing employment opportunities for Aboriginal persons and increasing Aboriginal business participation throughout the duration of

the Project. Georgiou demonstrates its commitment to Aboriginal Participation within its Indigenous Relations Policy and our Reconciliation Action Plan (RAP).

As per MRWA requirements for the Project, the Project has implemented the following targets for Aboriginal participation:

- Aboriginal Employment Target – at least 10% of the total hours are undertaken by Aboriginal Persons.
- Aboriginal Business Procurement Target – works and/or services to a value of at least 3% of the contract sum are undertaken by Aboriginal Businesses.

Further information is available at the link below:

<https://www.georgiou.com.au/responsibility/community/>

## **Technology and Innovation**

Through the application of the quadruple bottom line principles of sustainability, the Project is able to recognise opportunities for advancement of the infrastructure. As stated in our Project Sustainability Policy, Georgiou is committed to facilitating the sharing of ideas, knowledge and innovation, internally and externally, that create financial savings and benefit to society and the environment in which we operate. The Project team is empowered to highlight opportunities to enhance the infrastructure design for the benefit of key Project stakeholders and community.

## **Climate Change Assessments**

Climate action was identified within the preliminary materiality assessment as a very high material issue for the Project. Direct and indirect risks and opportunities were assessed through a collaborative Resilience, Climate and Natural Hazard Risks Workshop. Georgiou engaged representatives from Main Roads WA, the Fremantle Port and City of Fremantle to participate in the Workshop, as key participants to identify and understand resilience of the infrastructure to future shocks and stresses, and to identify and understand the current and future risks of climate change on the Project.

The assessment included assessing the likelihood of the below shocks and stresses relating to the Project in terms of assets impacted:

- Air temperature;
- Humidity;
- Sea surface temperature;
- Precipitation;
- Sea level rise;

- Wind and hail;
- Bushfire;
- Coastal inundation;
- Cyclones/storms;
- Flooding;
- Heatwave; and
- Drought.



The Risk and opportunity criteria applied was informed by ISO:31000 and AS:5334-Climate Change Adaptation for Settlements and Infrastructure: A Risk Based Approach. Research from the National Climate Change Adaptation Research Facility (NCCARF) indicates that current emissions are tracking close to Representative Concentration Pathway (RCP) 8.5. Accordingly, projections based on RCP 8.5 across two timeframes to 2030 and 2090 were adopted in the Assessment. The projections have been mapped against the asset’s design life (see below Table 8). The Project has managed climate change and natural hazard risks in accordance with the MRWA Guidelines Climate Change Risk Assessment (Version 2, August 2019).

Table 8: Component Design Life and Associated Mitigation Scenarios

| Project Component   | SWTC design Life (years) | Asset Replacement Year | Projections to be mitigated against |      |
|---|--------------------------|------------------------|-------------------------------------|------|
|   |                          |                        | 2030                                | 2090 |
| Bridge works (including underpasses)                              | 100                      | 2121                   | Yes                                 | Yes  |
| <b>R</b> etaining walls   | 100                      | 2121                   | Yes                                 | Yes  |
| Drainage structures   | 100                      | 2121                   | Yes                                 | Yes  |
| Gantries and cantilever sign support structures                   | 100                      | 2121                   | Yes                                 | Yes  |
| Asphalt Fatigue <60mm   | 15                       | 2036                   | Yes                                 | No   |
| Pavements (excl. asphalt wearing course and bituminous surfacing) | 40                       | 2061                   | Yes                                 | No   |
| Protective Coatings to steelwork                                  | 25                       | 2046                   | Yes                                 | No   |
| Lighting  | 20                       | 2041                   | Yes                                 | No   |
| Paint Finishes to Walls   | 10                       | 2031                   | Yes                                 | No   |

|  |     |      |     |     |
|--|-----|------|-----|-----|
| Elements of existing bridge structures that are retained | 100 | 2121 | Yes | Yes |
| Landscaping  | N/A | N/A  | N/A | N/A |

## Case Study – Horrie Long Reserve

Early within the project, the Project Team identified an alternative drainage system proposal to the base case which required the installation of a significant reinforced concrete underground drainage structure to be placed in the centre of the proposed roundabout median. An alternative system has been proposed to be installed in the City of Fremantle’s Horrie Long Reserve, located approximately 80m from the drainage ‘low point’ of the project. The alternative system provides the following benefits to the project:

1. Significant improved access and ease of maintenance of the Underground Storage/Infiltration facility due to its location outside of high trafficked areas, resulting in a sizable reduction in maintenance costs.
2. It enabled the deletion of the unpopular (with local residents) North Eastern drainage basins. Resulting in improved connectivity of shared paths by providing the ability to construct additional shared paths between the two underpasses.
3. The ‘Catch All Row’ of the proposed ecoAID system has the potential to trap the majority of fines within the first easily maintained row, in lieu of removing fines from the entire underground system.
4. Reduction in project risk due to traffic and community disruption i.e. traffic management and safety by reducing proposed works within the roundabout. This would be associated for maintenance activities also.
5. Reduced lifetime cost due to reduction in maintenance effort, traffic management and disruption to traffic due to maintenance.
6. Potential long term durability benefits in comparison to the current design which has water infiltrating into limestone (near heavily trafficked areas).
7. Infiltration into the Horrie Long Reserve area would aid to recharge the reserve’s reticulation bore.
8. Further potential sustainability benefits due to the utilisation of polypropylene in lieu of concrete.

The project team is currently working to finalise the agreements between Main Roads WA and the City of Fremantle, however a general understanding has been reached and a ‘Memorandum of Understanding’ has been executed in order to allow planning and design works for the proposed alternative to continue.

# Social Aspects Performance

## At a Glance

Table 9: Social Snapshot

| Social Aspect   | Year to 30 June  | Total for Project                        |
|---|--|--|
| Community Satisfaction to Project                           | N/A  | N/A                                      |
| No. of Stakeholders engaged with during project development | Over 200 (meetings, info sessions, community reference groups).  | 264 CONNECT cases<br>Over 400 additional |
| No. of complaints   | 23   | 51                                       |
| No. of legacy commitments                                   | 6  | TBC                                      |
| No. of heritage sites in project vicinity                   | 0  | 0  |
| No. of heritage sites significantly impacted                | 0  | 0  |
| No. of traffic safety incidents within project boundary     | 3  | 3  |
| % of women in workforce                                     | 16.8   | 16.8                                     |
| % indigenous in workforce                                   | 24 employees total   | 24 employees total                       |
| LTIFR   | 0  | 0  |
| No. of hours training during project                        | N/A  | N/A                                      |
| No. of development employees and apprentices on the project | 0  | 0  |
| No. of employees (FTEs) sourced from local community        | This project is a metropolitan based project with no fly in/fly out or remote drive in/drive out. All personnel are Perth/surrounding area based resulting in 100% employment from local community |  |

## Social Context

Engaging and consulting the community and project stakeholders is key to the success of the High Street Upgrade project, and a key focus of the project.

The project area is located 2 kilometres east of the Fremantle CBD. High Street and Stirling

Highway serves as a main route to Fremantle and as part of the major freight to the Fremantle Port, and as such heavy vehicle numbers within the project area are high.

The project area is surrounded by medium density residential properties, and recreation areas including the Royal Fremantle Golf Club, Fremantle Public Golf Course, Fremantle Netball Association, and Booyeembara Park immediately south of the project.

Stakeholders include, Federal and State Government, Local Government Authorities (City of Fremantle, City of Melville and Town of East Fremantle), Fremantle Ports and associated freight stakeholders, environmental regulators and groups, local residents and businesses, Aboriginal custodians, road users (including pedestrians and commuter / recreational cyclists), community groups and emergency services.

Appendix 3 details the project stakeholders.

### **Addressing Community Concerns**

Common concerns and key issues raised by stakeholders and community during the project planning, design and early delivery stages have included vegetation clearing; noise wall height, type and design, particularly the interface between noise wall and footpath connectivity. Concerns have also been raised regarding construction impacts, particularly after-hours works; traffic congestion and staging; pedestrian underpass design and improving pedestrian connectivity in the area; roundabout design and suitability for large vehicles; and screening properties from traffic.



*Consulting community to enhance local streetscape design*

The community is largely supportive of the project, and many residents have been consulted over the years, as a number of freight efficiency and improvement projects with varying scopes have been proposed previously.

### **Community & Stakeholder**

Consultation and stakeholder engagement is vital to all public infrastructure projects. A comprehensive communication and stakeholder management strategy has been established, identifying key stakeholders, key project issues and opportunities for consultation and influence, and identified key communication channels.

Stakeholders and the community have had a number of opportunities to influence and provide feedback regarding the project, and shape a number of design outcomes. In addition to engagement completed by Main Roads, Georgiou has also:

- Convened a project Resident Reference Group
- Held community drop-in sessions to gather feedback in relation to noise wall construction, artist design, and general project design.
- Engaged and briefed Gibson Park and White Gum Valley Resident Precinct Groups.
- Engaged Fremantle Public Golf Course, Royal Fremantle Gold Club and Fremantle Netball regarding project design and construction impacts. RFGC in particular regarding new entrance design.
- Ongoing 1:1 engagement with landowners where noise walls will be constructed on their property boundary.
- Meetings with neighbourhood groups to provide opportunities to influence final project design.



*Local artist Penny Bovell briefing local community about art design concepts*

## Legacy Aspects

*Table 10: Identification of Issues and Treatment*

| Issue  | Treatment   |
|--|---|
| Loss of tree canopy                                | Project designed to reduce vegetation removal. Main Roads tree planting partnership with Trillion Trees   |
| Water drainage storage                             | Memorandum of Understanding developed with City of Fremantle and Main Roads to develop alternative underground drainage storage design at nearby Horrie Long Reserve. Alternative to recharge the aquifer, upgrade park reticulation, and enable open sumps to be filled and road verge landscaped. |
| Improving pedestrian and cyclist connectivity      | Connectivity from Carrington Street to Forrest Street underpass to replace existing fragmented pedestrian links. Relocating drainage sumps from north-east of Stirling Highway and High Street intersection further enhancing connectivity between underpasses.                                     |
| Screening traffic view from residential properties | Additional screening walls added to scope, to screen properties where vegetation removal has been required.   |
| Improving local residential streetscapes           | Consulting with proximate residents and landowners to design noise wall, footpath and cul-de-sac streetscape.   |
| Enhancing the entrance portal to Fremantle         | Inviting community and stakeholder feedback to develop geometric, abstract, and repeatable urban design artwork for noise and retaining walls.  |

## Traffic management

Traffic management is one of the highest risk activities on a road work site. The High Street Upgrade project area, poses a range of traffic management constraints and challenges:

- Vital Port Freight link with high volumes of heavily vehicles
- Stirling Highway and High Street part of the RAV Network 4
- Numerous driveways and local roads connecting onto High Street
- Local residents and night works impact
- Fremantle Netball Association and Royal Fremantle Golf Club access and parking
- Maintaining mature trees and vegetation
- Underpass excavations
- Underground and overhead utility services requiring relocation
- Maintaining an acceptable level of service for the road network.

Georgiou is committed to ensure a safe work site for employees and members of the community while maintaining an acceptable level of service for the road network.

Examples of specific road safety treatments planned and implemented include:

- Traffic management planning using a hierarchy of control process (ideally traffic around the work area).
- Detailed traffic management staging (Closing right-turn movements to and from High Street).
- Road closures and providing adequate detour routes.
- Installation of temporary barriers separating the worksite from traffic.
- Geometric design to meet Main Roads WA accepted temporary design standards for temporary alignments while maintaining suitable speed limits and traffic capacity.
- Desktop, pre and post Road Safety Audits of temporary traffic switches.
- Undertaking traffic analysis prior to significant modifications to the road network, including intersection layout, lane configurations and road closures.
- Designing a temporary roundabout to replace the High Street and Stirling Hwy traffic signals.



- Trialling lane closures on High Street and Stirling Highway, to investigate daytime lane closures to reduce the prevalence of after-hours works and disruption, while maintaining appropriate traffic flow.
- Staging the decommissioning of street lighting to maintain existing lighting infrastructure.
- Installing permanent line marking on temporary traffic switches to improve drivers safety
- Installing long-term speed and direction signage
- Construction works staging to minimise traffic delays
- Proactive communication with key traffic stakeholders including the WA Fremantle Ports Taskforce, including Port and freight representatives.
- Advanced notification of major road network changes via Variable Message Signs, Letter-drops and eDMs, Notification of Roadworks, social media, etc.

## Workforce Safety

The High Street Upgrade project has a Health Safety and Environment (HSE) Management Plan, applying to all activities undertaken by staff and sub-contractors delivering the project.

The project records lead and lag HSE statistics, to date the project has had only first-aid injuries with no medical treatment or Lost Time Injury injuries. Injuries and diseases the workforce are pre- disposed to include:

- fall from heights
- mobile plant injuries
- engulfment from collapsed excavations
- electrocution or electric shock
- exposure to live services, including medium pressure gas, high voltage electricity and sewerage
- asbestos related diseases, and
- live traffic injuries.

Project initiatives to address these risks include:

- Revised permit to work procedure
- Targeted detailed hazard inspections
- Engineering involvement in conducting HSE meetings
- 'Safety is My Way' implementation

Lead indicators include detailed hazard inspection and workplace inspections. These are completed by supervision Engineering personnel and site management. Hazards are identified by this process and corrective actions implemented for rectification.

### **Lag indicator targets**

Target: Zero injuries for the project. Lost Time Injury Frequency Rate (LTIFR) = zero

The number of reported safety incidents as of 30 June is nine.

### **Lead indicators**

Project targets include zero injuries.



# Appendix 1 – List of Protected Areas Project interfaces with:

The project boundary is located partially on Class A (1.8 ha) and Class C (0.1 ha) reserves associated with the Fremantle Royal Golf Course and Fremantle Public Golf Course, established for recreation purposes. Land acquisition has been undertaken by MRWA at these locations.

A search of the Department of Biodiversity Conservation and Attractions (DBCA) database did not identify any Threatened Ecological Communities (TECs) or Priority Ecological Communities occurring within the project footprint. Further to this, no conservation significant ecological communities listed under the EPBC Act or DBCA were recorded during the Project's field surveys (as per the Project's Environmental Impact Assessment).

## Appendix 2 – Protected fauna and flora species and habitat

The below table is the DBCA Conservation list for fauna and rare or priority flora that have the potential to be found on site (or identified within survey of the development envelope). Please note that only species that have a likelihood of being found on site that can be categorised as 'unlikely' and above have been included within this list.

| Name                                | Family     | Common Name                             | Code | Likelihood of Occurrence  |
|-------------------------------------|------------|---|------|---|
| Apus pacificus                      | Apodidae   | Fork-tailed swift                       | IA   | Unlikely- Species migratory and rarely seen in the south west, they are areal and unlikely to utilise a terrestrial environment       |
| Ardea ibis                          | Ardeidae   | cattle egret                            | IA   | Unlikely - The species is not known from the region and no domestic stock present   |
| Ardea modesta                       | Ardeidae   | great egret                             | IA   | Unlikely - No habitat available for this species  |
| Cacatua<br>pastinator<br>pastinator | Cacatuidae | Muir's corella                          | CD   | Unlikely - Species is rarely observed utilising the Swan Coastal Plain and is now restricted to the North of the Perth greater region |
| Calyptorhynchus<br><br>banksii naso | Cacatuidae | forest red-tailed<br><br>black cockatoo | VU   | Present   |
| Calyptorhynchus<br>baudinii         | Cacatuidae | Baudin's cockatoo                       | EN   | Unlikley - Species is rarely observed utilising the western portion of the Swan Coastal Plain   |
| Calyptorhynchus                     | Cacatuidae | Carnaby's<br>cockatoo                   | EN   | Present   |

|                           |             |                                  |    |   |
|---------------------------|-------------|----------------------------------|----|---|
| latirostris               |             |                                  |    |   |
| Falco peregrinus macropus | Falconidae  | Peregrine falcon                 | OS | Likely - The species is known in the region, however use would be restricted to foraging, no breeding areas are provided in the survey area |
| Isodon fusciventer        | Peramelidae | quenda, southern brown bandicoot | P4 | Unlikely - Although in the species range the survey area is highly modified and unlikely to support a population of the species             |
| Lerista lineata           | Scincidae   | lined skink                      | P3 | Unlikely - Although in the species range the survey area is highly modified and unlikely to support a population of the species             |

Notes: <sup>1</sup> No rare or priority flora were identified in the survey of the development envelope or considered likely to occur due to the degraded nature of the survey area and lack of suitable habitat.

# Appendix 3 – List of Stakeholders to the project

| Stakeholder/s             | Details   |
|---------------------------|---|
| Federal Government        | Federal Minister for Population, Cities and Urban Infrastructure Hon Alan Tudge   |
| State Government          | Minister for Transport, Hon Rita Saffioti   |
| State Government Agencies | <ul style="list-style-type: none"> <li>• Department of Transport</li> <li>• Department of Planning, Lands and Heritage</li> <li>• Department of Fire and Emergency Services (FESA)</li> <li>• Water Corporation</li> <li>• ATCO</li> <li>• LandCorp</li> <li>• Service providers</li> </ul> |
| Westport Taskforce at DOT |   |
| Other Emergency Services  | <ul style="list-style-type: none"> <li>• St John Ambulance</li> <li>• FESA</li> <li>• Fremantle Police</li> </ul>   |
| Federal Local Member      | <ul style="list-style-type: none"> <li>• Member for Fremantle, Mr Josh Wilson</li> </ul>  |
| State Local Members       | <ul style="list-style-type: none"> <li>• Member for Fremantle, Simon McGurk</li> <li>• Member for Bicton, Lisa O'Malley</li> </ul>  |

|                                     |   |
|-------------------------------------|---|
| <p>Local Government</p>             | <ul style="list-style-type: none"> <li>• City of Fremantle</li> </ul> <p>Neighbouring:</p> <ul style="list-style-type: none"> <li>• City of Melville</li> <li>• Town of East Fremantle</li> </ul>   |
| <p>Freight and Port</p>             | <ul style="list-style-type: none"> <li>• Freight and Logistics Council of WA</li> <li>• WA Road Transport Association</li> <li>• Port Operations Task Force</li> <li>• Freight Industry</li> <li>• Fremantle Ports</li> </ul>                                       |
| <p>Media</p>                        | <ul style="list-style-type: none"> <li>• Metropolitan and suburban newspapers.</li> <li>• Radio and television, including: Fremantle Herald and Gazette, News Local, ABC, SBS, Channels 7, 9 and 10.</li> <li>• Travel, trade and motorist publications.</li> </ul> |
| <p>Main Roads Network Operation</p> | <ul style="list-style-type: none"> <li>• Main Roads Heavy Vehicle Services (HVS)</li> <li>• Customer Information Centre</li> <li>• RNOC</li> </ul>  |
| <p>Aboriginal Land Council</p>      | <ul style="list-style-type: none"> <li>• South West Aboriginal Land and Sea Council</li> </ul>  |
| <p>Cycling Groups</p>               | <ul style="list-style-type: none"> <li>• DOT Cycling</li> <li>• WestCycle</li> <li>• City of Fremantle Bike Plan</li> </ul>   |
| <p>Businesses</p>                   | <ul style="list-style-type: none"> <li>• Royal Fremantle Golf Club</li> <li>• Mother India Restaurant</li> <li>• Montreal Street industrial area</li> </ul>   |

|                              |   |
|------------------------------|---|
| Sporting organisations       | <ul style="list-style-type: none"> <li>• Fremantle Netball Association</li> <li>• Fremantle Public Golf Course</li> </ul>   |
| Schools                      | <ul style="list-style-type: none"> <li>• East Fremantle Primary School</li> <li>• John Curtin College of the Arts</li> <li>• White Gum Valley Primary School</li> </ul> |
| Local resident organisations | <ul style="list-style-type: none"> <li>• Gibson Park Precinct Committee</li> <li>• White Gum Valley Precinct Committee</li> </ul>                                       |
| Local resident/landowners    | <ul style="list-style-type: none"> <li>• Landowners and residents with prescribed locality</li> </ul>   |
| Road users                   | <ul style="list-style-type: none"> <li>• Residential traffic</li> <li>• Large freight traffic</li> </ul>  |



# Appendix 4 – Project Sustainability Policy



## PROJECT POLICY

Georgiou

### SUSTAINABILITY

The High Street Upgrade Project shall manage its operations to promote positive environmental, social and economic impacts. This will be done by applying the principles of sustainable development to everything we do.

In order to achieve this commitment the Project will:

- benchmark performance against the Infrastructure Sustainability framework, achieving at least 50 points;
- integrate sustainability initiatives across the Project;
- reduce lifecycle material, energy and water impacts by at least 5%;
- be ethically responsible in managing the projects we construct, the materials we procure and the people we employ;
- address sustainability risks and opportunities in the supply chain and leverage procurement to achieve sustainability objectives;
- achieve and publicly report performance against set sustainable objectives and targets on a yearly basis;
- engage with local communities to achieve shared and lasting positive legacies;
- support the culture and wellbeing of our workforce promoting workforce diversity, motivation and competence - together working towards the sustainable success of the Project;
- work towards reducing the gap in employment outcomes between Aboriginal and non-Aboriginal people through achievement of 10% Aboriginal employment and 3% Aboriginal business procurement targets;
- help increase construction industry capacity through achievement of target training rate for construction apprentices and trainees;
- facilitate the sharing of ideas, knowledge and innovation, internally and externally, that create both financial savings and benefit to society and the environment in which we operate;
- implement risk and hazard management principles to maintain the health and safety of our people, the surrounding community and the environment;
- design and construct infrastructure resilient to the shocks and stresses of natural hazards and climate change and
- drive to deliver sustainable profitable growth while satisfying our social, legal and contractual obligations.

All employees who work for the Project have a personal responsibility for implementing this Policy.

Ben Guile  
Project Manager  
March 2020



SAFETY | PROFIT | RELATIONSHIPS | PEOPLE | INNOVATION

# Appendix 5 – Georgiou Company Sustainability Policy



COMPANY POLICY

Georgiou

## SUSTAINABILITY

Georgiou is committed to promoting a culture of sustainability, managing our operations in a manner that minimises our environmental and social impacts and enabling the integration of sustainability principles and practices into everything we do.

In order to achieve this commitment Georgiou will:

- focus on integrating sustainability initiatives throughout the business;
- be ethically responsible in managing the projects we construct, the materials we procure and the people we employ;
- set sustainable objectives and targets applicable to our projects prior to commencement and facilities on a yearly basis;
- engage with local communities to achieve shared and lasting outcomes;
- support our workforce in being diverse, engaged, motivated and competent - together working towards the sustainable success of our business;
- facilitate the sharing of ideas, knowledge and innovation, internally and externally, that create financial savings and benefit to society and the environment in which we operate;
- implement risk and hazard management principles to maintain the health and safety of our people, the surrounding community and the environment; and
- drive to deliver sustainable profitable growth while satisfying our social, legal and contractual obligations.

All employees who work for Georgiou have a personal responsibility for implementing this Policy.

Rob Monaci  
Chief Executive Officer  
August 2018

SAFETY | PROFIT | RELATIONSHIPS | PEOPLE | INNOVATION



# Appendix 6 – Glossary of Terms

Terms and definitions used within this document are listed below.

| Term                | Definition   |
|---------------------|--|
| BaU                 | Business as Usual  |
| Material            | Environmental, social and economic aspects as ranked by significance and importance to stakeholders. |
| CPTED               | Crime Prevention Through Environmental Design  |
| CSF                 | Credit Summary Forms   |
| EPD                 | Environmental Product Declaration  |
| IS                  | Infrastructure Sustainability  |
| ISAP                | Infrastructure Sustainability Accredited Professional  |
| ISCA                | Infrastructure Sustainability Council of Australia   |
| IS Rating Framework | System to evaluate sustainability of infrastructure, utilising the IS tool                           |
| MRWA                | Main Roads Western Australia   |
| RFP                 | Request for Proposal   |
| SDGs                | United Nations Sustainable Development Goals   |
| SMP                 | Sustainability Management Plan   |
| SWTC                | Scope of Works and Technical Criteria  |
| UN                  | United Nations   |