# Contractors Environmental and Social Management Plan (CESMP)

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<th>Pacific Aviation Investment Project (PAIP)</th>
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<td>Fua’amotu International Airport (TBU) Air Traffic Control Tower</td>
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<td><strong>Project No.</strong></td>
<td>ST311-TAL</td>
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AUTHORISATION AND REVISION RECORD

The content of this document will be formally reviewed at six monthly intervals through the project duration.

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<th>Detail</th>
<th>Prepared By</th>
<th>Date</th>
<th>Authorised By</th>
<th>Date</th>
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<tr>
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<td>Draft EMP for tender submission</td>
<td>Nina Donaldson</td>
<td>December 2017</td>
<td></td>
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<tr>
<td>02</td>
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<td>Eltham Environmental Limited</td>
<td>February 2018</td>
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<td>03</td>
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<td>Eltham Environmental Limited</td>
<td>March 2018</td>
<td></td>
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<tr>
<td>04</td>
<td>Final CESMP for project works</td>
<td>Nina Donaldson</td>
<td>April 2018</td>
<td>Josh Collins</td>
<td>April 2018</td>
</tr>
</tbody>
</table>
1. **INTRODUCTION**

1.1 **Preface**

This Contractors Environmental and Social Management Plan (CESMP) has been prepared to demonstrate how Fletcher Construction Company as the Contractor will manage the construction effects on the environment and the social effects on the adjacent communities, including airport workers, during construction.

The CESMP will address those matters identified in the Tonga Airports Limited Air Traffic Control Building Environmental Social Management Plan – Addendum to the Environmental Management Plan for Tonga Aviation Infrastructure Project (TAIP (August 2017) and will address the Principal’s Requirements, relevant by-laws, Acts and Regulations. In addition, the CESMP provides the necessary detail to ensure project staff identify and manage the environmental effects of the project on a day to day basis as well as the social impacts of the project on the adjacent communities.

It is a dynamic document and is to be reviewed annually to ensure it continues to reflect the requirements of the construction site.

The EMP is supported by the Fletcher Construction Environmental Management Manual which is the overarching document for the Fletcher Environmental Management System. This system provides order and consistency across the company. The system has been externally certified as meeting the requirements of AS/NZS ISO 14001:2004. Transition to AS/NZS ISO 14001:2015 is currently underway.

The EMP is also supported by the Fletcher Construction Environmental Toolkit – a practical site guide for the day to day management of site environmental issues. Copies of both the Manual and the Toolkit are available on Fletcher Works.

The Tongan Environmental Impact Assessment Act (2003) and the associated Environmental Impact Assessment Regulations (2010) along with the Tonga Environmental Management Act (2010) have all been considered during the preparation of this CESMP.

1.2 **Management Plan Framework**

This CESMP is the final piece of the hierarchy for controlling the environmental and social impacts associated with the construction of the Air Traffic Control Tower at Fua’āmotu International Airport as detailed in the Figure below.

The new ATCT is designated as a Category B project under World Bank environmental and screening guidelines and therefore requires the development of a CESMP. This document seeks to fulfil this requirement.
1.3 Project Background

The construction of the Air Traffic Control Tower at Fua’amotu International Airport is the fourth project to be completed as part of the Tonga Aviation Investment Project (TAIP) which is funded through the Pacific Aviation Investment Program (PAIP) funding loan through the World Bank (WB).

The three previous projects at Fua’amotu International Airport were the runway pavement rehabilitation, terminal upgrade and runway lighting and navigational aids upgrade.

1.4 Project Description

The new Air Traffic Control Tower (ATCT) is to be constructed adjacent to the new Rescue Fire Building at Fua’amotu International Airport on the island of Tongatapu, the largest island in the Kingdom of Tonga.

It will consist of a reinforced concrete air traffic control tower approximately 26 m in height and an associated single storey administration building. Car parking and gardens for the building will also be constructed.

Following a 20 working day mobilisation period, construction will take approximately 234 working days.
It will consist of a reinforced concrete air traffic control tower approximately 26 m in height and an associated single storey administration building. Car parking and gardens for the building will also be constructed.

Following a 20 working day mobilisation period, construction will take approximately 234 working days.

The area of influence for the construction works will include the immediate construction site adjacent to the Airport Rescue and Fire Fighting (ARFF) building. A laydown area and site office will be established at the site. An A3 site layout plan is attached at Appendix B.
Concrete production will occur at existing facilities (Royco Ready mix) on the island as will extraction of materials for base course and the access road. Additional truck movements from these locations to the construction site will occur as a result of the construction works, however these are considered to have a negligible effect on the existing traffic movements on the island. There will be no construction camp for workers as Fletcher bring their own local staff which are transported to the site each day.

1.5 Environment

Fua’amotu International Airport is located approximately 2.5 kilometres inland and is surrounded by open grassland used for agricultural activities. As a result, terrestrial biodiversity is limited with no endemic plants or species. In addition to agriculture, land use along Airport Road includes residential and commercial properties. The flora and fauna at the construction site is considered to be relatively common and found elsewhere on Tongatapu with sparse bladed grassland species dominating.

There is no surface water adjacent to the construction site. However, groundwater is located approximately 2m below ground level and is used for drinking water and facilities at the airport. Careful management of the site will be required to prevent potential contamination of the groundwater.

1.6 Construction methodology

The following sections detail the proposed construction methodology. A timeline identifying the proposed scheduling of the works is included in Appendix C with a summary of key milestone dates detailed below in Table 1.1.

<table>
<thead>
<tr>
<th>Construction Activity</th>
<th>Start Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site clearance and protection</td>
<td>Feb-2018</td>
<td>Apr-2018</td>
</tr>
<tr>
<td>Ground works including building platform construction</td>
<td>Mar-2018</td>
<td>May-2018</td>
</tr>
<tr>
<td>Structure</td>
<td>May-2018</td>
<td>Sep-2018</td>
</tr>
<tr>
<td>Fit out</td>
<td>Aug-2018</td>
<td>Feb-2019</td>
</tr>
<tr>
<td>Demobilisation from site</td>
<td>Feb-2019</td>
<td>Feb-2019</td>
</tr>
</tbody>
</table>

Table 1.1 Summary of key construction milestone dates

1.6.1 Site clearance and protection

Site levels will be established with bulk earthworks undertaken as necessary to fill to required levels. Site perimeter fencing will be installed with access to the work area protected by 24 hour security, provided by the Client at Fletcher cost.

1.6.2 Ground works

Set out lines for the control tower and administration building will be installed prior to the excavation and construction of the foundation and ground slabs for the control tower and administration block. Trenching for the underground services for both electrical and water supplies will occur at this time.

1.6.3 Structure

The ATCT will be constructed of reinforced concrete using system formwork from level 1 through to 16. Reinforced concrete landing and floor slabs including reinforcement will be constructed from level 1 to 15 with level 16 to the roof consisting of a steel structure.

All concrete works performed, including formwork and reinforcement to foundations, slabs and walls will be placed in situ. All concrete will be delivered by concrete truck poured directly into the foundations and for the superstructure, the 40MPa concrete will be distributed to a skip which will be lifted using a P&H Century 128 (28T) crane to reach the upper floors and walls of the tower. Precast concrete staircases shall be lifted and placed by crane as the structure progresses.
All quarry products and ready mixed concrete will be supplied locally from Royco.

Precast concrete staircases will be installed from Level 1 through to 14 with a cast in-situ concrete staircase being installed from level 14 to 15. Timber steps will be constructed from level 15 to 16.

The administration building is to be constructed in concrete masonry with the roof structure consisting of timber trusses. The lifting and moving of all materials including the structural steel crown will be by Century 128 crane. The tower shall be fully scaffolded while the installation takes place with handrails and clip-on points available on the full perimeter. Working at Height and robust safety precautions of harnesses, scaffolding and fall arrest systems will be in place.

Once the structure has been completed, GRP fascia and roofing to the tower is to be installed. Powder coated aluminium windows are to be installed at each level of the tower with stainless steel security doors. External surfaces of the reinforced concrete will be painted with Intonaco render and paint finish to the external face of the block work.

Internally, walls, ceiling structures and raised floor structures are to be constructed and finished. Finishing works inside will include doors, hardware, handrails, toilet cubicles, ceiling structures, ceiling, floor and wall finishes and the installation of kitchen joinery, doors and hardware.

1.6.4 Site Works and Services

These works will include the trenching of conduit and cables of services and laying gravel to the access road.

Services will include water and waste to the tower and administration building, general and emergency lighting, general services to the tower and building and installation of the lift in the control tower.

Where there is excavated material surplus to the required backfill, Fletchers will spread and level the material on site.

1.6.5 General Site Safety Measures

General site safety measures for working at height include scaffolding or protective platforms and barriers to all areas. A critical and significant portion of the scope of works involves the construction of the control tower. To mitigate the issues encountered with constructing high rise concrete structures, a specialist jump-form system formwork will be used which will provide a temporary platform and handrail as the concrete pours progress up the tower in lifts not exceeding 2700mm.

The inclined structure at the top of the tower shall also be constructed using specialist system formwork which will require additional support through the use of structural scaffold to the full perimeter of the tower. The external paint finish will be applied to the tower as the scaffold climbs up.

The structural steel portal frame shall be built in sections at ground level and will be lifted into place with approximately four lifts, thus minimising works on level 16.

Other general safety measures include the protection of all excavations, site wide safety signage and robust health, safety and quality plans. Refer to the Health and Safety Management Plan (attached in Appendix G) for additional information.

1.6.6 Environmental Objectives

The successful implementation of this CESMP will be measured through the achievement of a number of environmental objectives. These objectives will be monitored and reported on a monthly basis and are detailed below. The objectives identified reflect a culture of best practice, continuous improvement and the upskilling of all workers in environmental management.

Environmental objectives for the project include:

- No breaches of environmental legislative or regulatory requirements (no prosecutions, enforcement orders, infringement or abatement notices received)
- All employees and subcontractors are inducted on the environmental and social rules and procedures relevant of the project
- Environmental and social issues are included as a topic in project meetings and toolbox talks.
- No FOD (Foreign Object Damage) ingestion arising from construction site materials or waste
- All staff to be trained in spill response
- All discharges of cement and grout washout to occur in designated, lined area
- All refuelling of onsite plant and machinery to occur on hardstand areas and to be attended at all times.

In addition to achieving these objectives, the following is to be recorded and discussed with the client on a monthly basis:
- The number and type of environmental incidents
- Results of the regular environmental inspections
- The number and type of environmental complaints including the methods taken to address the issue.

1.6.7 Environmental Roles and Responsibilities

The Assistant Project Manager will ultimately be responsible for the highest standards of environmental management being set during construction of the ATCT with all staff required to increase their environmental awareness throughout the course of the project and demonstrate the highest standards of environmental behaviour during the project.

An organisational chart for the project is detailed below.
Key management roles of project staff as it pertains to environmental management during this project are detailed below. Not all roles specified in Appendix C of the TAIP CESMP will be engaged on site so responsibilities have been distributed across the roles which will be engaged as part of the project team.

**Project Manager**

The onsite duties are to be undertaken by the Assistant Project Manager who is based in the Kingdom of Tonga

- Ensure the Project achieves all environmental legislative compliance
- Provides leadership in the development and implementation of this CESMP
- Ensure that all engineers, supervisors, foreman, operators and construction workers are familiar with and implement all relevant environmental control measures
- Periodically reviews all environmental control measures to assess their ongoing applicability and effectiveness
- Environment review of the site developments
- Monitoring of environmental performance
- Programme monthly internal environmental audit.

**Construction Site Manager**

- Provide leadership to the site team to achieve Project environmental objectives and targets to ensure a high level of environmental performance is achieved
- Promote the company's policies, procedures and standards relating to health, safety and environmental management and ensure they are complied with
- Encourage all employees to maintain acceptable standards of health, safety and environmentally friendly work practices and foster awareness of health, safety and environmental matters
- Encourage the reporting of incidents, events and other concerns and ensure appropriate feedback on proposed corrective actions
- Report performance on a weekly basis to internal and external stakeholders
- Report significant incidents internally and externally as required by law and the Project Conditions
- Environmental Emergency Response Planning and action plan
- Leads the emergency response team
- Preparation of environmental reports as required
- Prevention/minimisation of site disturbance
- Provides leadership to the site team to achieve Project environmental objectives and targets
- Ensure the CESMP and sub-plans are implemented appropriately
- Ensures all environmental controls are protected and maintained on a daily basis
- Ensure environmental impacts are minimised
- Promote zero tolerance of harm to the environment
- Participate in incident and non-conformance report investigations and ensure that corrective and preventative action proposed is implemented effectively
- Ensure all construction activities are in accordance with the construction CESMP

**EHS Officer**

This is the functional and technical leader for the Project's environmental obligations and the principal contact for internal and external communication. This position holder has the authority and responsibility for overseeing all environmental management aspects including:
## Contractors Environmental and Social Management Plan (CESMP)

<table>
<thead>
<tr>
<th>Project:</th>
<th>Pacific Aviation Investment Project (PAIP) Fua'amotu International Airport (TBU) Air Traffic Control Tower</th>
<th>Project No.</th>
<th>ST311-TAL</th>
</tr>
</thead>
</table>

- The principal source of functional and technical expertise available to the entire Project team
- Provide leadership sufficient to inspire and influence others to achieve the Project objectives and targets
- Ensure that environmental plans, procedures and work instructions as applicable are prepared, reviewed and approved prior to commencement of work
- Report significant events internally and externally as required by law and the Project Conditions
- Ensure that all key environmental aspects and associated impacts are incorporated into this CESMP and that suitable control measures are proposed to minimise the Project's environmental impact
- Ensure that all relevant environmental permits are obtained for the Project
- Ensure all site employees and contractors engaged to work on the Project are appropriately inducted and trained in environmental issues and controls relevant to the Project
- Ensure monitoring programs, which assess the performance of the CESMP and specific Plans are implemented
- Conduct an employee and sub-contractor induction training session, prior to each individual beginning work on the project
- Decide upon the need for monitoring programs, which assess the performance of the CESMP and specific Plans
- Report internally and externally in accordance with Project and other requirements
- Investigate and report incidents and non-conformance and ensure corrective and preventative action is taken and is effective

### Resident Engineer (Snow Consulting)

- Prepare and review work packages against environmental objectives and targets to ensure a high level of performance is achieved
- Ensure designs are undertaken in accordance with the requirements of the Project Scope, technical requirements, CESMP and relevant standards
- Ensure design has minimal environmental impact
- Participate in incident and non-conformance reporting, investigations and ensure that corrective and preventative action proposed is implemented effectively
- Develop, implement and monitor construction methods to ensure compliance with legal requirements and CESMP
- Coordinate environmental interfaces with contractors and suppliers
- Comply with all Legislation, Regulations in relation to the work that is undertaken
- Demonstrate a good understanding of major environmental and community issues and environmentally sensitive areas
- Implement environmental protection measures in accordance with the Contract and CESMP.

### Supervisor (Site Foreman x 3)

- Manages the construction of critical erosion and sediment control devices, temporary stormwater ponds and removal of site vegetation
- Coordinate daily site inspections of all environmental control devices and coordinate maintenance where necessary
- Monitor the site during heavy rainfall and high wind events
- Ensure that all on-site employees are aware of environmental requirements at all times

### Employees and Sub Contractors

All employees and sub-contractors are required to operate within the requirements of the CESMP and relevant environmental legislation:
Attend toolbox talks and environmental training including familiarisation with the CESMP and sub-plans
- Report environmental incidents, complaints, defects and other problems to supervisors on site
- Ensure that required processes and procedures of environmental management are followed
- Ensure that environmental mitigation and protection measures are maintained and working correctly
- Ensure that the environment on site and adjacent to the site is protected and respected
- Ensure the site is tidy and all waste is placed in appropriate bins.

Community Liaison Officer (CLO)
These duties are to be undertaken by the Assistant Project Manager.
- Provide guidance on cultural aspects of the local people, particularly those expatriate workers
- Provide translation of written or verbal language when required
- Complaints and disputes are to be made to the CLO when predominantly in the native language. These complaints and eventual resolutions are to be formally recorded
- Report all complaints or disputes to the Project Manager or delegate when required
- Act as the Contractors’ Representative when issues to the Ministry’s, local authorities and local contractors are required.

1.6.8 Reporting and Emergency Procedures
Environmental emergencies associated with the construction site could range from preparation works for impending cyclones to hydraulic spills and concrete or grout spills. The emergency response team will be led by the Construction Manager.

The Emergency Response Team Leader will identify the situation which is occurring, the actions required to address the situation and ensure all safety procedures are in place to prevent further harm to people or the environment. The Team Leader will have the power to stop works and direct staff to manage the emergency effectively.

Contact details for the Emergency Team Leader are included in the project contact list in Section 3.

The site contingency plan is included at Appendix D.

1.6.9 Incident and Near Miss Reporting
All environmental incidents and near misses must be reported and recorded on either an Incident Field Report or Site Report Card (for near miss reporting). The scope of the investigation depends on the complexity of the incident as detailed below.
Contractors Environmental and Social Management Plan (CESMP)

Project: Pacific Aviation Investment Project (PAIP) Fua’amotu International Airport (TBU)
Air Traffic Control Tower

Project No.: ST311-TAL

Unplanned Event Happens

- **Hazard**: An arrangement, circumstance, situation or substance that is a potential source of harm. Something that might harm you or the environment if not fixed.

- **Near Miss**: An event that, unlike different circumstances, could have resulted in significant personal harm, environmental harm or property damage. A close call or lucky escape.

- **Injury or Damage**: Includes any injuries more than trivial (including any sort of injury needing treatment or medical assistance): environmental damage, plant or other property damage.

Who?

All sites are different, the project manager will delegate to individuals on each project.

All Employees

- Process supported by foreman/site engineer
- Timeframe: Within 24 hours

Project Manager (or delegate)

- Authorised to make decision
- Timeframe: 7 days

Engineer/Health & Safety/Environmental Co-ordinator

- Timeframe: As soon as known

Do the near miss/incident warrant further investigation?

- **NO (Minor)**

- **YES**

For serious events notify Fletcher Environment, Health and Safety Manager

Safety Investigation Report

Environmental Investigation Report

New Hazards

- Add the new hazard to the relevant JSEA and detail the required associated controls. Add hazard to site register.

Ensure Jobsafe entry completed

Feedback actions to site

Existing Hazards

- The hazard and its controls are to be discussed and reinforced at the daily pre start/tool box meeting.

CESMP MAR-2018 : VERSION 4
1.6.10 Corrective and Preventative Action

When a significant environmental incident occurs, the root causes are to be established through an investigation using ICAM or 5 WHYS (depending on the severity level) and appropriate steps to prevent recurrence must be planned, implemented and recorded.

Triggers for investigation and actions following an incident are identified in the Table 1.1 below.

The HSEQ Manager is responsible for ensuring that investigations are completed and actions have been undertaken and closed out.

Incident Levels and Required Response (Actual & Potential) – see chart following page.
<table>
<thead>
<tr>
<th>Incident Level</th>
<th>Category</th>
<th>Health and Safety</th>
<th>Environment</th>
<th>Financial Costs / Reputational</th>
<th>Notification (minimum)</th>
<th>Response/Action required</th>
<th>Response for Actual Incident</th>
<th>Response for Potential Incident</th>
<th>Timeframe</th>
<th>Notification (minimum)</th>
<th>Response/Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Insignificant</td>
<td>No treatment injury</td>
<td>Onsite/OFFsite release contained in controls</td>
<td>Less than $1,000</td>
<td>Your Manager/supervisor</td>
<td>Record by end of shift</td>
<td>Address absent/failed hazard controls.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Minor</td>
<td>First aid treatment</td>
<td>Onsite/OFFsite release cleaned up with internal resources</td>
<td>More than $1,000 and less than $10,000</td>
<td>BU GM, BU Operations</td>
<td>Record by end of shift</td>
<td>Address absent/failed hazard controls.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Moderate</td>
<td>Medical treatment injury (MTI)</td>
<td>Onsite/OFFsite release cleaned up with specialist assistance</td>
<td>More than $10,000 and less than $100,000</td>
<td>BU GM, BU Operations</td>
<td>Record by end of shift</td>
<td>Address absent/failed hazard controls.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Major</td>
<td>Serious injury</td>
<td>Onsite/OFFsite release with Major short term negative effects</td>
<td>More than $100,000 and less than $500,000</td>
<td>BU GM, BU Operations</td>
<td>Record by end of shift</td>
<td>Stop operation where hazard is located until absent/failed hazard controls addressed (interim controls)</td>
<td>Investigation - ICAM</td>
<td>FB Hazard Alert</td>
<td>Record by end of shift</td>
<td>Record by end of shift</td>
<td>FB Hazard Alert</td>
</tr>
<tr>
<td>5 Catastrophic</td>
<td>Fatality ([s])</td>
<td>Toxic release onsite/offsite with detrimental long term effects</td>
<td>More than $500,000 and less than $1,000,000</td>
<td>BU GM, BU Operations</td>
<td>Record by end of shift</td>
<td>Stop operation where hazard is located until absent/failed hazard controls addressed (interim controls)</td>
<td>Investigation - ICAM</td>
<td>FB Hazard Alert</td>
<td>Record by end of shift</td>
<td>Record by end of shift</td>
<td>FB Hazard Alert</td>
</tr>
</tbody>
</table>

Table 1.2 Incident levels and required reporting actions
1.6.11 Notification Procedures

Incidents shall be notified within FCC depending on their actual or potential severity as detailed in the table above. Additionally they shall be notified to external organisations as required by local authorities and project specifications.

1.6.12 Environmental and Social Training

Training and awareness programmes are critical to ensuring that there is an appropriate level of environmental knowledge for those staff and subcontractors involved in the project.

Prior to starting work on site, all staff and subcontractors will undergo a site induction which identifies their responsibilities while working on the site and implementing the CESMP, provides an overview of the environment in which they are working and will provide an awareness of the environmental issues at the site and the key environmental objectives to be achieved, reporting responsibilities and the Code of Conduct.

In addition, key staff (Managers and Foremen) will undergo spill response training to ensure they are well versed in responding to environmental spills.

Site visitors will complete a shorter visitor induction which covers off the key points and will be escorted at all times by an inducted staff member.

In addition to the induction, environmental topics and issues will be discussed at regular toolbox talks. Information posters around spill response, waste reduction and noise will also be posted at the site office.

Resources including posters covering the management of key environmental nuisance issues such as dust and noise and the Environmental Toolkit are available on the Electronic Tool Centre.

Opportunities will also be made available for selected staff members to attend industry training programmes where they would benefit from further training.

The Construction Manager will be responsible for writing Work Plans and Job Safety and Environmental Analysis (JSEA’s) and will be given guidance on how to assess and plan for environmental issues using the CESMP and Environmental Risk Register.

Fletchers Construction company has teamed with the Tonga Family Health Association (TFHA) to provide the entire site with HIV/AIDS prevention campaigns and on the spot HIV testing. The TFHA presentations will also include Gender Based Violence (GBV) and Child Abuse/Exploitation (CAE) topics.

The intention is to run three two hour presentations for the entire construction team at the ATCT project site. Copies of training records and toolbox talks will be located in the Project files.
2. ENVIRONMENTAL & SUSTAINABILITY POLICY

Environmental Policy

Together we strive to be better every day by committing to working with the public, industry and regulatory bodies to protect the environment by reducing the environmental impacts associated with our manufacturing, construction and extraction operations, and the distribution and use of our building materials.

Together we will:

• Ensure that we comply with all legal and regulatory requirements to operate and Fletcher Building standards.
• Commit to implementing measures to prevent pollution.
• Maintain a management system which includes identification and evaluation of the environmental risks associated with our business activities.
• Set objectives and targets on a risk-based approach that prioritises controls and programmes for critical risks.
• Regularly review and report on our environmental performance.
• Support training programmes to build environmental knowledge and improve environmental work practices.

Francisco Irazusta  
Interim CEO  
Fletcher Building Limited

Michele Kernahan  
Chief Executive – Construction Group  
Fletcher Building Limited

Date: August 2017
Sustainability Policy

Together we strive to be better every day by committing to reduce our environmental footprint and working proactively to respond to global sustainability issues. We recognise that sustainable practices need to be embedded in the way we work, and we believe that this will contribute to long term business success.

Together we will:

- Implement projects and programmes that improve our energy efficiency and reduce our CO₂ emissions.
- Reduce our disposal of waste to landfill and work with our supply chain and customers to ensure efficient use of resources, with reduced waste and increased recycling of waste materials.
- Improve our water efficiency and minimise the impacts from water discharged from our operations.
- Offer innovative, practical solutions to customers to enable their buildings and infrastructure to be sustainable.
- Support industry education on sustainable construction practices, design principle and measures.
- Identify opportunities to reduce environmental footprint (e.g. life cycle assessments).

Francisco Irazusta  
Interim CEO  
Fletcher Building Limited

Michele Kernahan  
Chief Executive – Construction Group  
Fletcher Building Limited

David Kennedy  
General Manager  
Building + Interiors

David Gaor  
General Manager  
Infrastructure

Brent Leach  
General Manager  
South Pacific

Date: August 2017
### 3. PROJECT CONTACT DETAILS

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>POSITION</th>
<th>NAME</th>
<th>TELEPHONE</th>
<th>MOBILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fletcher Construction South Pacific</td>
<td>General Manager</td>
<td>Brent Leach</td>
<td>+64 9 526 3502</td>
<td>+64 27 247 8207</td>
</tr>
<tr>
<td></td>
<td>EHS Delivery &amp; Assurance Manager</td>
<td>Kerry McDermott</td>
<td>+64 9 526 3502</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health, Safety, Environment &amp; Quality Manager</td>
<td>Nina Donaldson</td>
<td>+64 9 525 4913</td>
<td>+64 27 595 2524</td>
</tr>
<tr>
<td>Fletcher Construction South Pacific</td>
<td>Project Manager</td>
<td>Gary Low</td>
<td>+64 9 525 4985</td>
<td></td>
</tr>
<tr>
<td>Fletcher Construction South Pacific</td>
<td>Assistant Project Manager, Manager, Tonga</td>
<td>Josh Collins</td>
<td>+676 786 3125</td>
<td></td>
</tr>
<tr>
<td>Fletcher Construction South Pacific</td>
<td>Construction Manager and Emergency Response Team Leader</td>
<td>Simon Kite</td>
<td>+676 788 6424</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EHS Officer</td>
<td>Nina Donaldson</td>
<td>+64 27 595 2524</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surveyor</td>
<td>Penisimana Halai</td>
<td>+676842 7413</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community Liaison Officer</td>
<td>Josh Collins</td>
<td>+676 786 3125</td>
<td></td>
</tr>
</tbody>
</table>

| CLIENT                         | Tonga Airports Limited                        | Villami Ma’aake | +676 776 7264       |                  |
|                                | CEO                                           | Tino Fuka       |                     |                  |

| LOCAL AUTHORITIES             | Ministry of Infrastructure – Building Department | | | |

| KEY STAKEHOLDERS              | Pacific Aviation Investment Programme Contracts Manager | Charles Nepia | +642106 74661 | 8408434 |
|                              | Snow Consulting Resident Engineer               | Tom Duguid     |                     | |
|                              | Pacific Aviation Investment Programme Contracts Manager | Charles Nepia | +642106 74661 | 8408434 |
4. ENVIRONMENTAL AND SOCIAL IMPACTS

4.1 Management of Environmental Issues

Construction activities have the potential to result in adverse environmental effects if not managed appropriately and in accordance with Project Specifications, local regulations and best practice. Management techniques to minimise the effects are described in subsequent sections.

An Environmental Hazard Register is included in this plan. The purpose of the register is to provide an up-to-date list of specific environmental risks and any required monitoring on this project and possible mitigation measures. The EHS Officer will be responsible for ensuring the register remains up to date and available to relevant staff, (e.g. those staff preparing specific Work Plans and Job Safety and Environmental Analyses). The register is a live document and will be reviewed and updated as the project progresses including following any significant environmental incident. The EHS Officer is also responsible for ensuring environmental monitoring and inspections are undertaken.

4.2.1 Site Clearance Works

An excavator will be used to knock down the elephant grass currently on the project site and clear back the minimum of top soil to provide clear working space for construction and laydown areas as well as car parking.

Site clearance works will include the construction of Clean Water Diversions to divert clean water from entering the construction site and the preparation of the site laydown area which has been detailed in Appendix B of this CESMP.

4.2.2 Noise

Due to the location of the construction site, additional construction noise is considered to be negligible. The nearest sensitive receptor is located approximately 1 kilometre away which is also shielded by trees. As there is no expectation of working at night, noise at night from construction will not be an issue. Despite this, hearing protection will be worn by workers where necessary and steps will be taken to minimise noise through basic behaviour changes such as minimising yelling between co-workers (using radios to communicate) and the like.

4.2.3 Dust Control

Dust can become a construction nuisance issue to nearby residents when it accumulates on vegetation, clothes or houses. Due to the compacted nature of the access road it is anticipated that dust nuisance issues will be unlikely. However, in the event they do occur, water sprinklers will be used to minimise any dust effects.

4.2.4 Management of Cement and Grout Slurries

Fletcher Construction will use management controls to ensure as little cement and grout wastage is produced from the site as possible. However if there is a case where there is excess material that needs disposing of, a clearly identified washout area will be available in the site laydown area. This will consist of a designated area with a polythene liner and soil bund. This area will be cleaned at regular intervals with cured cement and grout disposed of at the Government landfill.

4.2.5 Fuel and Chemical Storage

Fuel and chemical storage on site will be in a separated area of the project lay down area. FCC intends to store all chemical and fuel in a specially constructed shed with a concrete floor and a 150mm bund.

4.2.6 Groundwater

It is estimated that the groundwater level is approximately 2 metres below ground level. The borehole which feeds the ATCT and the Airport Fire Rescue Service is located behind the existing Fire Station so care must be taken to ensure that any spills to ground or other discharges to ground are prevented to minimise any potential impacts or contamination to the groundwater. Any onsite vehicle or machinery refuelling must occur on a, hardstand area and be attended at all times. Care must be taken with the disposal of wash-down water to ensure contamination of the groundwater does not occur.
4.2.7 Waste Management

Foreign Object Damage (FOD) is a key risk to aircraft in an airport environment and as such all rubbish is to be placed into appropriate waste designated area on site which will be covered with a cargo net. No rubbish is to be permitted to blow away under any circumstances. The Kingdom of Tonga does not have any Recycling facilities so all waste materials will be removed to the Government run waste disposal facility.

4.2.8 Stormwater

Clean water diversions will be installed during the construction of the ATCT to direct any surface runoff away from the construction site as required. Tanks will be installed to capture rainwater from the roof of the site sheds. This water is to be used for dust mitigation.

4.2.9 Erosion and Sediment Control

Fletcher Construction intend to only clear enough of the existing vegetation as is needed to complete the construction works, minimising the amount of soil exposed to prevent erosion. The access driveway is to be constructed early in the works to prevent sediment on transport tyres being taken off site during the course of the construction. Due to the nature and location of the construction site, issues associated with erosion and sediment control are considered to be minimal.

4.3 Management of Social Impacts

4.3.1 Labour Force

The main labour force will be Tongan Nationals, with the expectation of 40 persons on site from Fletcher Construction, increasing with Sub Contractors. The work force will be sourced from the greater Tongatapu area and will be residing at their normal places of residence. Consequently, there will be no need for a ‘Workers Camp’ to be set up.

- Fletcher Construction will run five light vehicles each day to the job site for transport.
- One expat Construction Manager will be situated on the site the majority of time, who will reside in Nuku’alofa.
- All of the work force will be made aware of the Fletcher Construction Code of Conduct through the induction process prior to starting work on site. The FCC Code of Conduct is attached at Appendix F. In addition, all staff will sign an individual Code of Conduct upon completion of their GBV/CAE training.

4.3.2 Transport and Traffic

The project is expected to result in some additional traffic movements along Airport Road. However, the effects associated with the increase in traffic as a result of construction works are expected to be no more than minor.

Mitigation measures include the use of five light vehicles to transport construction workers to and from the site, to minimise traffic movements associated with site staff.

Care will be taken by truck drivers, particularly through busy streets and in the vicinity of schools. The most appropriate routes will be identified for vehicles transporting equipment and materials and all safety precautions taken including ensuring the load is covered when needed and secured appropriately.

4.3.3 Community Health and Safety

Due to Fletcher Construction supplying all its project labour from existing staff on Tongatapu and local sub-contractors, potential impacts on the adjacent communities of Fua’amotu and surrounding villages is considered to be minimal.

Staff will be managed through the use of light vehicles to transport staff to and from work, minimising any opportunity to interact with local community members in a negative way.
4.3.4 HIV/AIDS Prevention Including GBV and CAE

An information, education and consultation communication campaign on HIV/AIDS will be undertaken by Tonga Family Health Association (TFHA). This will include HIV/AIDS testing for staff. In the event that a staff member returns a positive result for HIV/AIDS, they will not be discriminated against and support will be provided to ensure any diagnosis is managed appropriately.

TFHA will provide an action plan for this campaign based on the ‘Road to Good Health Toolkit’ (www.theroadtogoode health.org) to the Consulting Engineer for approval prior to the information programme starting. The action plan will include:

- The types and frequency of education activities to be undertaken
- The target groups including all Fletcher Construction employees, all sub-contractors and consultants employees and all truck drivers and crew making deliveries to site as well as immediate local communities
- Whether condoms will be provided
- Whether STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS programme (unless otherwise agreed) of all site staff and labour shall be provided.

The information, education and communication campaign is aimed at addressing the risks, dangers and impact and the appropriate avoidance behaviour with respect to Sexually Transmitted Infections and Diseases (STI and STD) including HIV/AIDS.

Gender Based Violence (GBV) and Child Abuse/Exploitation (CAE) issues will also be addressed in the training package from TFHA. The programme will be based around the TAIP Codes of Conduct and Action Plan to prevent Gender Based Violence as well as Child Abuse/Exploitation. The TAIP Codes of Conduct is included at Appendix F.

The Assistant Project Manager will be responsible for creating and maintaining an environment that prevents GBV and CAE with all managers and employees being required to sign the ‘Individual Code of Conduct for GBV and CAE following their attendance at GBV/CAE training.

All Managers will be required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and CAE Codes of Conduct. This training will provide managers with the necessary understanding and technical support to develop the action plan for addressing GBV and CAE issues.

In addition, copies of the individual code of conduct will be displayed in clear view in the smoko area and site office.

4.4 Monitoring and Inspections

Monitoring the success of environmental control measures will be achieved through site inspections, tests and audits. This will also ensure compliance with PAIP/TAL ESMP approval conditions and management commitments to identify any additional investigations or controls if unexpected impacts should occur. Monitoring will also drive a culture of continuous improvement.

Monitoring during construction will be in accordance with EIA 2003 and EIA Guidelines 2010 and the World Bank EHS Guidelines Strategy as detailed in the table below.
<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Issue to Monitor</th>
<th>Monitoring to be Undertaken</th>
<th>Frequency</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water and Soil</td>
<td>Polluted areas</td>
<td>Inspection of sites to ensure waste collection in defined area; Spill response plan in place and workers trained. Complete spill kits available on site. Hazardous substances sorted, handled and stored correctly.</td>
<td>Weekly</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>Safety of Road Users and Transport Movement</td>
<td>Safety of the surrounding communities and settlements, road users, public at large and employees on the job site.</td>
<td>Monitor the effectiveness and efficiency of the safety procedures and equipment used to safeguard employees e.g. flags and diversions in place, and workers wearing appropriate personnel protective gear. Monitor the compliance with traffic management plan. Regular inspections to check that TMP is implemented correctly. If complaints received from other road users and local communities, follow through immediately.</td>
<td>Weekly</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>Dust, Noise and Air Pollution at all Construction activities work sites</td>
<td>Safety of the surrounding communities and settlements, road users, public at large and employees on the job site</td>
<td>Visual inspection to ensure workers are wearing protective equipment when required. Measurement of noise level with hand-held noise meter not to exceed 70 dB within all airport property. Public signage detailing complaints procedure and contact people/person on display. Noisy machinery is replaced or fixed as soon as problem arises or on instruction by Project Manager and TAL. Site inspections to ensure equipment and machinery operating without excessive emissions.</td>
<td>Daily</td>
<td>Construction Manager</td>
</tr>
<tr>
<td>Storage and handling of fuel, oil and other toxic chemicals at all work sites</td>
<td>Safety of the soils, groundwater, surrounding environment and employees at that particular site.</td>
<td>Regular site inspections to ensure material is stored within bunded area and spill response training for workers completed. Visual inspection of spill kit for completeness and accessibility.</td>
<td>Weekly</td>
<td>Construction Manager</td>
</tr>
</tbody>
</table>
### Contractors Environmental and Social Management Plan (CESMP)

<table>
<thead>
<tr>
<th>Project:</th>
<th>Pacific Aviation Investment Project (PAIP) Fua‘amotu International Airport (TBU) Air Traffic Control Tower</th>
<th>Project No.</th>
<th>ST311-TAL</th>
</tr>
</thead>
</table>

**Waste Management**
- Water and solid waste care is very important to workers at the new ATC Tower both during construction and operation.
- Proper maintenance of septic system.
- No reports of odour or seepage
- All waste water drainage systems must be well maintained regularly
- Ensure all wastes are removed from site and disposed of in an approved manner to an approved landfill site
- No visible construction wastes on site or elsewhere around the construction and other work sites other than those in designated waste receptacles
- All employees must be aware of all site waste management practices.

**Enquiries, concerns and complaints response**
- Complaints, enquiries and concerns are quickly addressed and recorded in the complaints register.
- Number of complaints
- Complainant satisfaction.

**Inspections**
- Inspections to ensure workers have access to and are wearing appropriate personnel protective equipment for handling hazardous materials when needed during working hours.

**Monthly**
- Construction Manager

---

A documented weekly inspection of the site will be undertaken by the Construction Manager with the aim to identify any environmental issues and rectify them as soon as possible to maintain compliance.

The Project Manager will undertake monthly audits to provide an additional level of assurance that environmental issues are being identified and addressed.

Depending on the duration of the project, audits by environmental staff external to the project will be undertaken. Audits are a good way of identifying areas for improvement. Audit results will be communicated to staff and action items closed out in a timely manner.

More guidance on inspections and auditing can be found in the Fletcher Construction Environmental Management Manual.
4.5 Record Keeping

Records of all inductions, trainings, incidents, complaints and monitoring will be maintained on the project files. The following table identifies the required records and who is responsible for them.

<table>
<thead>
<tr>
<th>Records</th>
<th>Definitions</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Record</td>
<td>A complete record of all employee accidents is to be maintained.</td>
<td>Foreman</td>
</tr>
<tr>
<td>Notification of Accidents</td>
<td>Fatal or serious accidents to be reported to the Police (and per Fletcher</td>
<td>EHS Officer</td>
</tr>
<tr>
<td></td>
<td>Construction reporting guidelines for internal notification).</td>
<td></td>
</tr>
<tr>
<td>Communications Register</td>
<td>A register of all official communications to be maintained.</td>
<td>Community Liaison Officer</td>
</tr>
<tr>
<td>Training Record</td>
<td>A record of all training undertaken.</td>
<td>EHS Officer</td>
</tr>
<tr>
<td>Risk Register</td>
<td>A register of all risks is to be maintained.</td>
<td>Construction Site Manager</td>
</tr>
<tr>
<td>Complaints Register</td>
<td>A record of all complaints to be maintained with response.</td>
<td>Community Site Manager</td>
</tr>
<tr>
<td>Monitoring Records</td>
<td>A record of all monitoring results.</td>
<td>Community Site Manager</td>
</tr>
<tr>
<td>Environmental Management and</td>
<td>To be submitted to the Engineers representative on a monthly basis. Presents</td>
<td>EHS Officer</td>
</tr>
<tr>
<td>Monitoring Report</td>
<td>a summary of all accidents and environmental record with corrective action,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>complaints and monitoring record.</td>
<td></td>
</tr>
<tr>
<td>Inspection Reporting</td>
<td>Normal report for the Environmental Consultant.</td>
<td>All Supervisors</td>
</tr>
</tbody>
</table>

4.6 Environmental and Social Reporting

The reporting of environmental and social issues and the tracking of environmental and social targets will occur in a number of ways.

- An environmental management and monitoring report will be submitted to the Engineers Representative on a monthly basis.
- This will include a summary of all accidents, incidents, complaints and enquiries.
- For any environmental monitoring undertaken, a summary of the results will be provided and in the event that any environmental investigations are undertaken, a summary of the report findings will be included.
- Results of regular environmental inspections will also be included.

In addition, environmental incidents will be reported internally through Fletcher Construction processes as they occur.
5. STAKEHOLDER LIAISON

5.1 Stakeholders

Stakeholders associated with this project include workers and operations at Fua’amotu International Airport, adjacent communities including Fua’amotu Village, the World Bank as project funder, the Ministry of Infrastructure the Civil Aviation Division and local regulatory authorities.

It is important that stakeholders are kept informed of project progress where this may affect them. Stakeholders will be kept informed through personal contact by the Assistant Project Manager, via email or through specific meetings which are arranged to discuss issues which may have arisen.

Typical issues which may affect the community include:

- Works on or close to property boundaries
- Works with a human nuisance factor such as noise or vibration
- Service interruptions
- Potential opportunities for work
- Vehicle access
- Hours of work and
- Potential health and safety impacts on the adjacent community.

The Community Liaison Officer will be central to all stakeholder liaison activities particularly for those stakeholders who speak English as a second language. The responsibilities of the CLO are detailed in section 1.5.7 of this CESMP.

5.2 Complaints Register

A public telephone number will be advertised and maintained throughout the project to serve as the main conduit for enquiries, concerns and complaints about the project.

A complaints register will be maintained by the Construction Manager and will also include all other interactions including enquiries, concerns and compliments.

The following information will be recorded for all complaints:

- Time, date and nature of the enquiry, complaint or concern
- Type of communication (e.g. telephone, letter, email, personal contact)
- Name of the complainant including contact address, phone number and email address
- The response and investigation undertaken as a result of the enquiry, complaint or concern
- Actions taken and the person responsible for undertaking the actions

In the event that the matter cannot be addressed or closed out immediately, the complainant is to be kept informed of progress towards rectifying the situation.

Measures taken to respond and close out the complaint will be reported back to the complainant and recorded on the complaint register prior to close out.

An initial response to the complainant will be made within 48 hours of the complaint being received, except where urgency is indicated. In this case, the project will endeavour to respond within two hours. This initial response will detail the immediate investigations and measures taken to resolve the issue.
6. **WORK PLANS & JSEA’S**

6.1 **Work Plans**

Work Plans and associated Inspection and Test Plans are developed for each significant element of construction to ensure that the project quality objectives are met. Environmental requirements are to be incorporated into construction Work Plans as relevant to the task. The primary source of information for engineers writing work plans will be this Environmental Management Plan and the Fletcher Construction Environmental Toolkit. The EHS Officer (or as delegated by the Project Manager) must review all Work Plans.

6.2 **Job Safety and Environmental Analysis**

A Job Safety and Environmental Analysis (JSEA) form will also be used to further identify significant project risks, including health and safety, environmental and quality. These forms will be prepared in advance of major aspects of work. Environmental risk areas that will be covered will include those areas identified in the Environmental Hazards Register. The Environmental Rep (or as delegated by the Project Manager) must review all JSEA’s. These are live documents which are reviewed as required throughout the project.
### 7. ENVIRONMENTAL RISK REGISTER

#### RISK MATRIX

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>INSIGNIFICANT</th>
<th>MINOR</th>
<th>MODERATE</th>
<th>MAJOR</th>
<th>CATASTROPHIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALMOST CERTAIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is expected to occur in most circumstances, occurs every month</td>
<td>Medium (8)</td>
<td>High (13)</td>
<td>Very High (20)</td>
<td>Very High (23)</td>
<td></td>
</tr>
<tr>
<td>LIKELY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will probably occur in most circumstances, occurs every three months</td>
<td>Low (6)</td>
<td>Medium (11)</td>
<td>High (17)</td>
<td>Very High (21)</td>
<td></td>
</tr>
<tr>
<td>POSSIBLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Might occur at some time, every year</td>
<td>Low (4)</td>
<td>Medium (9)</td>
<td>High (12)</td>
<td>Very High (18)</td>
<td></td>
</tr>
<tr>
<td>UNLIKELY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could occur at some time, known to happen in industry</td>
<td>Low (2)</td>
<td>Low (5)</td>
<td>Medium (10)</td>
<td>High (15)</td>
<td></td>
</tr>
<tr>
<td>RARE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May occur only in exceptional circumstances, no known experience</td>
<td>Low (1)</td>
<td>Low (3)</td>
<td>Low (7)</td>
<td>High (14)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High (16)</td>
</tr>
</tbody>
</table>

**PEOPLE**
- **No treatment.**
- **Pain & Discomfort**
  - **ENVIRONMENT**
    - On/Off Site release contained in controls

**ENVIRONMENT**
- **On/Off Site release cleaned up with internal resources**
- **Lost Time Injury (LTI).**
  - **ENVIRONMENT**
    - On/Off Site release cleaned up with specialist assistance
    - Damage to items of ecological or culture significance.

**PEOPLE**
- **Medical Treatment (MTI).**
  - **ENVIRONMENT**
    - On/Off Site release cleaned up with specialist assistance
    - Damage to items of ecological or culture significance.

**PEOPLE**
- **FB Serious injury**
  - **ENVIRONMENT**
    - Toxic release on/off site with detrimental long term effects
- **Fatality(s)**

**LIKELIHOOD**
- **ALMOST CERTAIN**: Is expected to occur in most circumstances, occurs every month
- **LIKELY**: Will probably occur in most circumstances, occurs every three months
- **POSSIBLE**: Might occur at some time, every year
- **UNLIKELY**: Could occur at some time, known to happen in industry
- **RARE**: May occur only in exceptional circumstances, no known experience

**LIKELIHOOD**
- **POSSIBLE**: Might occur at some time, every year
- **UNLIKELY**: Could occur at some time, known to happen in industry
- **RARE**: May occur only in exceptional circumstances, no known experience
<table>
<thead>
<tr>
<th>HAZARD</th>
<th>RISK</th>
<th>L</th>
<th>C</th>
<th>RISK RATING</th>
<th>CONTROLS</th>
<th>L</th>
<th>C</th>
<th>RESIDUAL RISK RATING</th>
</tr>
</thead>
</table>
| Oil and fuel spills                         | Contamination of land                     | L | M | Medium (11) | All staff trained in spill response  
Spill kits available and stocked  
Refuelling occurs on hard stand area where possible  
No unattended refuelling of equipment and machinery. | P | M | Medium (9) |
| Noise                                       | Nuisance for neighbours and workers       | P | I | Low (4)     | Ear protection worn by staff as required  
Minimise shouting and yelling to each other  
Maintain equipment to minimise squeaky tracks and wheels  
Worksite located approximately 1m from potentially affected parties | U | I | Low (2) |
| Dust                                        | Nuisance for neighbours and airport operations | L | M | Medium (11) | Install well stabilised access road  
Limit speed on aces road  
Sprinkle water when required | P | I | Low (4) |
| Flora and Fauna                            | Damage to terrestrial ecology              | P | M | High (12)   | No known ecology of significance  
Tree clearance has already occurred | U | M | Low (5) |
| Storage of hazardous goods                  | Spill  
Land contamination                       | U | Mod | Medium (10) | Store hazardous goods as per local regulations  
Minimise what is kept on site  
Store in designated, covered, bunded area | U | M | Low (5) |
| Waste                                       | FOD  
Waste not disposed of appropriately       | P | Maj | Very high (18) | Pick up all waste  
Ensure bins have lids on them  
Ensure waste is disposed to regulated landfill | P | Min | Medium (9) |
| Groundwater                                 | Contamination of groundwater through discharges to land | P | Maj | Very high (18) | Prevent spills to ground through good management practices  
Ensure concrete and grout are washed out in designated area  
Respond quickly to spills | U | Maj | High (15) |
8. STANDARD FORMS

This CESMP is supported by the following standard forms that are contained in the Fletcher Construction Environmental Management Manual located on Fletcher Works.

- Complaint Record
- Complaints Register
- Construction Noise Monitoring Sheet
- Environmental Audit Checklist
- Environmental Checklist (Project Start-up)
- Environmental Hazards Register (Generic)
- Environmental Incident-Investigation Report
- Environmental Inspection Check sheet
- Job Noise Analysis
- Job Safety and Environmental Analysis (JSEA).
APPENDIX D

Contingency Plan

Emergency Evacuation and Assistance
In case of an accident (serious injury) or anyone requiring assistance and/or fire the following procedures will be effective.

An alarm system (siren/gong) will blast continuously

When you hear the siren/gong

1. **Stop what you are doing.**
2. **Make sure you are safe.**
3. **Assess the situation.**
4. **If accident (injury)** emergency rescue, first aid or resuscitation, assist victim only if it is safe for you to do so.
5. **If oil spill, hazardous substance (solid, gaseous, or liquid).**
   - Locate and isolate source of spillage
   - Shut down all engines and electrical machine to eliminate risk of fire
   - Assess the spill size – if too large to contain using on site equipment call the safety officer and site manager to take appropriate action
   - Quickly deploy petrochemical absorbent material to contain spill.
6. **If a fire threat.**
   - All fire extinguishers must be readily in place and maintained regularly as required by the authorities.
   - Check out size of fire and if too big to control with site fire-fighting equipment call site manager and safety officer.
7. **If a tropical cyclone.**
   - **Phase 1:** Extreme weather event watch - Prevention
     - An extreme weather event watch will be issued when an extreme weather event or developing event is likely to affect the area to affect the area **within 48 hours,** but not expected to impact the area within 24 hours. This phase is a critical time for responsible staff to plan and prepare for the impact of the event. During this period, all responsible staff should review their safety plans and address any matters outstanding (e.g. fuel, torch, water).
   - **Phase 2:** Extreme weather event warning - Preparedness
     - An extreme weather event warning will be issued when an extreme weather event or developing event is likely to affect the area **within 24 hours.** This phase is critical for Contractor to complete all preparations in an orderly manner prior to the event occurring.
   - **Phase 3:** Actual extreme weather event - Response
     - By this phase, all employees are expected to have enacted their job location safety plans noting that the site will be closed and movements restricted commensurate with the threat to safety of the environment.
   - **Phase 4:** After the extreme weather event has passed – Recovery
     - Responsible team will assess residual risks and determine the actions needed to be addressed. Do not assume that as the extreme weather event has passed, it is now safe to move around the site.
     - No movement within job site until the official all clear is given by the responsible officer and supervision.
Contractors Environmental and Social Management Plan (CESMP)

<table>
<thead>
<tr>
<th>Project</th>
<th>Project No.</th>
</tr>
</thead>
<tbody>
<tr>
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APPENDIX A

Kingdom of Tonga Environmental Legislation
ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2010
ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2010

Arrangement of Regulations

Regulation

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ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2010

ENVIRONMENTAL IMPACT ASSESSMENT ACT 2003

IN EXERCISE of the powers conferred by section 24 of the Environmental Impact Assessment Act 2003, the Minister of Environment with the consent of Cabinet makes the following Regulations —

PART I - PRELIMINARY

1 Short Title
These Regulations may be cited as the Environmental Impact Assessment Regulations 2010.

2 Interpretation
(1) In these Regulations -
   “Act” means the Environmental Impact Assessment Act 2003; and
   “Secretariat” means the Secretariat of the Environmental Assessment Committee.

(2) The terms and phrases defined in the Act shall be given the same meaning in these Regulations, unless the context requires otherwise.

3 Forms and Fees
(1) The forms set out in Schedule 1, are hereby prescribed for the purposes of the Act and these Regulations.

(2) The fees set out in Schedule 2, are hereby prescribed for the purposes of the Act and these Regulations.
(3) Where the Act or these Regulations require a development application to be referred to a Determining Authority, the Minister, considering the advice of the Secretariat, may require additional copies of the development application, the environmental impact assessment, and any supporting documents to be lodged so that reference can be made.

PART II - ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURES

4 Application for environment impact assessment

The process of environmental impact assessment shall be applied to all major projects so classified under Part III of the Act.

5 Assessment to be appropriate

The process of assessment shall be appropriate for the activity taking into account the scale and intensity of the proposed activity and its anticipated environmental impacts.

6 Process established

All Major Project assessment shall follow a process of notification, environmental impact assessment, review, final decision with or without conditions.

7 Assessments to be written

All assessments of environmental impact shall be undertaken by the proponent and shall be submitted to the Minister in written form together with a copy of the form for development application.

8 Notification

All development activities proposed shall be notified to the Minister or, in the case of a license issued by another Determining Authority, to that Authority for referral, as necessary, to the Minister, prior to any project-related work or activity commencing, or any decision being made to approve such an activity.

9 Form 1 of Schedule 1 to be used

Notification shall be in accordance with Form 1 of the Schedule 1 and include such information as is necessary for the Minister, acting upon the advice of the Secretariat, to determine whether any environmental impact assessment is necessary under the Act.
10 Additional Information Required

The Minister shall, within 30 working days of receipt of notification of a development application, and after consideration of advice from the Secretariat and any other agency relevant to the proposal, by notice in writing to the proponent, notify the proponent, and the Determining Authority, where it applies, of the requirement to conduct environmental impact assessment or the need to furnish additional information in relation to the proposed development, being information which is, in the Minister’s view, essential to the determination of the proposal under section 8(2) of the Act.

11 Project to proceed if no environmental impact assessment advised

Where the Minister has not advised the proponent, and the Determining Authority in writing within 30 working days of receipt of notice that an environmental impact assessment is required, or has not indicated to the proponent that an extension of time for further consideration of the development application applies, then the Proponent may assume that no environmental impact assessment is required and, subject to gaining all other necessary approvals, the activity may commence.

12 Consideration

The factors to be taken into account by the Minister and the Secretariat when considering the likely impact of an activity upon the environment shall include whether that activity may cause:

(a) any environmental impact upon a community;
(b) any transformation of a locality;
(c) any environmental impact upon the ecosystems of a community;
(d) any diminution of the aesthetic, recreational, scientific or other environmental quality or value of a locality;
(e) any effect upon a locality, place or building having aesthetic, archaeological, architectural, cultural, historical, scientific, social significance or any other special value for present or future generations;
(f) any endangering of any species of flora or fauna;
(g) any long-term effects upon the environment;
(h) any degradation of the quality of the environment;
(i) any risk to the safety of the environment;
(j) any curtailing of the beneficial uses of the environment;
(k) any pollution of the environment;
(l) any environmental problems associated with the disposal of waste;
(m) any increased demands upon resources, natural or otherwise, which are, or likely to become, in short supply;
(n) any effect upon the supply of electricity, water, waste collection services, telephone or other services;
(o) any increase in the amount or duration of traffic generated by either the construction of the development or by its consequent use; and
(p) any cumulative effect with any other existing or likely future activities.

13 Secretariat advice may be sought

(1) In completing the impact assessment, the Proponent may seek the assistance of the Secretariat in determining what degree of assessment shall be undertaken.
(2) The Minister’s written advice in such matters shall be final.

14 Secretariat guidelines to be used for minor projects
Where the Secretariat has prepared guidelines for minor projects assessment, these shall be used to complement matters outlined in the Schedule 1.

15 Major Project Assessment process to be thorough
A Major Project assessment shall involve a thorough assessment of environmental impacts and be determined by the appropriate Determining Authority taking into account environmental recommendations of the Committee.

16 Form 3 and environmental study to be used for Major Project assessment
The environmental impact assessment for projects which require Major Project assessment under sections 7 and 9 of the Act shall be in general accordance with Form 3 of the Schedule 1 and shall comprise a written Environmental Study which will:
(a) fully describe the proposed development activity;
(b) fully describe the existing environment that is likely to be affected by the proposed development;
(c) present a justification of the proposed development activity in terms of environmental, economic, cultural and social considerations;
(d) identify, describe and analyse the potential direct and indirect physical, biological, social, cultural and economic impacts of the development activity for both construction and operational phases of the development;
(e) detail any measures to be taken to protect the environment and to avoid, reduce or otherwise mitigate any potential adverse effects of the development;

(f) evaluate and describe any feasible alternative activities, including locations, for achieving the objectives of the development;

(g) evaluate and describe the implications and consequences of not undertaking the proposed development;

(h) identify, describe and analyse the possible cumulative effects upon components of the environment with other existing or likely future development activities; and,

(i) assess the way in which the project accords with the current Government of Tonga Development Plan, declared Government of Tonga environmental policy, and any international environmental policies, agreements, conventions or treaties to which the Government of Tonga is, or is considering becoming, a signatory.

17 Secretariat’s guidance shall be sought

(1) In completing the Environmental Study, the Proponent shall seek the guidance of the Secretariat in determining how much assessment shall be undertaken.

(2) The Director's advice in such matters shall be final.

18 Certification of environmental study

An Environmental Study that is submitted for environmental impact assessment review shall bear a certificate by the person preparing the study to the effect that it has been prepared in accordance with regulations 16 and 17.

19 Secretariat’s guidelines to be used for major projects

Where the Secretariat has prepared guidelines for Major Project assessment these shall be used to complement matters outlined in the Schedule 1.

20 Committee to review and recommend

The Committee shall review the application, environmental assessments, Secretariat report, and any additional relevant reports provided to it before making its recommendations to the appropriate Determining Authority.

21 Structure of recommendation

The recommendation to the appropriate Determining Authority shall state:

(a) whether to approve, reject, defer or modify the development application;
(b) the reasons for that recommendation; and
(c) any conditions that shall be attached to any approval.

22 Adoption by quorum
The recommendations shall be formally adopted by a majority of the Committee present.

23 Report by Committee
The Committee, in relation to any Major Development Project, shall prepare an Assessment Review Report of its examination and consideration of the environmental study, as required under section 14 of the Act.

24 Copies of Committee report to be free of charge
Individual copies of the Committee Assessment Review Report shall be furnished free of charge to the proponent and the Determining Authority.

25 Certification of approval
Written advice from the Minister to the proponent or the Determining Authority shall constitute certification of completion of the environmental impact assessment process for a development activity under section 16 of the Act.

26 Information to be correct
An applicant or proponent for any development activity shall not make any application or furnish any document in respect of any development activity under the terms of these regulations knowing:

(a) it is false in any material particular; or
(b) that it contains information that is materially misleading in the form or context in which it appears.

27 Change in circumstances
Any change in circumstances which has the effect of rendering any such information false, incomplete or misleading shall be notified immediately to the Minister who shall refer the matter to the Committee.
28 **Minister may impose further conditions**

Where a matter is referred to the Committee pursuant to regulation 27, the Committee may recommend that the Minister imposes such further conditions as are appropriate, and the procedures outlined in regulations 5 to 26 shall apply as if this was the original application.

29 **Committee may cancel certification**

Where the information notified pursuant to regulation 8 is of such ecological significance that, were it known at the time, the project would not have been approved, the Committee shall determine whether the certification under regulation 25 should be cancelled and whether the development activity should cease while a new application under the terms of the Act is prepared and considered, or whether the approval for the activity should be cancelled by the Determining Authority and environmental restoration undertaken at the cost of the proponent.

30 **Proponent to re-submit application**

If a development activity is subject to cessation of work under regulation 29, the activity shall not proceed to continue until it has met the requirements of the Act as if it were a new development activity.

Made at Nuku’a alofa this 20th day of October 2010.

Minister of Environment
FORM 1: DETERMINATION OF CATEGORY OF ASSESSMENT

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<td>Proponent Company:</td>
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<tr>
<td>Project ID No.:</td>
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The following information is to be included in the proposal to be submitted for assessment:

1. full description of the proposed activity/development and its costs.
2. location of the proposed activity and of any associated developments.
3. full description of the existing environment of the sites and their relationship to existing adjoining uses or habitation; in particular details of any significant physical, biological, social or cultural heritage items which may be affected by the proposed development or activity.
4. timing of design, construction and operation of the development.
5. estimated type, source and volume of any materials to be used in the construction and operation of the development; and proposed demand for utility services.
6. any plant or animal species to be introduced which are not native to Tonga.
7. any likely solid, liquid or gaseous emissions from the activity/development, whether or not totally contained upon site.
8. likely noise generated by the development, and assessment of likely increases in traffic flow.
9. employment likely to be generated by the activity/development, and contribution (if any) to the local or national economy.
10. assessment of anticipated environmental risks and impacts, and measures to be taken by the proponent to mitigate the same.

*Please attach proposal to this form.*
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<td>Contact Person:</td>
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| Additional information required: |

This is to confirm that all required information has been lodged in accordance to the requirements of the Act.

Signature:  
Print Name:  
Determining Authority:
**FORM 3: MAJOR ENVIRONMENTAL IMPACT ASSESSMENT**

Project ID No.:  
Name of Project:  
Contact Person:  
Contact Number:  

The written environmental study shall include the following:

1. Title, abstract and executive summary.
2. Description of the purpose and scope of the proposed development activity:
   - a) Purpose: What goals and objectives of society are served? Why is the project needed?
   - b) Direct benefits expected: products, services, jobs, return on investment
   - c) Location and extent of site boundaries and associated facilities at preferred site and other feasible sites (please provide map of area)
   - d) Technology to be used.
   - e) Local infrastructure required: roads, utilities, etc.
   - f) Inputs of capital, labour, natural resources.
   - g) Duration of construction period and operating life.
3. Present a justification of the proposed development activity in terms of environmental, economic, cultural and social considerations.
4. Identify, describe and analyse the potential direct and indirect physical, biological, social, cultural and economic impacts of the development activity for both construction and operational phases of the development.
5. Detail any measures to be taken to protect the environment and to avoid, reduce or otherwise mitigate any potential adverse effects of the development.
6. Evaluate and describe any feasible alternative activities, including locations, for achieving the objectives of the development.
7. Evaluate and describe the implications and consequences of not undertaking the proposed development.
8. Identify, describe and analyse the possible cumulative effects upon components of the environment with other existing or likely future development activities.
10. Assess the way in which the project accords with the current Government of Tonga Development Plan, declared Government of Tonga environmental policy, and/or any international environmental policies, agreements, conventions or treaties to which the Government of Tonga is, or is considering becoming, a signatory.

This is to confirm that all required information has been lodged in accordance to the requirements of the Act.

Signature:  
Print Name:  
Determining Authority:
## FORM 4: COMMITTEE RECOMMENDATIONS

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This is to confirm that all requirements have been met in accordance with the Act.

Signature:

Print Name:
Determining Authority:
SCHEDULE 2

FEES AND CHARGES

The following charges may apply:

1. For all applications, a Registration Fee of $10.00 shall apply, to accompany lodgement of the application.

2. For all applications requiring major project assessment, including all applications listed in the Schedule to the Act, an initial application fee of $250.00 shall accompany the Environmental Study. Upon final scoping of the proposal the Minister shall require a final fee of 1% of the capital cost of the proposed activity/development.

3. Where the final fees levied exceed $10,000, and where the proponent considers this fee to be unreasonable, the proponent may make application to the Committee for a reduction in the fees to be levied. The proponent shall meet the cost of any special meeting of the Committee to be held to consider such an application.
ENVIRONMENT MANAGEMENT ACT
2010

Act No. 27 of 2010
# ENVIRONMENT MANAGEMENT ACT 2010

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ENVIRONMENT MANAGEMENT ACT 2010
Act No. 27 of 2010

AN ACT TO ESTABLISH THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE TO ENSURE THE PROTECTION AND PROPER MANAGEMENT OF THE ENVIRONMENT AND THE PROMOTION OF SUSTAINABLE DEVELOPMENT

I assent,
GEORGE TUPOU V,
27th August 2010.

BE IT ENACTED by the King and the Legislative Assembly of Tonga in the Legislature of the Kingdom as follows:

PART I - PRELIMINARY

1 Short Title
This Act may be cited as the Environment Management Act 2010.

2 Interpretation
In this Act, unless the context otherwise requires –

“climate change” means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods;
“Director” means the Director for Environment and Climate Change appointed under section 7;

“environment” includes all natural and physical resources, the ecology, people and culture of the Kingdom, and the social and economic relationships that exist between these elements;

“living modified organism” has the same meaning as under the Biosafety Act 2009;

“Minister” means the Minister for Environment and Climate Change;

“Ministry” means the Ministry of Environment and Climate Change;

“natural resources” includes land, soil, minerals, water, air and all plants and animals and their habitat, whether native to the Kingdom or introduced;

“premises” includes any structure, building or part of a building, or land without buildings;

“sustainable development” means promoting development at a rate and in such a way as to ensure that the quality of the environment and the supply of resources is maintained and, wherever practicable, enhanced to meet the needs of the present generation without compromising the needs of future generations.

3 Binding the Crown

This Act shall bind the Crown.

4 Objects of this Act

The objects of this Act are to –

(a) co-ordinate the role of Government in relation to all environmental management, including climate change issues, and decision-making processes;

(b) promote meaningful public involvement in relation to issues of environment management, including climate change;

(c) ensure the observance within the Kingdom of its international obligations relating to the protection of the environment;

(d) promote the concept of sustainable development in relation to the environment and natural resources of the Kingdom;

(e) facilitate an assessment of the impacts on the environment of any activity likely to affect it, prior to a proposed activity taking place;

(f) promote the understanding, management, conservation and protection of the biological diversity of the Kingdom; and
(g) facilitate implementation of measures to increase the resilience of the Kingdom and its environment to climate change.

PART II - ESTABLISHMENT OF THE MINISTRY

5 Establishment of the Ministry
The Ministry of Environment and Climate Change that existed before this Act came into force shall be the Ministry under this Act.

6 Appointment of Minister
(1) There shall be a Minister for Environment and Climate Change.
(2) The Minister shall be responsible for the administration of this Act.

7 Appointment of Director and other staff
(1) There shall be a Director for Environment and Climate Change appointed in accordance with established procedures of Government.
(2) There may also be appointed, in accordance with the established procedures of Government, such other officers and staff of the Ministry as are necessary for the Ministry to discharge its powers, functions and responsibilities.

PART III - FUNCTIONS AND POWERS OF THE MINISTRY

8 Functions of the Ministry
(1) In achieving the objects of this Act, the functions of the Ministry shall include –
   (a) liaising with Government ministries, departments and agencies in relation to issues affecting the environment and climate change;
   (b) assisting other Government ministries and departments in relation to meeting their obligations in relation to the protection of the environment, climate change issues and the development of the natural resources of the Kingdom in ways that are consistent with the objects of this Act;
   (c) advising Government in relation to matters of environmental management, including climate change and the protection and conservation of natural resources and the promotion of sustainable development;
(d) co-ordinating Government’s response to matters affecting the environment and the enforcement of laws relating to the protection of the environment;
(e) monitoring impacts on the environment;
(f) preparing environment and climate change plans and policies;
(g) facilitating, conducting and participating in environmental research;
(h) promoting public awareness and education in relation to environmental issues, including climate change;
(i) facilitating the participation of non-government organisations, and agencies having expertise in relation to environmental management, in the protection of the environment of the Kingdom and the raising of public awareness in relation to such matters;
(j) conducting all matters necessary for the observance of the international and regional conventions to which the Kingdom is a party to, including those listed in the Schedule to this Act;
(k) ensuring that the laws of the Kingdom relating to the management and protection of the environment and climate change adaptation and mitigation are reviewed, implemented and enforced; and
(l) performing any other act or thing that attains or furthers the objects of this Act.

(2) Without limiting the generality of sub-section (1), the functions of the Ministry in relation to the management of the environment shall include matters relating to –
(a) climate change;
(b) ozone depletion;
(c) the movement or disposal of hazardous wastes and chemicals;
(d) desertification and drought relief;
(e) the preservation of wetlands and the management and protection of coastal areas;
(f) the conservation of endangered species;
(g) the preservation of biological diversity, including management of living modified organisms; and
(h) aspects of the environmental management of international waters.

9 Powers of the Minister

The Minister shall have the power to do all things necessary or convenient to be done in connection with the functions of the Ministry and in order to attain or further the objects of this Act, including power to –
(a) grant approvals or any licence or authority designated to the Minister under this Act or any regulations made under this Act or any other law relating to the management or protection of the environment;

(b) approve any report required to be prepared by the Ministry on behalf of Government;

(c) approve any environment plan or programme required to be prepared by the Ministry for submission to Government, or to any other agency or body; and

(d) delegate to the Director or an officer of the Ministry any Ministerial powers provided under this Act or regulations made under this Act, by notice in writing.

10 Powers of the Director

The Director shall have power to do all things necessary or convenient to be done in relation to the proper administration of the Ministry and the implementation of the provisions of this Act, including power to –

(a) arrange for the investigation or monitoring of any activity, matter or thing that is having or may have an impact on the environment;

(b) prepare reports in relation to any impact on the environment, or the implementation of the Kingdom’s international environmental obligations, for the Minister or Cabinet, as directed; and

(c) engage consultants for the purpose of assisting the Ministry to perform its functions.

11 Environment Officers

(1) The Minister may appoint any person, whether employed in the Ministry or otherwise, to be an Environment Officer for the purposes of this Act.

(2) The Director shall be an Environment Officer for the purposes of this Act.

(3) All Environment Officers appointed under this section, whether officers of the Ministry or not, shall act under the direction of the Director.

12 Powers of Environment Officers

(1) In addition to powers conferred by this or any other law, Environment Officers shall have power, on producing (if so required) evidence of appointment under this Act, to enter without any warrant at any time any land, premises, vehicle, ship, aircraft or other conveyance for the purpose of —

(a) monitoring the impact of any activity, matter or thing upon the environment;
(b) investigating whether an offence has been committed, or an obligation in relation to the protection or management of the environment has been breached;
(c) enforcing this Act or any other law relating to the protection or management of the environment; or
(d) seizing property reasonably suspected of being used in relation to adverse impacts on the environment, or the breach of any law relating to environment protection.

(2) In the exercise of the powers provided for in sub-section (1), an Environment Officer may –
(a) conduct such investigations and examinations as are necessary to monitor the effect on the environment of any activity, matter or thing, or to determine whether any offence has been committed in relation to the environment;
(b) take samples for the purpose of analysis and testing;
(c) take photographs or measurements;
(d) require any person who he reasonably believes is associated with the creation of an impact upon the environment to state his full name and usual place of residence and if necessary require such person to provide information which shall be taken in writing;
(e) require the production of any document relevant to the activity, matter or thing under investigation, including any licence or permit required by law relating to the activity, matter or thing; and
(f) require from any person any assistance that is relevant to the investigation or monitoring activity.

(3) An Environment Officer shall not be liable for any loss or damage, in relation to the reasonable exercise of any power under this Act, or any other law.

PART IV - PROTECTION OF THE ENVIRONMENT

13 Committee
For the purpose of achieving the objects of this Act, the Minister may, with the consent of Cabinet, establish an Environment and Climate Change Committee, and may appoint its members, determine its functions, and such members may be remunerated in accordance with Government policy.

14 Monitoring of environmental impacts
The Ministry may undertake the monitoring of environmental impacts within the Kingdom –
(a) as directed by Cabinet;
(b) as determined by the Minister, or in accordance with any approved plan or programme;
(c) at the request of any department or agency of Government; or
(d) in accordance with any requirement of any international and regional conventions to which the Kingdom is a party to, including those set out in the Schedule to this Act.

15 Precautionary Notice

(1) Where an Environment Officer reasonably suspects that an activity, matter or thing may be impacting upon the environment, he may issue a notice requiring that any person apparently in control of or associated with the activity, matter or thing comply with any requirement specified in sub-section (2).

(2) A notice issued under sub-section (1) may require all or any of the following —
(a) that the activity, matter or thing be temporarily suspended;
(b) that information be provided in relation to the activity, matter or thing to satisfy the Director that the environment is not thereby being adversely impacted upon;
(c) that alternative activities or operating techniques be considered and employed to avoid or decrease the impact upon the environment;
(d) that improvements or alterations be made in relation to the activity, matter or thing to the satisfaction of the Director, to avoid or decrease the impact upon the environment; and
(e) any other requirement, as determined by the Director, to ensure that the activity, matter or thing is not adversely impacting upon the environment.

(3) Any person served with a notice under this section shall ensure that the requirements stated in the notice are complied with within the time stipulated, and shall satisfy the Director, prior to the expiration of that time, that the activity, matter or thing is not, or is no longer adversely impacting upon the environment.

16 Notice to cease activity

(1) A Notice may be issued under this section, notwithstanding that a Precautionary Notice has not been served under section 15.

(2) Where the Director is of the opinion that there is occurring, or may occur, an act which involves an immediate threat or risk to the environment, the Director may issue a Notice under this section.
(3) A Notice issued under this section shall —
   (a) be directed to any person, organisation or body whom it is believed is carrying out the act, or apparently has some control over it;
   (b) specify the act and the nature of its effect upon the environment; and
   (c) require that the act cease, or not be done, until the Director is satisfied that the threat or risk no longer exists.

(4) A Notice may be served under this section notwithstanding that any approval, licence or permit has been granted in relation to the activity.

(5) The Minister, Director and Government shall not be liable in respect of any loss or damage arising from, or in any way connected with, the issuing of a notice under this section.

17 Appeal

Any person who disagrees with a decision of a Director or an Environment Officer may appeal to the Minister.

18 Offences and penalties

(1) Any person who —
   (a) hinders or obstructs an Environment Officer in the performance of his duties under this Act, or the exercise of a power under this Act;
   (b) induces or incites any other person to hinder or obstruct an Environment Officer acting in accordance with this Act;
   (c) by words or conduct falsely represents that he is an Environment Officer, or who otherwise impersonates an Environment Officer;
   (d) fails to comply with a requirement made by an Environment Officer under section 12(2)(d), (e) or (f); or
   (e) provides false or misleading information to an Environment Officer when required under section 12(2) to provide information,

   commits an offence.

(2) Any person who, having been served with a Notice issued pursuant to section 15 —
   (a) fails to comply with a requirement stated in the Notice; or
   (b) fails to satisfy the Director that an activity, matter or thing is not or is no longer adversely impacting upon the environment within the time stipulated,

   commits an offence.

(3) Any person who —
(a) having been served with a Notice issued under section 16, fails to comply with any of its terms;
(b) having been served with a Notice issued under section 16, causes or permits any other person to act in breach of its requirements; or
(c) knowingly acts in breach of the requirements of a Notice given under section 16, whether or not that person has been served with the Notice, commits an offence.

(4) Any person who commits an offence under this section shall be liable upon conviction:
(a) if it is an individual, to a fine not exceeding $20,000 or to a term of imprisonment not exceeding 5 years, or both; or
(b) if it is a company, to a fine not exceeding $100,000.

(5) In addition to any other penalty imposed under this section, a court may order that any person convicted of an offence:
(a) do any act to reinstate the environment as far as practicable to its state prior to the commission of the offence;
(b) pay to Government any sum representing the cost of reinstating the environment to its state prior to the commission of the offence; and
(c) pay any compensation to Government, or to any other person affected by the offence, in respect of the damage caused to the environment.

(6) Where a company is guilty of an offence under this Act or the Regulations, any officer, director or agent of the company who authorised, assented to or participated in, or by his neglect or omission contributed to the commission of the offence, is a party to and may be found guilty of the offence, and may be liable to the penalty provided for the offence.

**PART V - MISCELLANEOUS**

19 **General Regulations**

(1) The Minister, with the consent of Cabinet, may make Regulations not inconsistent with this Act, prescribing all matters which are required or permitted to be prescribed, or which are necessary or convenient to be prescribed for carrying out or giving effect to this Act or advancing its objects, and in particular for prescribing matters in relation to:
(a) the implementation of any obligation under the international and regional conventions set out in the Schedule to this Act;
(b) regulating or prohibiting trade and commerce in connection with wildlife, including rare and endangered species;
Section 19  Environment Management Act 2010

(c) regulating or prohibiting the pollution of the air, water or land, and the depositing or dumping of litter, rubbish, or any substance of a dangerous, noxious or offensive nature;

(d) the prevention and control of soil erosion and siltation, and the taking of gravel, sand, soil, rock coral or like material;

(e) prescribing fees for applications, permits or approvals under any law relating to the management of the environment, or for the provision of advisory, inspection or other services by the Ministry; and

(f) regulating or prohibiting the importation or dumping of non-recyclable products.

(2) Any Regulation made under this Act may make provision for offences, and may prescribe penalties:

(a) if it is an individual, a fine not exceeding $10,000, or to a term of imprisonment not exceeding 3 years, or both; or

(b) if it is a company, a fine not exceeding $50,000.

Passed by the Legislative Assembly this 12th day of August 2010.
SCHEDULE

(Section 8(1)(j) and 14(d))

CONVENTIONS

1. Convention on Biological Diversity
   (Adopted at Rio de Janeiro on 5 June 1992, Acceded to by the Kingdom on 19 May 1998)

2. United Nations Framework Convention on Climate Change
   (Adopted at New York on 9 May 1992, Acceded to by the Kingdom on 20 July 1998)

3. Montreal Protocol on Substances that Deplete the Ozone Layer
   (Adopted at Montreal on 16 September 1987, Acceded to by the Kingdom on 29 July 1998)

4. Vienna Convention for the Protection of the Ozone Layer
   (Adopted at Vienna on 22 March 1985, Acceded to by the Kingdom on 29 July 1998)

5. United Nations Convention to Combat Desertification
   (Adopted at Paris on 17 June 1994, Acceded to by the Kingdom on 25 September 1998)

6. Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Waste and to Control the Transboundary Movement and Management of Hazardous Waste within the South Pacific Region
   (Adopted at Waigani, PNG on 16 September 1995, Ratified by the Kingdom on 22 May 2002)

7. Cartagena Protocol on Biosafety to the Convention on Biological Diversity
   (Adopted at Montreal on 29 January 2000, Acceded to by the Kingdom on 18 September 2003)

8. Convention for the Protection of the World Cultural and Natural Heritage
   (Adopted at Paris on 23 November 1972, Acceded to by the Kingdom on 30 April 2004)

   (Adopted at Kyoto on 11 December 1997, Acceded to by the Kingdom in January 2008)
10. Stockholm Convention on Persistent Organic Pollutants
   (Adopted at Stockholm, on 23 May 2001, Ratified by the Kingdom on 23 October 2009)

   (Adopted at Basel in March 1989, Acceded to by the Kingdom on 26 March 2010)

   (Adopted at Rotterdam in September 1998, Acceded to by the Kingdom on 31 March 2010)
ENVIRONMENTAL IMPACT ASSESSMENT ACT 2003

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ENVIRONMENTAL IMPACT ASSESSMENT ACT 2003

No. 16 of 2003

AN ACT TO PROVIDE FOR THE APPLICATION OF ENVIRONMENTAL IMPACT ASSESSMENT TO THE PLANNING OF DEVELOPMENT PROJECTS WITHIN THE KINGDOM AND MATTERS RELATED THERETO

I assent,
TAUFA'AHAU TUPOU IV,
18th November, 2003

[11th of September, 2003]

BE IT ENACTED by the King and the Legislative Assembly of Tonga in the Legislature of the Kingdom as follows:

PART I - PRELIMINARY

1 Short Title
This Act may be cited as the Environmental Impact Assessment Act, 2003.
2 **Interpretation**

In this Act unless the context otherwise requires —

“Committee” means the Environmental Assessment Committee established by the Minister under this Act;

“Department” means the Department of Environment;

“determining authority” means any authority which is responsible for issuing of a licence or approval before any development activity proceeds;

“development activity” means any new project, including extensions and additions to existing projects, undertaken in the private or government sectors which requires any licence or other government approval and which accords with the criteria established by the Minister under Regulations made under this Act;

“Director” means the Director of the Department of Environment;

“environment” includes all natural, physical and social resources, people and culture and the relationship that exists between these elements;

“environmental impact assessment” means the study and evaluation of the potential effects that a development project may have on the environment;

“land” for the purpose of this Act includes all land covered by water or not;

“major project” means any development activity listed in the Schedule or determined by the Minister under this Act;

“Minister” means the Minister of Environment;

“natural resources” includes land, soil, minerals, water, air, plants and animals and their habitat whether native or introduced;

“physical resources” includes all buildings, structures, roads, and other man made facilities and constructions placed or otherwise fixed in, on, under or over land, whether temporary or permanent;

“prescribed form” means the form prescribed by Regulations under this Act.

3 **Binding the Crown**

This Act shall bind the Crown.
PART II - FUNCTIONS AND POWERS

4 **Powers of Minister**

The Minister shall be responsible for the proper administration of this Act.

5 **Delegation**

In exercising any function under this Act the Minister may, in writing delegate to the Director, such functions, either in part or in whole, as may be considered appropriate for the efficient and effective administration of that function.

PART III - ENVIRONMENTAL IMPACT ASSESSMENT

6 **Environmental Impact Assessment**

All major projects shall be supported by an appropriate environmental impact assessment, conducted as required under this Act.

7 **Major Project Assessment**

Major project assessment shall apply to all major projects as set out in the Schedule and shall be conducted in accordance with the procedures set out in the Regulations.

Where a development proposal is submitted with an impact assessment completed under the law of a foreign country, the Minister may, deem such assessment to fulfil the requirements of this Act.

8 **Minister to determine assessment**

(1) The Minister shall determine an assessment for a major project.

(2) The Minister shall have regard, in making any determination under subsection (1), to the effect the project is likely to have on —

(a) any ecosystems of importance, especially those supporting habitats or rare, threatened, or endangered species of flora or fauna;

(b) areas, landscapes, and structures of aesthetic, archaeological, cultural, historical, recreational, scenic or scientific value;

(c) any land, water, sites, fishing grounds, or physical or cultural resources, or interests associated with such areas, which are part of
Section 9

the heritage of the people of Tonga and which contribute to their well-being;

(d) the social and the economic well-being of communities; or
(e) whether any project is likely to —
   (i) result in or increase pollution;
   (ii) result in the occurrence, or increase the chances of occurrence, of natural hazards such as soil erosion, flooding, tidal inundation, or hazardous substances;
   (iii) result in the introduction of species of types not previously present that might adversely affect the environment and biodiversity;
   (iv) have features, the environmental effects of which are not certain, and the potential impact of which is such as to warrant further investigation;
   (v) result in the allocation or depletion of any natural and physical resources in a way or at a rate that will prevent the renewal by natural processes of the resources or will not enable an orderly transition to other materials; or
   (vi) whether utility services are available and adequate for that activity.

9 Major projects defined

Where, in the opinion of the Minister, any matter referred to in section 8(2)(e) of this Act is likely to occur to a significant degree, the project shall be deemed to be a major project and the prescribed procedures in the Regulations shall apply.

10 Application

All applications under this Act shall be in the prescribed form.

11 Minister to advise applicant

(1) The Minister shall determine the application for major projects within 30 working days of receipt and notify the applicant in writing of his decision.

(2) Where the Minister requires further information, he may notify the applicant of the requirements.
12 **Referral to Environmental Assessment Committee**

All major projects shall be referred to the Environmental Assessment Committee for processing.

13 **Environmental Committee established**

(1) There shall be established an Environmental Assessment Committee which shall consist of:

(a) Director of Environment, who shall be Chairman;
(b) Solicitor General;
(c) Director of Health
(d) Director of Planning; and
(e) one member appointed by the Minister, from the private sector.

(2) The Secretariat shall be provided by the Department.

(3) A quorum shall be the Chairman and any 3 members.

(4) The Committee may co-opt persons as it deems necessary.

14 **Functions of Committee**

(1) The Environmental Assessment Committee shall review and recommend to the determining authority, conditions to be attached to major projects and the means by which they should be implemented and shall have the following functions:

(a) to receive all relevant documentation relating to the application submitted for projects required to undertake major project assessment;

(b) to ensure appropriate inter-departmental coordination is made for all major projects submitted to the Environmental Assessment Committee;

(c) to receive a copy of all completed major project assessments and any report prepared on that assessment by or at the request of the Secretariat;

(d) to review any environmental conditions recommended by the Secretariat for attachment to major projects submitted to it; and

(e) to recommend to the appropriate determining authority environmental conditions to be attached to major projects and the means by which these should be implemented.
15 Environmental Impact Assessment Report

The determining authority shall ensure that all major project proposals are to be submitted with an environmental impact assessment report.

16 Environmental Impact Assessment Approval

No major project application shall proceed, unless it has satisfied the appropriate environmental impact assessment requirements under this Act and approved in the prescribed form.

PART IV - OFFENCES

17 Non compliance with environmental conditions

Any person who fails to comply with environmental conditions required under this Act commits an offence and shall be liable upon conviction to a fine not exceeding $5,000 or imprisonment for a term of 1 year or both, and in the case of a corporation to a fine not exceeding $10,000.

18 Supplying false information

Any person who knowingly supplies false information under this Act commits an offence and shall be liable upon conviction to a fine not exceeding $10,000 or imprisonment for a term of 2 years or both, and in the case of a corporation to a fine not exceeding $20,000.

19 Penalty for carrying out any activity or project without approval

(1) Any person carrying out any activity or project, without any approval required under this Act, shall be liable upon conviction to a fine not exceeding $500 or imprisonment for a term not exceeding 1 month and in the case of a corporation to a fine not exceeding $1,000.

(2) Upon conviction under subsection (1) of this section, the Court in addition to any penalty may order the offender to return the site to its original condition.

20 Activity to cease forthwith

(1) Where a person is charged with an offence under this Act, the activity for which that person is charged shall cease immediately.
(2) Any person who fails to comply with the provisions of subsection (1) commits an offence and shall be liable to a fine not exceeding $500 and in the case of a corporation to a fine not exceeding $1,000, for each day that non-compliance continues.

21 Review of license due to conviction

Where a person is convicted of an offence under this Act, the Court may recommend the revocation of the licence or refer it back to the Minister for a review of the application.

22 Offences by corporations

Where a body corporate is charged with an offence, every person who, at the time of the commission of the offence, was a director or officer of the body corporate may be charged jointly in the same proceedings with such body corporate, and where the body corporate is convicted of the offence, every such director or officer shall be guilty of that offence unless he satisfies the court that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of the offence.

PART V - MISCELLANEOUS

23 Transitional

Any major project which has not been completed at the date of commencement of this Act shall be exempted from the requirements of this Act.

24 Regulations

The Minister may, with the consent of Cabinet, make regulations for the proper and efficient administration of this Act.

Passed in the Legislative Assembly this 11 day of September, 2003.
SCHEDULE

MAJOR PROJECTS

Any of the following activities shall be deemed to be major projects:

(a) abattoirs;
(b) brewery works;
(c) buildings, works, or land associated with the landing, take-off, parking or servicing of aircraft or helicopters;
(d) canning and bottling works in excess of floor space 2000 square metres;
(e) cattle feedlots or intensive piggeries with excess of 50 animals;
(f) cement works or concrete batching works in which more than 2,000 tonnes per annum are manufactured;
(g) ceramic works, being works in which excess of 200 tonnes per annum are produced of bricks, tiles, pipes, glass are manufactured in furnaces or kilns;
(h) chemical factories, or chemical storage areas in excess of 1,000 square metres;
(i) electricity generating stations;
(j) marinas (comprising pontoons, jetties, piers, dry storage, moorings) for more than 20 vessels primarily for pleasure or recreation;
(k) mining, being an activity that disturbs the surface of the land in excess of one hectare;
(l) sand or gravel extraction from any beach within 50 metres of the high tide mark;
(m) liquid, chemical, oil or petroleum refineries, storage or waste processing works;
(n) farms for the propagation of marine, estuarine or freshwater organisms; (o) pre-mix bitumen works;
(p) rubber or plastics works;
(q) the removal of trees (including mangroves) or natural vegetation of any area in excess of half a hectare;
(r) construction of roads, wharfs, barrages, embankments or levees which affect the flow of tidal waters;
(s) any facility involving the use, storage or dumping of nuclear materials;
(t) sawmills where more than 2,000 cubic metres per annum of timber is sawn, milled or machined in any way; or

(u) tourism or recreational resorts, buildings or facilities, involving a total building floor area of greater than 1,000 square metres or a potential total overnight accommodation level (visitors and staff combined) in excess of 20 persons.
Contractors Environmental and Social Management Plan (CESMP)

| Project: | Pacific Aviation Investment Project (PAiP) Fua'amotu International Airport (TBU) Air Traffic Control Tower | Project No. | ST311-TAL |

APPENDIX B

Construction Laydown Drawing
Construction laydown area - Site plan  (DO NOT SCALE)
Contractors Environmental and Social Management Plan (CESMP)

Project: Pacific Aviation Investment Project (PAIP) Fua'amotu International Airport (TBU) Air Traffic Control Tower

Project No.: ST311-TAL

APPENDIX C

Construction Timeline
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<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
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<td>Tue 8/05/18</td>
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# Air Traffic Control Tower
## Kingdom of Tonga

### Fletcher Construction
## South Pacific

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**Project:** Fua'amotu Airport Tow  
**Date:** Mon 19/03/18  
**JOSH COLLINS - PROJECT MANAGER**

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**Project: Fua'amotu Airport Tower**  
**Date: Mon 19/03/18**  

**JOSH COLLINS - PROJECT MANAGER**  

**FLETCHER CONSTRUCTION - SOUTH PACIFIC**
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Project: Fua'amotu Airport Towr
Date: Mon 19/03/18

JOSH COLENS - PROJECT MANAGER
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Project: Fu'a'amotu Airport Tow
Date: Mon 19/03/18

Josh Collins - Project Manager
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Project: Fua'amotu Airport Tow Date: Mon 19/03/18

- Task
- Split
- Milestone
- Summary
- Project Summary
APPENDIX D

Contingency Plan

Emergency Evacuation and Assistance
In case of an accident (serious injury) or anyone requiring assistance and/or fire the following procedures will be effective.

An alarm system (siren/gong) will blast continuously

When you hear the siren/gong

1. Stop what you are doing.
2. Make sure you are safe.
3. Assess the situation.
4. If accident (injury) emergency rescue, first aid or resuscitation, assist victim only if it is safe for you to do so.
5. If oil spill, hazardous substance (solid, gaseous, or liquid).
   - Locate and isolate source of spillage
   - Shut down all engines and electrical machine to eliminate risk of fire
   - Assess the spill size – if too large to contain using on site equipment call the safety officer and site manager to take appropriate action
   - Quickly deploy petrochemical absorbent material to contain spill.
6. If a fire threat.
   - All fire extinguishers must be readily in place and maintained regularly as required by the authorities.
   - Check out size of fire and if too big to control with site fire-fighting equipment call site manager and safety officer.
7. If a tropical cyclone.
   - Phase 1: Extreme weather event watch - Prevention
     - An extreme weather event watch will be issued when an extreme weather event or developing event is likely to affect the area to affect the area within 48 hours, but not expected to impact the area within 24 hours. This phase is a critical time for responsible staff to plan and prepare for the impact of the event. During this period, all responsible staff should review their safety plans and address any matters outstanding (e.g. fuel, torch, water).
   - Phase 2: Extreme weather event warning - Preparedness
     - An extreme weather event warning will be issued when an extreme weather event or developing event is likely to affect the area within 24 hours. This phase is critical for Contractor to complete all preparations in an orderly manner prior to the event occurring.
   - Phase 3: Actual extreme weather event - Response
     - By this phase, all employees are expected to have enacted their job location safety plans noting that the site will be closed and movements restricted commensurate with the threat to safety of the environment.
   - Phase 4: After the extreme weather event has passed – Recovery
     Responsible team will assess residual risks and determine the actions needed to be addressed. Do not assume that as the extreme weather event has passed, it is now safe to move around the site.
     - No movement within job site until the official all clear is given by the responsible officer and supervision.
APPENDIX E

Environmental Procedures

ENV-02 Fuel, Oil and Chemical Spills
ENV-04 Environmental Complaints
ENV-10 Waste concrete and grout
ENV-13 Dust nuisance
Document Status
The most recent revision of this document is listed on MN-8001 Integrated Management System Documentation Schedule.

Introduction

1.1 Purpose
This procedure describes the system for prevention, control, corrective action and reporting of fuel, oil and chemical spills on a project site.

1.2 Scope
The following procedure is applicable to all situations where an emergency situation has the potential to occur or has occurred. The primary aim is to prevent such situations from arising, however it is recognised that unforeseeable incidents, such as rupture of hydraulic lines, can occur and emergency preparedness and response plays a key role in minimising potential consequences.

Sediment discharge emergencies are addressed in ENV-07 Sediment Discharge Emergency.

1.3 References
- ENV-21 Refuelling and Maintenance of Vehicles and Equipment
- Incident Trigger Level Matrix
- Incident Notification Reporting and Investigation Flowchart
- Applicable Material Safety Data Sheets (MSDS)
- Resource Consent and Project Specification requirements (as applicable)
- Fletcher Construction Environmental Toolkit

1.4 Definitions
- Oil includes lubricants and machine oil and hydraulic fluid.
- Fuel includes petrol and diesel.
- Chemicals include thinners, anti-corrosion compounds, polymers, adhesives, form oil, retarders, curing agents, cement, pesticides and herbicides etc.

Maritime Operations For the purpose of the Maritime Transport Act 1994 reporting requirements, “Maritime Operations” are defined as activities involving the construction of an offshore installation, marine pipeline, wharf, bridge or other marine installation.

The following documents are associated with this procedure:

Standard Forms
- Field Incident Investigation Report
- 5-Whys Incident Investigation
- ICAM Incident Investigation
- Incident Register
## 2 Procedure

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsibility</th>
<th>Key Actions</th>
<th>Records</th>
<th>References</th>
</tr>
</thead>
</table>
| Preventative Measures     | Project Manager / Project Environmental Rep / Environmental Manager | ▶ Implement and maintain the required preventive measures for handling, transferring and storing of oil, fuel and chemicals  
▶ Identify potential spill sources, consider alternative work methodology to reduce risk and provide appropriate equipment.  
▶ Ensure all site personnel have received appropriate instruction and training in avoiding and dealing with emergency situations. | Training and Toolbox Minutes, Risk Register, Spill Kit Register, Work Plans and Job Safety Environmental Analysis, Spill Response Plan | MSD Sheets                                |
| Action in the Event of Spill | FCI Employees and Subcontractors | ▶ Assess personal safety and explosion risk  
▶ Stop operating machinery  
▶ Turn off discharge valve and/or isolate source of spill  
▶ Take whatever action is necessary to contain the spill and prevent it from spreading or discharging into a storm water drain or cesspit, natural waterway or the sea (e.g. create a temporary earth bund)  
▶ Notify Foreman/Supervisor  
▶ Locate nearest spill kit (if available)  
▶ Use absorbent booms, mats or ‘kitty litter’ to soak up the contamination  
▶ If external assistance is necessary call the local provider of spill equipment or the Regional Council spill response unit | | Environmental Toolkit |
| Reporting Spills          | Project Engineer/ Forman/ Supervisor  
Project Environmental Representative | ▶ Immediately notify relevant parties according to the Site Specific Response Plan and type of spill (refer to Section 3 Notes below)  
▶ Report spills to Client’s Representative according to the Site Specific Response Plan. | | FCI HSEQ Incident levels and notification, investigation and reporting flowchart and matrix, Site Specific Response Plan, Crisis Management Plan |
| Investigation             | Project Engineer/ Forman/ Supervisor | ▶ Record details of spills using Incident Report Form/Site Report Card | Incident Report Form/Site Report Card | FCI HSEQ Incident levels and notification, |
2.1 Environmental Effects

The key potential environmental aspects and impacts related to fuel, oil and chemical spills include the following:

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Impacts</th>
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</thead>
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<td>Accidental Spill and leaks of fuel, oils and chemicals into water bodies</td>
<td>Acute and chronic harm to aquatic ecosystems and riparian habitats.</td>
</tr>
<tr>
<td></td>
<td>Suffocation of benthic life and harm to other aquatic life.</td>
</tr>
<tr>
<td>Fire and explosion leading to noxious air emissions and damage to habitats and wildlife.</td>
<td>Impacts on local air quality, nuisance/danger and harm to local residents and wildlife.</td>
</tr>
</tbody>
</table>

2.2 Site Specific Spill Response

A Site Specific Spill Response Plan should be included with the Site Environmental Management Plan. Information to be provided in the Response Plan includes:

- Key contacts including site personnel, regulatory authorities, spill material providers, local liquid waste contractors, local fire service and Harbormaster (as appropriate),
- Copies or locations of site storm water drainage plans if relevant to the project site,
- Details of the location of spill equipment and MSD Sheets on the project site,
- Notification protocol, and
- Supporting posters to be displayed across the site summarising the spill response and contacts for senior staff that will co-ordinate the response and notify the appropriate parties.

Spill kits must be kept at the following locations:

- All Hazchem depots
- Areas designated for the handling and use of hazardous substances
- Vehicles carrying hazardous substances (e.g. refuelling vehicles)
- In the vicinity of, and readily available for all work areas.

Spill kits will comprise, as a minimum the following:

- Absorbent (i.e. peat, sawdust, pads, or zeolite product)
- Personal Protective Equipment (i.e. disposable overalls, gloves and boot covers)
- Bunding devices (i.e. absorbent socks or cess pit protection)
- A designated container for the disposal of contaminated equipment and soils.

All spill kits will be regularly inspected to ensure that they are fully stocked at all times.
In work areas near or adjacent to watercourses, consideration should be given to biodegradable absorbent material and floating spill booms.

2.3 Best Practice Measures

The following best practice measures must be adopted (unless suitable alternatives are agreed with the National Environmental and Sustainability Manager).

- All fuels, oils and chemicals on site must be stored in a secure bunded and covered area.
- All equipment containing stores of fuels or oils are to be inspected regularly (at least weekly) for fuel or oil leaks.
- All items of equipment used on or near water must have an isolating valve (automatic or manual) on the hydraulic and fuel tanks.
- All staff and subcontractors should be adequately briefed in the use of spill kits prior to commencement of works and regularly throughout the project.
- Refuelling must be undertaken in accordance with ENV-21 Refuelling and Maintenance of Vehicles and Equipment.
- Fuel transfer shall be supervised at all times. Where practical refuelling should be undertaken at least 20 meters back from the edge of a watercourse. Any person refuelling must remain present at the refuelling point – do not rely on automatic cut-off controls. A site specific refuelling procedure should be developed.
- Bulk fuel storage should be contained in a bunded covered area, or in a double shell construction to contain spills in the event of leaks or ruptures.
- Fuel storage areas must be made secure to minimise the potential for vandalism or theft.
- Copies of the Spill Response Plan are to be posted in work areas.
- Smoking is not permitted in the vicinity of Hazchem depots or vulnerable vegetation.
- Open fires are not permitted on site for any reason.
- All Hazchem depots and chemical handling areas will be stocked with appropriate fire extinguishers, sand buckets and other fire fighting equipment. Site vehicles will carry fire extinguishers.

2.4 Action in the Event of a Spill

All sites should have in place a site specific spill procedure. In the event of a spill, this procedure should be referred to in the first instance.

In the absence of a site specific procedure, the following list provides generic advice as to the actions required:

- Assess and ensure the safety of all personnel as the first priority. For example, if a large volume of flammable product such as petrol is spilt the correct action may be to secure the area and notify the Fire Service.
- Stop operating machinery causing the spill and where safe close any discharge valves or isolate the source of leakage or spill.
- Where safe take whatever immediate actions required to contain the spill and prevent it spreading or discharging into storm water drains, natural waterways or the sea.
- Clean up any contaminated material in designated contaminated waste containers, no chemical dispersants are to be used.
- Notify Project Manager and Site Environmental Representative.
- Used spill material is to be collected in heavy duty plastic bags. Disposal will depend on the substance spilled, however material used to clean up small volumes of oils can generally be disposed of in general landfill waste. Check with the FCI Environmental Manager before disposal if unsure. Any liquid wastes are to be collected by a Liquid Waste Contractor.

2.5 Action in the Event of a Fire

In the event of a minor fire, site personnel are permitted to utilise available equipment to put it out, provided that they do not endanger themselves or others.

Water must not be used to extinguish a chemical, oil or electrical fire and more serious fires should only be tackled by professional fire fighters.

The Fire Service (by calling 111) and a Construction Manager will be contacted immediately on identification of a fire or explosion.
All personnel should be evacuated from the area of a serious fire or explosion, or where an explosion risk (i.e. fire in the Hazchem depot) may exist.

Measures may be taken to minimise the spread of a fire to protect surrounding habitats via the removal of flammable material from adjoining areas and the creation of fire breaks.

Measures should be taken to minimise the spread of fire water and prevent release into water courses using available spill kits and containment ponds where appropriate.

Following a fire or explosion the appropriate Site Manager will carry out a thorough investigation of the cause and will raise a report detailed the actions taken to prevent a reoccurrence.

2.6 Notification, Reporting and Investigation

Notification, reporting and incident investigation type will depend on the scale and impacts of the spill or fire. The Incident Trigger Level Matrix and Incident Notification Reporting and Investigation Flowchart will be used to determine the appropriate notifications and investigation level.

2.6.1 Reporting Spills

The following table outlines further requirements for reporting of spills. However where this information conflicts with any site specific Resource Consent (or Project Specification) then these documents must take precedence over this table. The reporting requirements, along with relevant contact phone numbers, must be detailed in the approved site Environmental Management Plan and Site Specific Emergency Response Plan.

Practical reporting limits have been applied to this procedure. In case of spills initially notified internally, it is the responsibility of the Project Manager to make an assessment of whether or not the spill should be notified to any external parties. For example the Client, Regional Council or Harbormaster. This will be dependent on the type of product spilt, the risk of the product entering natural water, the nature of the receiving environment and the effectiveness of the internal clean up action. The Project Manager should refer to the National Environmental and Sustainability Manager for further advice if unsure.

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<thead>
<tr>
<th>Spill Type</th>
<th>Spill Volume</th>
<th>Initial Site Notification</th>
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<tbody>
<tr>
<td>Spill to natural water from any “Maritime Operations” project</td>
<td>Volume spilt &lt; 5 litres</td>
<td>Project Manager, Marine Spills Coordinator or Project Environmental Representative</td>
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<tr>
<td></td>
<td>Volume spilt &gt; 5 litres</td>
<td>As above, plus FCI National Environmental Manager or FCI Operations Manager Regional Council Pollution Hotline or Harbormaster</td>
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<tr>
<td>Spill to natural water or the storm water system from any other type of project</td>
<td>Volume Spilt &lt; 5 litres</td>
<td>Project Manager or Environmental Representative</td>
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<td>Volume Spilt &gt; 5 litres</td>
<td>As above, plus: FCI National Environmental Manager or FCI Operations Manager Fire Service (where there is any risk to life or property) Regional Council Pollution Hotline (risk to the environment)</td>
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<tr>
<td>Spill to ground only</td>
<td>Volume Spilt &lt; 20 litres</td>
<td>Project Manager or Environmental Representative</td>
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<tr>
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<td>Volume Spilt &gt; 20 litres</td>
<td>As above, plus: FCI National Environmental Manager or FCI Operations Manager Regional Council Pollution Hotline (risk to the environment) Fire Service (where there is any risk to life or property)</td>
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</table>
2.7 Training

In order to prevent the occurrence of spills it is essential that site personnel have received appropriate training. The Environmental and Sustainability Manual establishes training requirements for all personnel including the use of spill response kits and emergency prevention and response. It is the responsibility of each team leader to ensure their personnel have received the appropriate emergency training.

Document History and Status

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<td>Updated notification, reporting and investigations requirements. Inclusion of fires.</td>
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Document Status
The most recent revision of this document is listed on FCC-MN-8001 Integrated Management System Documentation Schedule.

Introduction

1.1 Purpose
The purpose of this procedure is to ensure that environmental complaints originating from the public are handled in a timely and appropriate manner.

1.2 References
Regulatory requirements, ie resource consents and designation conditions.
Contract requirements

1.3 Definitions
Project Environmental and/or Stakeholder Representative
The Fletcher Construction employee/s nominated to manage environmental and/or stakeholder issues associated with the project.

The following documents are associated with this procedure:
Standard Forms
Complaint Record
Complaints Register

2 Procedure

<table>
<thead>
<tr>
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<th>Responsibility</th>
<th>Key Actions</th>
<th>Records</th>
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</table>
| Environmental Nuisance Complaint | Project Manager                                                      | ◦ Establish who has responsibility for managing complaints (Client or Contractor).  
 ◦ If the Contractor's responsibility: | Project Contract Stakeholder Management Plan (if required for contract) |                                                |
| Receiver of Complaint        | Project Manager                                                      | ◦ Complete complaint record form or refer complaint to Project Environmental Representative. | Complaint record                  |                                                |
| Project Environmental and/or Stakeholder Representative | Project Manager                                                      | ◦ Confirm complaint will be investigated.  
 ◦ Enter details in Complaint Register.  
 ◦ Advise Client's Representative if required.  
 ◦ Circulate complaint record to affected site personnel. | Complaint record                  | Stakeholder Management Plan (if required for contract) |
| Investigating a Complaint    | Project Manager                                                      | ◦ Investigate complaint.  
 ◦ Seek advice from the Project Manager on complaints of a significant nature. | Complaint record                  | Stakeholder Management                      |
2.1 Receiving an Environmental Nuisance Complaint

The receiver of any complaint is to refer the complainant to the Project Environmental and/or Stakeholder Representative who shall record details of the complaint on the Complaint record.

If the complainant does not wish to be referred to anyone else the receiver of the complaint is to complete the Complaint Form.

The receiver should advise the complainant that the company will investigate the complaint.

The receiver should not comment on the likely source of the nuisance until identified following investigation.

The Complaint Form is then forwarded to the Project Environmental and/or Stakeholder Representative who shall enter the details in the Complaints Register.

The Project Environmental Representative shall advise the Client’s Representative and/or Regulatory Authority where required by the contract or other regulatory requirements (ie resource consents).

The Complaints Record form is to be circulated to appropriate site personnel.

2.2 Investigating a Complaint

In the event that the complaint is received by someone other than the Project Environmental and/or Stakeholder Representative, the Project Environmental and/or Stakeholder Representative should normally contact the complainant and request further details if appropriate and confirm that:

- An investigation into the complaint issue will be carried out,
- They will be advised of the investigation findings, and
- They will be advised of what corrective actions have or will be taken to minimise the likelihood of a further occurrence.

The Project Environmental and/or Stakeholder Representative shall ensure suitable resources are available to promptly investigate and determine the likely source or sources of nuisance giving rise to the complaint.
The person(s) investigating the complaint shall determine if there is evidence of abnormal operation of any aspect of construction on site that could be causing or contributing to the nuisance complained of.

If necessary arrange to visit the complainant if the cause of the complaint remains unabated.

If the source can be attributed to the Contractor’s or a subcontractors operations, the Project Environmental and/or Stakeholder Representative shall liaise with the appropriate persons to ensure corrective action is taken to prevent or minimise any further risk of the nuisance reoccurring.

Where the complaint is of a highly significant nature the Project Environmental and/or Stakeholder Representative should seek guidance and/or advice from the Project Manager on the corrective action to be taken and the response to be given to the complainant.

2.3 Reporting

Upon completion of the investigation and subject to the approval of the Project Manager the Project Environmental and/or Stakeholder Representative will:

Advise the complainant of the investigation findings and corrective action taken or to be taken,

- Complete the complaints register,
- Summarise complaints for inclusion in the project monthly report,
- Advise the Client’s Representative if required, and
- Advise the Regulatory Authority if required.
## Document History and Status

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Document Status
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Introduction
1.1 Purpose
This procedure describes the system for control of concrete and grout waste on a project site. Cement and grout have the potential to affect the environment because of their high pH. Freshwater receiving environments (e.g. streams, rivers, lakes, swamps) are particularly vulnerable to changes in pH.

References
Applicable Material Safety Data Sheets (MSDS)
Various posters and fact sheets available from the FCI National Environmental and Sustainability Manager Environmental Toolkit

Standard Forms
Environmental Incident Report
Incident Register
Environmental Incident Witness Statement

1.2 Definitions
Concrete  A composite building material composed of sand and rock aggregate, cement, other additives and water.
Grout  A cement slurry of high water content, fluid enough to be poured.

2 Procedure

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| Preventive Measures          | FCC Employees and Subcontractors | ▶ Implement and maintain the required preventive measures for handling, transferring, washout and storing of cement and grout products.  
▶ Ensure that waste concrete and grout is minimised to the greatest possible extent.  
▶ Ensure washout of any concrete and grout pumps is undertaken in an area where sediment / slurry do not discharge to any stormwater system or to natural waterway. | Training records | MSD sheets   |
| Action in the Event of Spill | FCC Employees and Subcontractors | ▶ Assess and protect personal safety  
▶ Take whatever action is necessary to contain the spill and prevent it from spreading or discharging into a storm water drain, cesspit, natural waterway or the sea (e.g. create a temporary earth bund). |                  |              |
### Activity | Responsibility | Key Actions | Records | References
--- | --- | --- | --- | ---
Cleanup | FCC Employees and Subcontractors | ▸ Recover spill material and dispose of in accordance with Site / Project procedures |  | 
Reporting Spills | Project Engineer | ▸ Verbally advise Project Manager / Project Environmental Representative immediately of any spills to the stormwater system or natural waterway. Complete an Environmental Incident Report form. ▸ Submit Incident Report to Project Manager and copy to Project Environmental Representative. | Incident Report | 
 | Project Manager or Project Environmental Representative | ▸ Log Incident Report on Register ▸ Determine whether Client’s Representative and/or Regional Council need to be notified. ▸ Ensure any required remedial actions are promptly implemented. | Register | Incident reporting, notification and investigation flowchart Incident trigger level matrix
Investigation | Project Manager or Project Environmental Representative | ▸ For Significant Environmental Incidents conduct further investigation to ensure incident report is accurate. ▸ Obtain witness statements where appropriate ▸ Ensure any required remedial actions have been properly closed out. | Incident Report Witness Statements |  |

3 Notes

3.1 Preventive Measures

The following measures provide generic guidance on management of the environmental effects of waste concrete and grout. However each project should identify their site-specific requirements. Further advice can be sought from the FCI National Environmental and Sustainability Manager

3.1.1 Pumping or Pouring Concrete and Grout

Concrete and grout pumps should be in good working order prior to use on a site. Check for any oil leaks from hydraulic hoses. Ensure the delivery hoses are set up correctly to minimise the risk of a blockage. Check that all connections are secure prior to pumping.

Where the discharge of any concrete or grout has the potential to enter a stormwater system, a cesspit or natural waterway in the event of a blockage, spill or leak then consider how to best manage the discharge. For example, on hardstand areas consider laying a sheet of polythene under the pump.

Ensure that a method is in place to capture excess concrete or grout from filling operations. Remove all excess concrete and grout waste to a safe disposal site away from the stormwater system, cesspits or natural waterway.

Ensure a method is available for the wash down of pumps and concrete truck chute wash. Do not allow wash down slurry (settled or otherwise) to enter the stormwater system, cesspits or natural waterway. Potential options may include:
3.2 Action In The Event Of A Spill

3.2.1 Immediate Actions

- Assess safety of all personnel.
- Stop operating plant and machinery as necessary.
- Take whatever immediate actions are required to contain the spill and prevent it spreading or discharging into stormwater drains, cesspits, natural waterways or the sea as directed.
- Collect and remove from the site any spilt waste material to an appropriate leak free disposal receptacle.
- If waste concrete or grout enters a stormwater system or cesspit then immediately arrange for a vacuum sucker truck to attend the site and pump it out.
- Check the receiving environment downstream of the stormwater drainage line or cesspit for any evidence of discharge. If necessary arrange for cleanup in consultation with the Project Manager or Clients Representative.
- If it is necessary to call in external assistance to assist clean up a significant spill, advise the Project Manager or Clients Representative who may call the relevant Regional Council spill response unit.
- Always dispose of concrete and cement slurry to areas where it will naturally soak into the ground or arrange for it to be collected by a waste disposal contractor.

3.2.2 Follow-Up Actions

Contaminated waterways are to be examined by the Project Environmental Representative. The Project Environmental Representative should consult with the Project Manager, National Environmental and Sustainability Manager and/or Clients Representative as appropriate to the situation and if necessary implement remedial action.

3.3 Reporting Spills

All spills of concrete or grout to the stormwater system or natural waterways are to be reported using the Incident Report Form.

A copy of the Incident Report is to be forwarded to the Project Manager and copied to the Operations Manager and National Environmental and Sustainability Manager.

The Incident Report is to be logged on the Environmental Incident Register by the Project Environmental Representative.

The Client’s Representative is to be informed of any significant spill to land or to natural waterways (the sea, stormwater drains or natural waterways) where required by the contract.
The Project Manager and/or Client’s Representative is responsible for identifying whether or not the Regional Council should be advised of a spill as appropriate to the situation. Further guidance can also be sought from the National Environmental and Sustainability Manager.

### 3.4 Investigation

Any spill having a significant environmental impact requires an investigation report to be prepared by the Project Environmental Representative under the direction of the Project Manager. A copy of this report is to be forwarded to the Operations Manager and National Environmental and Sustainability Manager. A copy may also be required to be provided to the Client’s Representative.

Attach witness statements where appropriate.

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Introduction

1 Purpose

This procedure describes methods for control of dust nuisance that may be generated from earthworks. Dust can create a nuisance for site workers, site neighbours or create a potential traffic hazard.

References


Standard Forms

Incident Report
Incident Register

2 Procedure

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| Preventive Measures            | FCC Employees and Subcontractors            | ➢ Ensure dust nuisance is considered as part of the Work Plan and Job Safety Environmental Analysis planning process.  
➢ Implement and monitor the required dust control measures  
➢ Ensure any dust issues are raised at relevant forums with staff and subcontractors | Work Plans  
JSEA’s  
Meeting & Toolbox records |                                                |
| Action in the Event of a Dust Complaint | FCC Employees and Subcontractors | ➢ If Contractor’s responsibility:  
➢ Refer ENV-04: Environmental Complaints procedure.  
➢ If valid complaint consider ceasing works in the area until measures to reduce dust potential, as outlined in Section C below, can be implemented | Complaint record |                                                |
| Investigation                  | Project Environmental Representative        | ➢ Request investigation report for dust complaints having significant nuisance effects or damage to project reputation |                                |                                                |
| Project Manager / Project Environmental Representative | ➢ Conduct investigation and prepare report  
➢ Liaise with complainant to ensure close-out of the issue | Incident Investigation Report |                                |                                                |
3 Notes

3.1 Preventive Measures
The following measures provide further guidance for the control of dust. It does not cover any worker health related issues - refer FCE-017 ‘General Safe Practices for Employees’ in the Health and Safety Manual for further guidance.

The potential for dust nuisance is site specific, and depends on a range of factors such as work activities, atmospheric conditions, soil characteristics, location of neighbours or traffic, and prevailing wind direction. Further advice on controlling dust can also be sought from the National Environmental and Sustainability Manager, Fletcher Construction Engineering.

3.2 Specific Control Options
- Consider wind speeds and direction when undertaking activities that may generate dust e.g. lime drying.
- Wet down haul roads and unpaved areas during dry / windy periods using a water cart. Dampening down is up to 70% effective in controlling dust.
- Stabilise haul roads with clean aggregate or pave heavily trafficked areas.
- Keep haul roads as clean as practicable by removing spilt material regularly. This prevents material being ground into fine particles and potentially becoming a source of dust.
- Re-vegetate or cover exposed surfaces or stockpiles as soon as possible. Techniques include grass seeding (e.g. hydro-seeding), aggregate, polythene or geotextiles (e.g. biddum) to protect exposed surfaces.
- Limit vehicle speeds on haul roads to 10–15 km/hr.
- Minimise drop height from loaders. Clean up any spills from mechanical loading operations.
- Wherever practical, do not locate stockpiles close to boundaries where they adjoin residential areas.
- Cover trucks with tarpaulins or use enclosed bins.
- Use a windbreak (e.g. horticultural cloth supported by poles).
- Use rollers / compactors to seal surfaces.
- Regularly sweep public roads adjacent to site entrances.
- Use wheel washers to remove entrained dirt from vehicles or plant before they exit the site.

3.3 Action In The Event Of Nuisance Dust
Consider whether or not operation can be temporarily suspended until a time when factors such as wind direction and speed are better suited.
Implement control measures or work methodologies to prevent further complaints.
Ensure workers are aware of control measures in advance of works through direct communication or toolbox meetings.

3.4 Investigation Of Complaints
Any dust nuisance having a significant environmental impact or large number of community complaints requires an investigation report to be prepared by the Project Environmental Representative under the direction of the Project Manager. A copy of this report is to be forwarded to the Operations Manager and the National Environmental and Sustainability Manager. A copy may also be required to be provided to the Client’s Representative and the local regulatory authority.
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APPENDIX F

FCC Workers Code of Conduct

TAIP Code of Conduct

TFHA Road to Health

Project Proposal
Code of Conduct

The Fletcher Construction Company values having a workplace environment in which the highest standards of integrity, business ethics, professionalism and personal achievement are clearly demonstrated. The responsibility for maintaining high standards of conduct and personal integrity clearly rests with individual employees; so this Code of Conduct is a guide to staff about the standards of behaviour which the company considers are essential for the efficient operation of its activities, and the protection of all employees.

The Code of Conduct reflects and reinforces matters which are the subject of specific policies and procedures issued from time to time by the company.

As business conditions and attitudes to best practice change over time, this Code of Conduct will be regularly reviewed, updated and amended. You will be advised of significant amendments affecting you.

Because this Code of Conduct is considered to be an important mechanism to protect both employees and the company, it is a requirement of your employment that you follow these rules. The Code applies to all employees irrespective of position. Ignorance of the rules is not an excuse.

RIGHT OF APPEAL: Any employee who considers that action taken by the company is unjustified, should consult with their HR Manager who will provide advice regarding rights to contest the decision.

Company Rules

Company rules relate to specific behaviours that are either required or forbidden: they are categorised according to seriousness: Misconduct – which will typically be dealt with by way of a formal warning in the first instance; and Serious Misconduct which can involve instant dismissal.

Note: Additional project and/or location-specific rules may also apply. These will be clearly identified at induction.

All of these rules can be related to our core values: Good to work with | Good to work for | Good to own.

MISCONDUCT

The following actions are some examples of potential misconduct for which a formal warning may be issued. These are itemised as an indication only – not as a complete list. Failing to heed warnings and continuing unacceptable behaviour with either the same or difference infringements, may eventually lead to dismissal.

1. Lateness or unauthorised absence – including failure to notify (without good cause) your manager of any intended absence prior to the commencement of the scheduled work start time.
2. Misuse of tools or equipment or defacing company property.
3. Failing to report any accident or known hazard.
4. Acting in an offensive manner.
5. Failing to observe standard operating procedures and accepted work practices or failing to meet acceptable work performance standards.
7. Wilful waste of time or materials.
8. Posting notices on company premises without due authority.

SERIOUS MISCONDUCT

These involve actions and types of conduct which are not acceptable under any circumstances. The following acts are examples of misconduct which the company considers particularly serious and which may result in immediate dismissal (without prior warning). This list is indicative only – other serious disregard of our core values could also result in instant dismissal.

1. Failing to observe safety rules, safe working practices, making proper use of safety equipment and appropriately using protective clothing and safety procedures.
2. Reporting for work under the influence of drugs or intoxicating liquors to such an extent that a manager has reasonable grounds for believing that the employee is unable to perform duties properly or with due care for personal safety or the safety of others.
3. Attempting to commence duties while clearly under the influence of illicit drugs or intoxicating liquors to such an extent as to be unable to perform usual duties satisfactorily.

4. Failure to observe environmental policies, rules and procedures.

5. The use, sale, supply or possession of illicit or restricted drugs or alcohol at work or on company premises or places of work (other than alcohol at company controlled functions with management approval).

6. Refusing to provide consent to undergo drugs or alcohol testing or rehabilitation when reasonably requested.

7. Misappropriation – including the unauthorised removal of company property, possession of company property without authorisation, or other forms of dishonesty or criminal damage in connection with company or client property or the property of another employee.

8. Failure to observe speed limits, traffic laws and regulations including NZTA requirements and the use of hand-held mobile phones and other telecommunications devices while driving a company vehicle.

9. Breaching laws or regulations or other criminal activity which has the potential to bring the company into disrepute.

10. Acts of disobedience, negligence or irresponsible behaviour which could prejudice either the safety and well-being of fellow employees or the quality of company work, or that involves the company in otherwise avoidable costs.

11. Misuse of electronic communication, social media or Internet.

12. Unauthorised statements to the media or the public, or purporting to speak on behalf of the company contrary to the company’s position or values or any statements which may reflect in a negative manner on the company.

13. Engaging in any conduct which causes the company to lose trust and confidence in you as an employee.

14. Threatening or abusive behaviour against a customer, employee or member of the public.

15. Refusing to obey an instruction from a superior or refusing to perform assigned work or walking off the job without the permission of your manager.

16. Assault or threats of violence against a customer, employee or member of the public.

17. The display of any form of sexual or other harassment towards an employee, work related person or member of the public.

18. Falsifying, defacing or destroying company documentation in any way whatsoever (including performance measurement, computer and equipment software).

The warning procedure

1. On the first offence a verbal warning will be given and recorded in writing. This note will be retained in the employee’s personnel file and remain in force for twelve months.

2. On the second offence a written warning will be given. One copy of the warning will be given to the employee’s representative (if applicable), a further copy will be put in the employee’s personnel file and remain in force for a further twelve months from the date of the warning.

3. On the third offence a final written warning will be given. One copy of the warning will be given to the employee’s representative (if applicable), a further copy will be put into the employee’s personnel file and remain in force for twelve months from the date of the warning.

4. On the fourth offence the employee will be dismissed.

NOTE: Instances may occur where the offence will be of such a serious nature that a written warning or a final written warning will be issued to an employee for the first offence.

NOTE: The above provisions are not restricted to repetitions of a specific form of offence but may be applied to any form of misconduct or non performance. It is not a requirement to have breaches of a similar nature before dismissal can occur.
DISCIPLINARY PROCEDURE

1. Notification of Liability
   Supervisor advises employee of liability to disciplinary action

2. Preliminary Investigation
   Supervisor questions witnesses and employee concerned
   Supervisor decides if full investigation should be undertaken
   IF NO
   IF YES
   Employee has right to have representative present at this and any subsequent stage

3. Conclusion of Preliminary Investigation
   Supervisor informs employee of decision to conduct full investigation and to hold a formal interview
   Full investigation including questioning all relevant witnesses and considering any evidence
   Department Supervisor or above should be informed prior to action being initiated
   If necessary in serious cases, suspend with pay pending further investigation

4. Formal Interview
   Supervisor arranges attendance of another supervisor as witness.
   Informs employee of collected facts and statements, referring to any previous disciplinary action. Allows him opportunity to reply to allegations. Adds employee’s statement to report.
   If necessary in serious cases, suspend with pay pending further investigation

5. Decision
   Consideration of evidence and employee’s explanation. Further investigation in light of employee’s explanation if necessary. Employee informed of conclusions reached and any disciplinary action to be taken.

DISCIPLINARY ACTIONS
- RECORDED ORAL REPRIMAND
- WRITTEN WARNING
- FINAL WRITTEN WARNING
- DISMISSAL NOTIFIED IN WRITING
PRIVATE & CONFIDENTIAL

Please complete this form and return to the HR team.

Name:

Location:

Position:

Manager’s Name:

AUTHORITY AND DECLARATION

I acknowledge that I have received and read a copy of The Fletcher Construction Company Code of Conduct. I confirm that I understand and agree to abide by the standards outlined in the Code of Conduct and all other company policies and procedures.

I understand that the Code of Conduct will be regularly reviewed, updated and amended in line with current business conditions and best practice. I confirm that I have been shown where and how to access the most recent copy and undertake to review it periodically for any changes or modifications. I accept that it is a requirement of my employment that these rules are followed and understand that failure to comply with requirements may result in disciplinary action and in some circumstances may result in termination of my employment.

Signed: ____________________________  Date: ____________________________
TONGA AVIATION INVESTMENT PROJECT (TAIP) CODES OF CONDUCT AND ACTION PLAN

TO PREVENT

GENDER BASED VIOLENCE AS WELL AS CHILD ABUSE/EXPLOITATION

1. Background

The purpose of this Tonga Aviation Investment Project (TAIP) Codes of Conduct and Action Plan to Prevent Gender-based Violence (GBV) and Child Abuse/Exploitation (CAE) is to introduce a set of key definitions, core Codes of Conduct and guidelines that establish mechanisms for reporting, addressing, monitoring and sanctioning GBV and CAE within the work site and in its immediate surrounding communities.

The Codes of Conduct aim to prevent and/or mitigate the risks of GBV and CAE within the context of infrastructure development interventions for the Government of Tonga (GoT) to be funded under the World Bank financed Tonga Aviation Investment Project (TAIP). These Codes of Conduct are to be adopted by the civil works contractors, as well as supervision consultants.

Mutual respect and fair treatment by all parties, that include an understanding of the impact their presence has on the communities living in the areas targeted by the project, are deemed of utmost importance to create a respectful, pleasant and productive work environment. This will help prevent issues of GBV and CAE, thereby guaranteeing a safe environment to work in and around. The Codes also present clear guidelines for sanctions of staff should they be warranted. By ensuring that the project’s staff respect the project environment and its communities, a successful attainment of the project objectives will be achieved.

2. Definitions

The following definitions apply:

- **Gender-Based Violence (GBV)** – is an umbrella term for any harmful act that is perpetrated against a person’s will and that is based on socially ascribed (i.e. gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private.

- **Child Abuse and Exploitation (CAE)** – is defined as physical, sexual or psychological harm of minor children (i.e. under the age of 18) including using for profit, labor, sexual gratification, or some other personal or financial advantage. This also includes other activities such as using computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any mediums.

- **Child Protection (CP)** - An activity or initiative designed to protect children from any form of harm, particularly arising from CAE.

- **Child** – is used interchangeably with the term ‘minor’ and refers to a person under the age of 18.

---

1 Sexual favors or other forms of humiliating, degrading or exploitative behavior is prohibited.
This is in accordance with Article 1 of the United Nations Convention on the Rights of the Child.

- **Grooming** – is defined as behaviors that make it easier for a perpetrator to procure a child for sexual activity. For example, an offender might build a relationship of trust with the child, and then seek to sexualize that relationship (for example by encouraging romantic feelings or exposing the child to sexual concepts through pornography).

- **Online Grooming** – is the act of sending an electronic message with indecent content to a recipient who the sender believes to be a minor, with the intention of procuring the recipient to engage in or submit to sexual activity with another person, including but not necessarily the sender. For further details, refer to the *Criminal Code Act 1995, Division 474* (telecommunications offences, subdivision C).

- **Survivor/Survivors** – is defined as the person(s) adversely affected by GBV or CAE. Women, men and children can be survivors of GBV; children can be survivors of CAE.

- **Perpetrator** – is defined as the person(s) who commit(s) or threaten(s) to commit an act or acts of GBV or CAE.

- **Work site** – is defined as the area in which infrastructure development works are being conducted, as part of interventions planned under the World-Bank funded Tonga Aviation Investment Project (TAIP).

- **Work site surroundings** – are defined as the ‘Project Area of Influence’ which are any area, urban or rural, directly affected by the project, including all human settlements found on it.

- **Consent** – is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the code of conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

- **Contractor** – is defined as any firm, company, organization or other institution that has been awarded a contract to conduct infrastructure development works in the context of the TAIP and has hired managers and/or employees to conduct this work.

- **Consultant** – is defined as any firm, company, organization or other institution that has been awarded a contract to provide consulting services in the context of the TAIP, and has hired managers and/or employees to conduct this work.

- **Manager** – is defined as any individual offering labor to the contractor or consultant, on or off the work site, under a formal employment contract and in exchange for a salary, with responsibility to control or direct the activities of a contractor’s or consultant’s team, unit, division or similar, and to supervise and manage a pre-defined number of employees.

- **Employee** – is defined as any individual offering labor to the contractor or consultant within country on or off the work site, under a formal or informal employment contract or arrangement, typically but not necessarily in exchange for a salary (e.g. including unpaid interns and volunteers), with no responsibility to manage or supervise other employees.

- **Grievance Response Mechanism (GRM)** – the process established by the TAIP project to receive and address complaints (see www.taip.to)

- **GBV and CAE Allegation Procedure** – is defined as the prescribed procedure to be followed when reporting incidents of GBV or CAE.

- **Accountability Measures** – is defined as the measures put in place to ensure the confidentiality of survivors and to hold contractors, consultants and the client responsible for instituting a fair system of addressing cases of GBV and CAE.
• **Response Protocol** – is defined as the mechanisms set in place to respond to cases of GBV and CAE.

• **GBV and CAE Compliance Team:** A team established by the contractor and/or consultant to address GBV and CAE issues with the work force.

### 3. Codes of Conduct

This chapter presents three Codes of Conduct for use:

A. **Company Code of Conduct:** Commits the company to addressing GBV and CAE issues;

B. **Manager’s Code of Conduct:** Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,

C. **Individual Code of Conduct:** Code of Conduct for everyone working on TAIP, including managers.

#### Company Code of Conduct

A. The company is obliged to create and maintain an environment which prevents gender based violence (GBV) and child abuse/exploitation (CAE) issues, and where the unacceptability of GBV and actions against children are clearly communicated to all those engaged on the project. In order to prevent GBV and CAE, the following core principles and minimum standards of behavior will apply to all employees without exception:

1. GBV or CAE constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV and CAE including grooming are unacceptable be it on the work site, the work site surroundings, or at worker’s camps. Prosecution of those who commit GBV or CAE will be pursued if appropriate.

2. Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.

3. Do not use language or behavior towards women, children and men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

4. Sexual activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child and consent from the child is not a defense.

5. Sexual favors or other forms of humiliating, degrading or exploitative behavior is prohibited.

6. Sexual interactions between the company’s employees at any level and member of the communities surrounding the work place that are not agreed to with full consent by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex – such sexual activity is considered “non-consensual” within the scope of this Code.

7. All employees, including volunteers and sub-contractors are highly encouraged to report suspected or actual GBV and/or CAE by a fellow worker, whether in the same company or not. Reports must be made in accordance with GBV and CAE Allegation Procedures.

8. All employees are required to attend an induction training course prior to commencing work on site to ensure they are familiar with the GBV and CAE Code of Conduct.

9. All employees must attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the institutional GBV and CAE Code of Conduct.

10. All employees will be required to sign an individual Code of Conduct confirming their agreement to support GBV and CAE activities.
11. I do hereby acknowledge that I have read the foregoing Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

Company name: ___________________________  Signed by: ___________________________

Title: ___________________________  Date: ___________________________

Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the code of conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
Managers Code of Conduct

B. Managers at all levels have particular responsibilities to create and maintain an environment that prevents GBV and CAE. They need to support and promote the implementation of the Company Code of Conduct. To that end, they must adhere to the Manager’s Code of Conduct and also sign the Individual Code of Conduct. This commits them to support and develop systems that facilitate the implementation of this action plan and maintain a GBV-free and child-safe work environment. These responsibilities include but are not limited to:

1. Compliance Team and Development of Action Plan

1. Appoint the Contractor’s GBV and CAE Focal Point. This will typically be the contractor’s occupational health and safety manager. This person will:
   a. Represent the Contractor on the GBV and CAE Compliance Team (GCCT) which is comprised of representatives from TAL, contractor(s), the supervision consultant, and local service provider.
   b. Participate in training of staff to sensitize them to their responsibilities the Individual Code of Conduct; and,
   c. Be trained and empowered to undertake any investigations of staff members alleged to have minor violations of the Code of Conduct and ensure sanctions are applied as appropriate. For major violations the Focal Point must appropriately refer the complaint to: (i) a local service provider; (ii) the authorities; and/or, (iii) management for further action.

Work on GBV and CAE will be recognized in employee's scope of work and performance evaluations.

2. The GCCT will prepare an Action Plan for implementation by the contractor, based on the outline plan in Section 4 below. The Action Plan shall, as a minimum, include:
   a. **GBV and CAE Allegation Procedure** to report GBV and CAE issues through the project Grievance Response Mechanism (GRM);
   b. **Accountability Measures** to protect confidentiality of all involved; and,
   c. **Response Protocol** applicable to GBV survivors/survivors and perpetrators.

3. The Contractor shall submit the Action Plan for clearance by the TFSU safeguards teams, as well as the World Bank prior to full mobilization.

2. Implementation

1. Ensure that all staff receive a clear written statement of the company’s requirements with regards to preventing GBV and CAE in addition to the training.

2. To ensure maximum effectiveness of the Company and Individual Codes of Conduct
   a. Prominently display the Codes of Conduct in clear view in public areas of the workspace. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.
   b. All posted and distributed copies of the Company and Individual Codes of Conduct should be translated into the appropriate language of use in the work site areas (ex. Tongan, English).

3. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.

4. Promote internal sensitization initiatives (e.g. workshops, campaigns, on-site demonstrations etc.) throughout the entire duration of their appointment in collaboration with the GCCT and in accordance to the Action Plan.
5. Ensure that:
   a. All managers and employees sign the ‘Individual Code of Conduct for GBV and CAE’, including acknowledgment that they have read and agree with the code of conduct;
   b. Staff lists and signed copies of the Individual Code of Conduct are provided to the GCCT and TAL;
   c. Participate in training as outlined below;
   d. Staff are familiar with the TAIP GRM and that they can use it to anonymously report concerns over GBV and CAE (See Section 4.2 in the Action Plan).
   e. Staff are encouraged to report suspected or actual GBV and/or CAE through the GRM.

6. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees.

7. Ensure that when engaging in partnership, sub-grant or sub-recipient agreements, these agreements:
   a. incorporate the TAIP Codes of Conduct as an attachment;
   b. include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the TAIP Codes of Conduct; and,
   c. expressly state that the failure of those entities or individuals, as appropriate, to take preventive measures against GBV and CAE, to investigate allegations thereof, or to take corrective actions when GBV and/or CAE has occurred, shall constitute grounds for sanctions and penalties in accordance with the TAIP Codes of Conduct.

8. Provide support and resources to the GCCT to create and disseminate the internal sensitization initiatives through the Awareness-raising strategy under the Action Plan.

9. Any major issue with regard to GBV or CAE warranting police action shall be reported to TAL and the World Bank immediately.

3. Training
   1. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and CAE Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the Action Plan for addressing GBV and CAE issues.
   2. Ensure that time is provided during work hours and that staff attend the mandatory TAIP facilitated induction GBV and CAE training required of all employees prior to commencing work onsite.
   3. Ensure that staff attend the monthly mandatory refresher training course required of all employees to combat increased risk of GBV and CAE during civil works.
   4. Managers are required to attend and assist with the TAIP facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations.
   5. Collect satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

4. Response
   1. Managers will be required to provide input, final decisions and formal adoption of the GBV and CAE Allegation Procedures and Response Protocol developed by the GCCT as part of the final cleared Action Plan.
   2. Once adopted, managers will uphold the Accountability Measures set forth in the Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of
GBV and CAE (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).

3. If a manager develops concerns or suspicions regarding any form of GBV or CAE by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is highly encouraged to report the case using the identified reporting mechanism.

4. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision was made.

5. Managers failing to comply with such provision can be in turn subject to disciplinary measures, to be determined and enacted by the company’s CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
   a. Informal warning
   b. Formal warning
   c. Additional Training
   d. Loss of up to one week’s salary.
   e. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
   f. Termination of employment.

6. Ultimately, failure to effectively respond to GBV and CAE cases on the work site by the contractor’s managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action.

Company name: ________________________________

Signed by: ________________________________

Title: ________________________________

Date: ________________________________
C. Individual Gender Based Violence and Child Protection Code of Conduct

I, ____________________________, acknowledge that preventing gender based violence (GBV) and child abuse/exploitation (CAE) are important. GBV or CAE activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. All forms of GBV or CAE are unacceptable be it on the work site, the work site surroundings, or at worker’s camps. Prosecution of those who commit GBV or CAE may be pursued if appropriate.

I agree that while working on the TAIP project, I will:

- Consent to police background check.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual activity with children—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defense.
- Not engage in sexual favors or other forms of humiliating, degrading or exploitative behavior.
- Not have sexual interactions with members of the communities surrounding the work place and worker’s camps that are not agreed to with full consent\(^2\) by all parties involved in the sexual act. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.
- Attend and actively partake in training courses related to HIV/AIDS, GBV and CAE as requested by my employer.
- Report through the GRM or to my manager any suspected or actual GBV and/or CAE by a fellow worker, whether in my company or not, or any breaches of this Code of Conduct.

- With regard to children under the age of 18:
  
  - Wherever possible, ensure that another adult is present when working in the proximity of children.
  - Not invite unaccompanied children into my home, unless they are at immediate risk of injury or in physical danger.
  - Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.
  - Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium (see also “Use of children's images for work related purposes”).
  - Refrain from physical punishment or discipline of children.

\(^2\) Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the code of conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
• Refrain from hiring children for domestic or other labor which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
• Comply with all relevant local legislation, including labor laws in relation to child labor.

D. **Use of children's images for work related purposes**

When photographing or filming a child for work related purposes, I must:

• Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
• Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
• Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
• Ensure images are honest representations of the context and the facts.
• Ensure file labels do not reveal identifying information about a child when sending images electronically.

E. **Sanctions**

The project has established a ‘GBV and CAE Compliance Team’ (GCCT) which is comprised of representatives from TAL, contractor and supervision consultant. The GCCT and/or the local service provider will oversee any investigation of grievances against the employee with regard to GBV and CAE, according the accused procedural fairness and within the local laws. If an employee has breached the Code of Conduct, the employer will take disciplinary action which could include:

• Informal warning;
• Formal warning;
• Additional Training;
• Loss of up to one week’s salary;
• Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months; or,
• Termination of employment.

In addition to the above, if warranted, report the employee to the Police as per local legal paradigms.

*I understand that it is my responsibility to use common sense and avoid actions or behaviors that could be construed as GBV or CAE or breach this Code of Conduct. I do hereby acknowledge that I have read the foregoing Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and CAE. I understand that any action inconsistent with this Code of Conduct or failure to take action mandated by this Code of Conduct may result in disciplinary action and may affect my ongoing employment.*

Company name: ________________________ Title: ________________________

Signed by: ________________________ Date: ________________________
Tonga Family Health Association

PROJECT PROPOSAL

| Project Title: | “A Road to Good Health is to Combat STIs-HIV in Tonga Program”
|               | “Ko e Hala Fononga Ki He Mo’ui Lelei ko hono malu’i ‘a Tonga mei he fokoutua ‘o e Vailasi ’Eitisi moe ngaahi mahaki pipihi ‘o e fe’auaki” |
| Name of the Organization: | Tonga Family Health Association (TFHA) |
| Project Sites: | Fua’amotu Airport Tower (Tongatapu) |

**Background:**

Tonga Family Health Association [TFHA] was established in 1970 and Incorporated in 1975 by the late king Tupou IV. TFHA is a full member of the IPPF. One of her key Frameworks is HIV/AIDS which is featured in her Strategic Plan. TFHA has run specific provision of HIV/AIDS learning, awareness, prevention, VCCT, mitigation and behavioural initiatives in Tongatapu, Vava’u, Haapai and ‘Eua for the many years. As a result TFHA commitment to fight against HIV/AIDS, the Ministry of Health [MOH] made a deliberate and intentional decision to establish partnership with TFHA in addressing HIV/AIDS learning, awareness and prevention programs.

**Challenges:**

Tonga comprises three main island groups with a total land area of about 700 sq. km dispersed over a 400,000 sq. km area of the South Pacific. Basic infrastructure is of reasonably good quality, as is its social service system. However, its small size, geographic dispersion and isolation and limited natural resources provide a narrow economic base, making it particularly vulnerable to external economic shocks. Tonga faces many challenges in developing and maintaining sustainable internal, regional and international transport and communication linkages, all of which are crucial to the economic development and social well-being of its estimated 105,000 population. The country is faced with limited capital resources and decaying infrastructure, combined with financial and administrative constraints, as well as challenges of meeting domestic and international transport safety security requirement.

**Rationale for the STIs-HIV Prevention Program:**

Economic, political, socio-cultural, technological and ideological development initiatives have brought both positive and negative changes into the Kingdom of Tonga. Additionally, migrations of Tongans overseas as well as immigrating of Tongans and non-Tongans into the Kingdom of Tonga have increased. These factors make Tonga a ‘global society’ rather than a mere isolated nation.
Consequently, Tonga becomes a ‘risk society’. It’s a ‘risk society’ mainly because Tonga has been directly in constant contact with many, diverse and contesting global forces and epidemics. One of those epidemics is HIV/AIDS.

<table>
<thead>
<tr>
<th>Project Purpose/Objective(s):</th>
<th>The chief purpose of this project is to establish a HIV/AIDS learning and awareness process and a support structure to empower not only those who will directly involve in the rebuilding of Fua’amotu Airport Tower but also all potential parties that may engage with those workers on a daily basis. Specifically, the project will perform the following processes – HIV/AIDS learning, awareness and prevention programs, voluntary counseling and testing services, Gender-Based Violence screening as well as a support structure to assist when a need arises.</th>
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### Situational Analysis

**HIV / AIDS**

#### 2.1. Situation at Country Level

Incidence of HIV /AIDS in Tonga is low, however, STIs is increasing particularly amongst the young population (SGS Surveillance, WHO 2004). There is a general awareness that the general Tongan population have lack of knowledge regarding the basic facts of HIV/AIDS. Exact number of HIV positives persons is unknown; HIV testing is not compulsory and not available to Antenatal mothers for screening. Voluntary Confidential Counselling and Testing (VCCT) have been established in Tonga.

#### 2.2. Strengths of TFHA to address HIV/AIDS

TFHA has established comprehensive processes, procedures and structure to address HIV/AIDS. She has staffs that have been trained on syndromic management and VCCT. Currently, TFHA has Sexual Reproductive Health Trainings at different groups in various communities in both Tongatapu and Vava’u in which STI and HIV/AIDS are key issues discussed. More significantly, TFHA has Radio and TV programs, pamphlets and posters on STI and HIV/AIDS, as well as a renowned Filitonu Drama Group for delivering STI & HIV/AIDS messages to the general population of Tongatapu, Haapai, Vava’u and ‘Eua.

#### 2.3 Goal

Reduction in the incidence of STIs / HIV / AIDS and the full protection of the rights of people infected by HIV / AIDS

### Project Beneficiaries:

The beneficiaries of these programs and activities will include, but not be limited, to skilled and unskilled laborers of these firms and targeted members of communities surrounding the construction and infrastructure sites, e.g. out of school youth and commercial sex workers. In addition, for the project would also provide education and behavior change programs to high-risk groups in remote villages intended to benefit from the infrastructure upgrades, but also
may be adversely affected by opportunities the new infrastructure creates for HIV/AIDS to affect and infect communities previously not at risk.

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<th>Output 1: Supportive and Enabling Environment</th>
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<td>Output 4: Program Management Support</td>
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Starting Date: February 2018
Completion Date: December 2018

Project Manager/Focal Person/Full contact details:

Mrs. ‘Amelia Tipaleli Hoponoa
Executive Director
Tonga Family Health Association
PO Box 1142
Nuku’alofa
Phone: 676 22770
Fax: 676 23 766
E-mail: tfha@tongafamilyhealth.org.to
ahoponoa@tongafamilyhealth.org.to

Mrs Katherine Mafi
Program Manager
Tonga Family Health Association
PO Box 1142
Nuku’alofa
Phone: 676 22770
Fax: 676 23 766
E-mail: kmafari@tongafamilyhealth.org.to
APPENDIX G

Health and Safety Management Plan
Traffic Management Plan
Waste Management Plan
PROJECT SAFETY MANAGEMENT PLAN

Tonga Aviation Investment Project
TAIP P128939

Tonga

2018

“Our Goal is Zero Harm to all persons on site”

It is important that all site employees and subcontractors read and comply with this document

The information contained herein focuses primarily on Project/Site Specific items. It does not exempt any person from their responsibilities as required by the local Health and Safety regulations and any applicable Codes of Practice, Guidelines or Standards.
## PROJECT SITE SAFETY MANAGEMENT PLAN

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1. Purpose

This Project Site Safety Management Plan (SSMP) reflects Fletcher Construction Health, Safety and Security Management System and outlines the procedural requirements for the Project to ensure that all personnel associated with the Projects works and assets work in a safe manner and in compliance with legislative requirements and Fletcher Building Standards.

- Employee and contractor responsibilities;
- Fletcher Construction document hierarchy; and
- Safe work practices.

2. Scope

This SSMP applies to all Fletcher Construction employees, contractors and visitors and is to be implemented by way of:

- Scheduled SMP introduction and revised training sessions;
- Inductions; and
- Toolbox talks including change management awareness sessions.

3. Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ALARP</td>
<td>As low as reasonably practical</td>
</tr>
<tr>
<td>ERP</td>
<td>Emergency Response Plan</td>
</tr>
<tr>
<td>EPA</td>
<td>Environment Protection Agency</td>
</tr>
<tr>
<td>JSEA</td>
<td>Job Safety Environmental Analysis</td>
</tr>
<tr>
<td>PTW</td>
<td>Permit to work</td>
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4. Safety Management Plan

4.1 Project Scope

4.1.1 Client Project document
The following table shows the client requirements for the project

<table>
<thead>
<tr>
<th>Client Document procedure:</th>
<th>Document No:</th>
<th>Difference to normal</th>
<th>SMP Chapters affected:</th>
<th>WMS affected:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Workers Health and HIV/STI Awareness</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

If the documents differ from the current standards the Project Manager must inform the SP Contracts Manager – South Pacific, HSE & Quality Co-Ordinator - South Pacific, Local HSE Advisor of the change. The Local HSE Advisor then must review and change relevant Work Method Statement (WMS).

4.2 Structure
The SMP is positioned in the hierarchy of the document structure and supports the Fletcher Construction Contracting’s Integrated Management System (IMS). This SMP focuses on the safe construction and maintenance of Commercial, Residential Utilities Infrastructure, civil works, pipelines and systems of work.

Figure 1 outlines the document hierarchy of the Fletcher Construction Health, Safety and Security Management System.
5. Policy
Fletcher Construction Health & Safety Policy is the over-arching document of the safety management system.

This Policy is approved by the Fletcher Construction - South Pacific General Manager and approved by the Fletcher Building Board. Fletcher Construction communicates its commitment to safety via this Policy to all employees, contractors and others. This is achieved primarily through induction processes, noticeboards, this SMP and intranet. Other communication mechanisms are used to support these processes such as toolbox talks and meetings.
5.1 Safety Policy

Safety Policy

Together we strive to be better every day by committing to managing the safety risks at our operations so that employees and other workers are not exposed to the risk of significant injuries and fatalities.

Together we will:

• Ensure leaders are competent and accountable in safety and demonstrate a highly visible level of commitment.
• Set objectives and targets on a risk-based approach that prioritises controls for critical risks.
• Commit to meet Fletcher Building and relevant regulatory and industry standards.
• Consult with employees and other workers to encourage participation for continuous improvement and empowerment.
• Set high standards of operational discipline and ensure accountability.
• Support training programmes to build safety knowledge and improve safe work practices.
• Encourage an open, honest and transparent reporting culture where all workers participate in reporting incidents and safety concerns.
• Accurately report and record all incidents and safety concerns, ensure investigations identify incident causes, and ensure there is accountability for corrective actions.
• Recognise and celebrate effective safety risk management.

Francisco Irazusta
Interim CEO
Fletcher Building Limited

Michele Kernahan
Chief Executive – Construction Group
Fletcher Building Limited

David Kennedy
General Manager
Building + Interiors

David Geor
General Manager
Infrastructure

Brent Leach
General Manager
South Pacific

Date: August 2017
Workplace Health Policy

Together we strive to be better every day by committing to programmes and measures that enhance health and productivity, recognising that improvements can be achieved by partnerships with our employees and other workers.

Together we will:

- Protect employees and other workers from exposure to workplace health risks.
- Prioritise and support workplace health programmes and provide training programmes to build knowledge.
- Actively manage the rehabilitation and safe return to work of any employee who has suffered a work-related injury or illness.
- Consult with injured employees and medical professionals to develop and implement an individual rehabilitation and return to work plan.
- Provide appropriate alternative work duties that may be incorporated into the plan including any additional training that may be required.
- Recognise employees' rights, including being supported by another employee or representative of their choice throughout the rehabilitation and return to work process.
- Provide support for the management of employee non-work-related injury or illness as required.

Date: August 2017
6. Planning

6.1 Statutory Legislation and Standards
This SMP has been prepared in line with the Legislation of the country applicable, including but not limited to Environment Act 1998, Labour Act (Cap 73) in conjunction with the Fletcher Building Standards along with other relevant Acts, Regulations, Standards and Codes of Practices as set out in Appendix 1.

Appendix 1

6.1.1 Legislation Register
All Fletcher Construction employees have access to current and relevant statutory legislation and standards by having a collated hard copy folder. The Fletcher Construction compliance database is located in the main office and is reviewed on an annual basis, or as required when new legislation and/or standards are implemented or amended.

An appropriate person is available for each functional location as a contact for employees, contractors and others seeking guidance on matters of legislative requirements.

6.1.2 Compliance
Compliance is the outcome of Fletcher Construction meeting its legislative obligations as per Fletcher Building Compliance Programs. Compliance must be integrated into all aspects of how the organization operates and should not be seen as a stand-alone activity but should be aligned with Fletcher Construction overall strategic objectives.

6.2 Objectives and Targets
Fletcher Construction establishes a strategic business plan and sets the health and safety performance objectives and targets at a business level which forms the basis of the annual Fletcher Construction health and safety review.

6.2.1 Annual Goals and Targets
The approved goals and targets shall be communicated to the team by the Island Manager. Progress towards completion of the goals and targets will be monitored and recorded on a monthly basis and reviewed at project meetings. The HSE & Quality Co-Ordinator -South Pacific will coordinate measurement and achievement.

6.2.2 Key Performance Indicators
The Health, Safety and Security Key Performance Indicators (KPI) combine both lagging and leading indicators. These are detailed on the health and safety scorecard (strategic plan overview) and are reviewed annually through a consultative process.

Details of the KPIs documented on the Environment Health, Safety Plan.

6.3 Plans
We shall develop specific plans to reflect Fletcher Construction requirements for areas of projects to identify hazards and risks for the relevant works and assets to outline the appropriate control measures to mitigate against any risk to ensure all people working under the plan work in a safe and compliant manner.

Appendix 2 – Risk Register
6.3.1 Environmental Management Plan
Fletcher Construction Environmental Management Plan sets performance standards that Fletcher Construction is to achieve, as required by the Fletcher Building Environmental Policy. Strategies for the following aspects requiring environmental management will be detailed for the following areas:

- Soil and sediment
- Noise
- Air
- Stormwater
- Flora and fauna
- Heritage
- Access and security
- Hazardous material
- Waste

These management strategies outline the actions Fletcher Construction will undertake to achieve minimal environmental impact resulting from operations. The Project Manager, under the direction of the Island Manager, shall drive management of environmental hazards and the environmental management system.

6.3.2 Subcontractor Management Plan
The purpose of Fletcher Construction Subcontractor Management Plan is to detail the systems used to ensure potential Health and Safety hazards are identified, assessed and eliminated in the selection and on-going evaluation of contractors and suppliers as per the systematic process of AS/NZS 4801:2001 Occupational Health and Safety Management Systems.

The Contractor Management Plan applies to all hire of plant, materials and equipment and all contractors engaged by Fletcher Construction to carry out work.

Fletcher Construction Subcontractor Management Procedure is to be followed to ensure Subcontractor Management is robust and compliant to the policies and procedures. Contractor selection is based on several aspects including: health and safety capability; competency; and prior performance.

The approach to contractors is they must conform to Fletcher Construction health and safety systems and it is the responsibility of the Fletcher Construction point of contact and job supervisor to ensure this occurs.

Appendix 3 - Subcontractor HSE agreement

6.4 Risk Management Plan
Fletcher Construction Risk Management Plan aligns with AS/NZS 4360 – Risk Management to manage risk across the organization. The risk management process provides a systematic approach for controlling hazards to an acceptable level, or developing appropriate control strategies and measures to minimize the level of risk. Risks shall be managed using the hierarchy of control.
Figure 2 - FB HSE Risk Matrix

Fletcher Construction risk management process following the hierarchy of control is to manage risks by elimination of the hazard. If this is not practical, the risk is to be managed to as low as reasonable practicable As Low As Reasonably Practicable (ALARP).
Figure 3 – Hierarchy of controls

6.4.1 Risk Register
Risks identified in Safety Management Studies such as a Risk Analyses are transferred to the operations risk register. The risk register is a live document allowing new or changed hazards, and methods for their mitigation to be added to the risk register as they are identified. The Site / Project Manager is responsible for approving risks ALARP.

A risk management study is scheduled to be completed at the beginning of the Job, halfway through the schedule project and at the closing of a Project to ensure all hazards are included in the risk register.

6.4.2 Permit to Work
Fletcher Construction will work under the clients permitting systems for all projects / work using the Permit to Work Process as detailed in the contracted works.

The Permit to Work (PTW) process aims to ensure that work occurs with the appropriate level of safety to reduce exposure to risk in a systematic, planned and approved manner by providing a mechanism for Fletcher Construction team members, contractors and/or other relevant third parties to identify, schedule, evaluate and review works before proceeding with the activity. All employees will be trained in Permit to Work processes during the induction process and additional training is provided on an ongoing basis as prescribed.

Appendix 4 – Permit to work
Figure 4 – Risk Assessment / JSEA conducted

6.4.3 Job Safety & Environmental Analysis
The Project Manager will ensure that a Job Safety & Environmental Analysis (JSEA) is undertaken and/or reviewed and be critically analyzed to ensure all relevant controls are identified for all job tasks. JSEA’s must also be prepared / reviewed prior to applying for a Permit to Work.

All assessments are to be compiled by the relevant Supervisor and work team. JSEA’s are to be forwarded to the HSE & Quality Co-Coordinator | South Pacific for review and registering. Further consultation between the supervisor and work team is to take place prior to commencing the work to ensure relevance of the planned method and also to confirm understanding and input from the crew.

Access to pre-existing JSEA’s is to be located in the JSEA register managed by the HSE & Quality Co-Coordinator | South Pacific. JSEA forms are available upon request to the HSE & Quality Co-Coordinator | South Pacific.

Appendix 5 – JSEA

6.4.4 Take 5
The Take 5 Risk Analysis shall be used by all persons for all jobs prior to commencing the work. It is a risk assessment tool where the person 5 steps back and takes 5 minutes to assess the job, tools, documentation and conditions for any hazards that may expose that person to unnecessary risk.

Appendix 5 - Procedure Take 5
6.4.5 Procedures and Work Instructions

Fletcher Construction recognizes that written standard operating procedures (procedures and work instructions) are essential to ensure a safe work environment and are an important part of an overall occupational health and safety program. However, it also recognizes that:

- A large proportion of construction workers have not received formal education and educating them in safety practices requires continual communication and supervision;
- There are difficulties finding skilled and experienced employees with construction industry experience so training employees in construction tasks take time.
- English is not a first language for a majority of workers on Fletcher Construction South Pacific worksites and there can be communication issues particularly in reading and writing in English. The delivery of training through written modes cannot always be used.

Procedures and work instructions should be developed, by use of a JSEA, for all routine activities, processes, equipment and machinery where there exists a risk to cause harm by the project Managers in coordination with the HSE & Quality Co-Coordinator | South Pacific.

Procedures or work instructions (including those of subcontractors) are to be in sufficient detail to allow the management team to clearly understand how the operation is to be undertaken. These are signed off by the respective manager authorizing the methodology to be used.

The Project Manager is responsible for ensuring there are maintained copies of all site procedures and work instructions and the register of JSEA’s received and reviewed.

- Procedures and work instructions must include as a minimum:
  - an overall description of the work to be undertaken;
  - engineering controls to be applied for the work to be undertaken;
  - hazards identified for the work to be undertaken and controls to be built in to the work sequence;
  - the manner in which the operation will be undertaken, what plant will be used and what resources will be needed for the completion of the operation;
  - what certification will be needed to complete the operation;
  - prior to an activity commencing for which a safe operating procedure has been developed, relevant personnel shall be advised of the content of the procedure.

6.4.6 Change Management

Fletcher Construction has identified strategies, policies and procedures that will ensure that all modifications are reviewed by competent people, are appropriately authorised and documented and that necessary training is provided before the modifications are implemented.

The objective is to ensure that any modifications to the design of plant or procedures are thoroughly assessed through relevant planning, design and procurement measures. This is to ensure that changes to systems and procedures, equipment and facilities or personnel do not dilute the integrity of the health and safety management system.

6.4.6.1 Risk Assessment of Change

Care will be taken to ensure the safety implications of change are identified and assessed, and any risks are either eliminated or controlled consistent with current Fletcher Building standards.

Proposed plant and process changes will be submitted to the Plant and Equipment Manager, who will assess the potential impact, give due consideration to the original design basis or management process and the effect of the change on other disciplines.

Where controlled documents are required to be revised, these will be updated, and the superseded documents removed from circulation in accordance with the Fletcher Construction South Pacific Quality manual.
6.4.6.2 Documentation / Scope Modifications

Proposed changes to procedural documentation and the scope of work of a project will be evaluated by the Project Manager through comparison with Fletcher Construction management system requirements, standards and policies prior to being implemented. The Project Manager, in consultation with relevant stakeholders, will also assess the potential of impact on the original process/design basis.

Contractors will obtain the Project Managers approval for proposed scope of work changes, as required. Approved scope of work changes, including any additional risk controls or scope modifications, will be documented as approved by the Project Manager before change implementation is initiated where appropriate.

Any changes to procedural documentation will be confirmed by the Project Manager and HSE & Quality Co-Ordinator | South Pacific. The Project Manager shall notify relevant supervisors of approved changes to procedural documentation.

Note: The only exception is for identified immediate risk control or in emergencies where the requirement is recognised as a non-routine situation or an immediate threat to the safety of personnel or the environment.

6.4.7 Construction Work

For the completion of major works within the Project, Risk Analysis are conducted.

Outstanding risks from Risk Analysis are managed by the Project Manager until satisfactorily close out, which occurs once the risk is deemed As Low As Reasonably Practicable (ALARP). Actions where appropriate, are incorporated into the risk register.

Fletcher Construction is responsible for identifying all site safety issues and providing and maintaining the appropriate systems to ensure the safety of workers and visitors. This includes establishing systems and processes, prior to commencing work on a site, for:

- Access and egress
- Site safety needs and amenities
- Site conditions and security
- Site safety inductions
- Safety signs and notices
- Records, registers and forms
- Health and safety consultative arrangements
- Lists of contacts onsite e.g. supervisor, first aider etc
- Emergency procedures

The construction team must ensure that any reasonably foreseeable hazard arising from the construction work that has the potential to harm persons undertaking construction work or any other Persons is identified and recorded:

- That reasonably foreseeable hazards arising from the following are identified and recorded:
  - The construction site;
  - Any design relating to the construction work;
  - Work practices and systems of work;
  - Plant (including the onsite transport, installation, erection, commissioning, use, repair, maintenance, dismantling, storage or disposal of plant);
  - Hazardous substances (including the handling, use, storage, and on-site transport or disposal of hazardous substances);
  - The presence of asbestos;
  - Manual handling (including the potential for occupational overuse injuries); and
  - The layout and condition of the construction site/area.
- The physical working environment, including the potential for any of the following
  - Electrocution;
  - Fire or explosion;
  - People slipping, tripping or falling;
  - Objects or structures falling on people;
✓ People being struck by moving plant;
✓ Exposure to noise, heat, cold, vibration, radiation, static electricity or a contaminated atmosphere; and
✓ The presence of a confined space.
✓ Effective procedures are required to be in place to identify and record hazards arising:

Prior to construction work commencing:
✓ Before and during the installation, erection, commissioning or alteration of plant on the construction site;
✓ Before changes to work practices and systems of work are introduced; before hazardous substances are introduced onto the construction site; and
✓ While work is being carried out.

7. Implementation

The Safety organizational structure is outlined in Figure 3. The health and safety structure operates with a leadership function from Fletcher Construction – South Pacific head office in Auckland and operations support from the site based local Health and Safety Advisor.

7.1 Responsibilities

Every Fletcher Construction employee contributes to the safe and efficient operation of Fletcher Construction assets. The health and safety responsibilities of key positions are detailed below and these should be read in conjunction with the relevant Position Description.

NOTE: The Project Manager is the custodian of the Project. Their duties include:

- Ensuring all personnel; both company and contractor fully understand this document
- Revision of the HSE Plan as needed to address changes in the operational environment
- Ensuring the HSE Plan is technically correct and updated throughout the operation
- Ensuring training is conducted in line with Fletcher Construction and Clients expectations
- Ensuring a copy of the HSE Plan is available to all required personnel

To provide lines of communication, personnel should assume the following duties.
**Island Manager**
Maintains communication with senior management of Fletcher Construction Client/s and local Government Authorities.

- Ensure that he/she has accurate and risk based information about the project to be able to ask the right questions for sound decision making, fulfill their EHS governance responsibilities, and have appropriate EHS assurance processes in place, to confirm the ongoing effectiveness of practices and drive continuous improvement
- When visiting sites spot check the outcomes of selected actual or potential level 3 or 4 work at height incidents, to confirm corrective actions have been implemented
- Ensure Site/Regional Managers have adequate resources and competent people available to be able to meet the requirements of this standard
- Sign off controls for working at height risks rated as very high, as required by the FB Managing EHS Risks Standard
- Obtain reports and advice from Site Managers and BU EHS Managers covering compliance with local legal requirements; submit these reports to the Divisional CE when appropriate.
- Ensure a robust assurance programme (e.g. comprising audit/s and inspections) is in place throughout the business, that provides assurance the requirements are in place and remain effective
- Review and sign off variation forms for any instances where a BU cannot meet requirements of a standard and communicate as appropriate
- Monitor EHS risks and the implementation of risk control measures

**Project Manager**

- Implement this HSE Plan within my area of responsibility; complete a variation form
- Provide safe, compliant and fit for purpose equipment for all work at height
- Identify tasks involving JSEA’s, SWMS, SOP’s have been met, before tasks commence
- Ensure only those persons who are suitably trained and deemed competent are permitted to complete the task required.
- Monitor work through the duration of the work, to ensure they remain effective and are being complied with
- Ensure necessary resources are available to enable this Standard to be effectively implemented and followed.
- Ensure all work tasks identified through risk assessment JSEA/SWMS and/or SOP processes are signed off as required by the FB Managing EHS Risks Standard
- Have planned assurance programs in place (e.g. inspection / audit) to confirm the requirements of this Standard are being effectively applied and followed
- Periodically participate in these assurance activities

**Local HSE Advisor**

- responsible to have all people within the scope of my role understand, at each level, what they must do to make this HSE Plan effective
- need to ensure they know how to achieve this and what resources, coaching and advice are available to support them
- provide advice to Site Managers and BU GMs on compliance with this HSE Plan’s requirements and the development of action plans for achieving full compliance
- assist with the development and implementation of inspection / audit activities to provide assurance the requirements of this standard are being effectively applied and followed
- participate in inspections and audits
- When visiting sites spot check the outcomes of selected actual or potential level 3 or 4 incidents, to confirm corrective actions have been implemented
- provide data as required for internal reporting; analyze information, and their controls (e.g. from audits/investigations), include in reporting as appropriate
Monitor the implementation of improvements that were recommended and report on these regularly

Engineers (Where applicable)
The Engineering Superintendent is responsible for the integrity management, engineering and technical support for the operation of the project assets. This is achieved through:

- input and engineering direction for emergency response;
- input and engineering direction in relation to environmental matters;
- input and engineering direction in relation to safety management matters;
- input and engineering direction in relation to operational matters;
- management of the change management process including design change;
- maintenance of the engineering plans and procedures to ensure currency and relevance to the project operations;
- ensuring the drawings are maintained and reflect the current state of the project;
- liaison with third parties to ensure compliance with Fletcher Construction requirements for works conducted near or on the project assets

Supervisor

- Having controls in place to prevent people being harmed when working is a fundamental responsibility of this role
- All persons within my area of responsibility need to be fully knowledgeable about what they must do to protect themselves from harm.
- Implement this standard within my business area; complete a variation form and have this signed off by the Country Manager and/or the Project Manager in any instances where a Standard’s requirements cannot be met
- Provide safe, compliant and fit for purpose equipment for all
- Identify tasks involving working at height and confirm requirements for JSEA’s/SWMS and/or SOP’s have been met, before tasks commence
- Ensure work controls, identified through risk assessment (as part of JSEA, SWMS & SOP processes) are signed off as required by the FB Managing EHS Risks Standard
- Ensure only those persons who are suitably trained and deemed competent are permitted to conduct work tasks.
- Monitor work a through the duration of the tasks, to ensure they remain effective and are being complied with

Employees

- It is important to all employees and team members (and the families of) that nobody is harmed while working on the project, also that work activities Employees are involved with do not contribute to harming others
- All employees are empowered and have the ability to take actions to prevent themselves and others from being harmed while carrying out work tasks.
- All employees to fully understand the work risk controls that must be in place
- Notify a supervisor/manager whenever they see a new risk, or a control that is not working or is absent
- Comply with the requirements for risk controls contained in Standard Operating Procedures (SOP’s), Job Safety and Environmental Analysis (JSEA’s)/Safe Work Method Statements (SWMS or Standard Operating Procedures (SOP’s), and Permits to Work if they are also applied
- Bring to the attention of my supervisor/manager any illness, ailment or condition which may prevent or limit my ability to work
- All Employees are trained and competent at for work tasks including the use of plant/equipment, and carry out any required pre start checks, before commencing any task
If not trained and competent for the type of work activity to be done, I will not engage in that activity and must instead advise my supervisor/manager, who will make alternative arrangements.

Assist with developing work at height risk assessments (JSEA’s/SWMS, or SOP’s) when requested.

Assist with inspections to make sure work controls are in place, when requested.

**Contractor and Subcontractors**

Contractors shall:

- attend Fletcher Construction induction prior to commencing work on Fletcher Construction worksites;
- comply with the Fletcher Construction health and safety management system requirements; use PPE where required, instructed and trained to do so;
- not willfully or recklessly interfere with or misuse anything provided for health and safety at the workplace;
- not willfully place at risk the health and safety of any person at the workplace;
- not willfully injure himself or herself;
- report all safety and health issues; and
- adhere to the health and safety Subcontractor Safety and Environmental Management Procedures.

**Visitors**

- Sign the visitor’s book on entering the site
- Receive a visitors site safety induction which outlines their responsibilities for Health and Safety, the emergency assembly area and site hazards
- Wear Personal protective equipment and clothing (PPE) as directed
- Sign out when leaving the site

**7.2 Training and Competency**

Safety of employees and the public is the number one priority for. High levels of safety and environmental awareness are a reflection of the level of competency of Fletcher Construction staff and the training provided.

All Fletcher Construction employees must participate in training and be assessed as competent to perform their duties. This is achieved through Internal Awareness Training, the use of a Verification of Competency Procedure and External NZ National Recognised Training Organisations where appropriate.

**7.2.1 Training Needs Analysis**

A Training Needs Analysis is undertaken annually by the Fletcher Construction by SP HSE Coordinator in conjunction with Island Managers to ensure all training goals are met. An employee training matrix is managed by the site HSE Coordinator / Site Administrator. Training information is to be regularly checked to ensure refreshers are completed prior to expiration of a qualification and they have the responsibility for servicing and maintaining.

**7.2.2 Competency**

Where possible we hire local experienced personnel are employed to work. Fletcher Construction ensures that each competency, relevant to responsibility, is retained. This is achieved by ensuring that selected operations and maintenance employees who have responsibility for operating or servicing plant and machinery undertake the minimum training / assessment.

This training is delivered by a range of internal and external providers new employees are identified as needing this form of training using the Site Training Needs Analysis. Refresher training is provided as required and training currently is monitored using the site training register.
7.2.3 Inductions

The Project site-specific inductions are held as required for employees and contractors either as a refresher or initial induction prior to starting work on site.

The site-specific safety induction shall include the following as a minimum:

- Site safety rules, regulations and safety policies
- Goals and Targets
- Health and Safety Policy
- Environmental Policy
- Fit for Duty Policy
- Fair and Just Culture
- Emergency procedures, services and rescue
- Site specific hazards
- Site orientation including location of first aid and amenities
- Site traffic plans and traffic rules
- Use of firefighting appliances
- Personal protective equipment
- Incident and hazard reporting
- First aid register, treatment and procedures
- Fletcher Construction Procedures/Risk assessments
- Pre-start and Toolbox Talk Meetings
- Workplace inspections and behavioral observations

A competency assessment is held at the end of the full induction to ensure understanding by participating personnel. The HSE Advisor (or delegate) will maintain records of attendance and the assessment.

- A record of all inducted personnel is kept using a training/Induction register. The full induction is current for the project

7.2.3.1 Project Induction

The Project induction shall be delivered to all new employees prior to commencing site work as an add-on to the standard Client induction training. If there is not a Client induction then this will become the main project induction. Immediate supervisors will conduct the inductions for new personnel. This induction covers document / records management and risk management. Records of this training are kept in the site induction register.

7.2.3.2 Visitor Induction

Short-term visitors to the project will be required to attend a short information session which focuses on addressing relevant safety issues and will last approximately 15 minutes.

This induction will cover specific requirements and guidelines for the site, and includes informing visitors of the project, the minimum mandatory requirements for the wearing of PPE and other specific access restriction or hazards to be aware of pertaining to the work site. Visitors will be accompanied by an inducted employee at all times during their visit. A register of all participants shall be maintained at the site.
7.3 Consultation, Communication and Reporting

7.3.1 Demonstration of Management Commitment
All levels of management within Fletcher Construction are committed to health and safety at the project. This commitment is demonstrated by the implementation and adherence to the company’s risk management practices and procedures intended to ensure that all persons at the workplace are not exposed to health and safety risks.

To demonstrate this commitment, the projects management will ensure that:

- Fletcher Construction health and safety policy is displayed and communicated throughout the workplace;
- the health and safety policy is reviewed periodically
- Senior management will be represented at a senior level at HSE meetings where they will discuss the relevant issues and trends.
- at risk behaviours and unsafe conditions will be rectified as soon as possible in accordance with the established time frames within Fletcher Construction risk management practices;
- where delays in resolution of health and safety hazards are expected, the workplace hazard will be made safe via such measures as are necessary until the final control measure/s can be implemented. Where this occurs, the progress on full correction will be communicated to the workforce at regular intervals;
- management will support all policies and lead by example;
- where appropriate, non-compliance with safety policies and procedures may result in disciplinary action being initiated using the fair and just culture process;
- safety will be an agenda item at all prescribed or regular meetings;
- regular workplace inspections, behavioural observations, reviews and audits are carried out at each workplace; and
- appropriate resources will be allocated to carry out health and safety practices and policies mentioned within this SMP.

7.3.2 Health and Safety Issue Resolution
Employees and contractors are encouraged to raise issues related to safety or their work environment with their supervisor. Staff are encouraged to stop work with no repercussions should they feel their safety, the public’s or individuals performing the work, is compromised.

Fletcher Construction management will foster the attitude that people should address issues as they arise, when they are capable of safely doing so. Health and safety issues, such as hazards and improvements, are to be documented using the Site Report Card.
This process is documented in the Procedure for Reporting Hazards/Improvements. The process is outlined in Figure 6.
7.3.3 Toolbox Talk Meetings

For the following reasons:

- A large proportion of construction workers have not received formal education and educating them in safety practices requires continual communication and supervision;
- There are difficulties finding skilled and experienced employees with construction industry experience so training employees in construction tasks take time;
- Cultural situation can also be a factor in local personal hiring and HSE planning;
- English is not a first language for a majority of workers on Fletcher Construction worksites and there can be communication issues particularly in reading and writing in English. The delivery of training through written modes cannot always be used.

Toolboxes are the Primary tool to communicate tasks, hazards, risks and procedure. Toolbox Talks are formal meetings held, as a minimum, on a weekly basis to discuss health, safety, environmental and operational matters.

The aim of these meetings is to communicate business initiatives and the importance of safety to enhance each person’s understandings of their work and ensures a consistent and safe approach to undertake work.

The manager, superintendent, supervisor or officer in charge shall lead the meeting and encourage open discussion between all attendees.

Each attendee shall sign to verify their attendance on the register for record of attendance. The records shall be held with the HSE Advisor or administrator and included in the monthly health and safety statistical reporting as a lead indicator.

Appendix 7 - Toolbox and Training Form
7.3.4 Safety Meetings
Fletcher Construction holds an extended management team safety meeting monthly. The meetings are attended by site management representatives and information is disseminated to all employees through Toolboxes and team leader briefings. These meetings are used to:

- review incidents;
- chart progress toward achievement of goals and targets;
- provide feedback on issues raised by other employees;
- review relevant Standards, Codes of Practice, etc; and
- provide an avenue to raise potential system improvements.

7.4 Documentation

7.4.1 Health and Safety Documentation Access
Safety related documentation and data will be controlled in accordance with Fletcher Construction’s Quality Procedure

The controlled copy of this SMP and related documents shall be maintained by the HSE advisor or Administrator, which can be copied and printed by the operations team. The printed copies shall be treated as uncontrolled documents.

Copies of the SMP, together with any amendments, will be issued to the relevant parties as per the distribution list within this plan. These issued copies will be treated as controlled copies and transmittal records shall be maintained to ensure all amendments are communicated.

7.4.2 Safety Alerts
Relevant safety alerts are discussed at monthly safety meetings and posted on all notice boards Throughout Fletcher Construction operations.

Alerts shall to be documented in a register and filed to ensure the material is available as a source reference.

7.5 Document and Data Control

7.5.1 Document Control
To manage and review documentation reliably, Fletcher Construction is committed to having a working, effective document control system. Controlled documents receive unique document numbers, details of which are retained in a document register. All controlled documents have been reviewed prior to approval. Once approved, a master copy is retained on file, both electronically and in hard copy. Superseded documents are removed from circulation and the revision number indicates the latest revision.

To maintain the currency of the documents, they are periodically reviewed. The table below provides a guide as to the frequency of review periods for documents. This may vary dependent on drivers such as changes to legislation, policy direction changes, incident report findings, or at the direction of the General Manager. Record management aspects are covered, in part, in the document control procedure with critical record requirements also captured in the compliance register.
Table 1 - Document Review Frequency Table

<table>
<thead>
<tr>
<th>Document</th>
<th>Review Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies, Manuals and Plans</td>
<td>Annually</td>
</tr>
<tr>
<td>Procedures</td>
<td>Annually</td>
</tr>
<tr>
<td>WMS</td>
<td>As required</td>
</tr>
<tr>
<td>Forms</td>
<td>Annually</td>
</tr>
<tr>
<td>JSEA</td>
<td>Before use</td>
</tr>
</tbody>
</table>

7.6 Managing Operational Risk

7.6.1 Electrical Safety

Electrical work shall be conducted in accordance with the Fletcher Standards / Local authority / Client requirements. Electrical equipment shall be maintained to the Fletcher Standards / Local authority / Client requirements. The following section relates to the management of electrical hazards associated with handheld electrical equipment.

- Every person at Fletcher Construction is to report any condition or practice considered to be dangerous or hazardous immediately;
- Do not remove or interfere with any equipment associated with an electrical incident until investigated by the supply authority, except where such removal of interference is necessary to avoid possible damage to life or property or with the approval of the authority;
- Any work being carried out in the vicinity of any external power source requires contact to be made with the relevant electrical supplier to identify the voltage and exclusion zones and authorisation for the work to proceed;
- All electrical equipment shall be maintained in good condition, be inspected, repaired and tagged by a licensed electrician at the prescribed intervals. Test and Tag is every 3 months. The Health & Safety Coordinator or delegate shall maintain records of such inspections;
- Double adaptors and piggyback plugs are not to be used in any power outlet;
- Electrical leads must have sound insulation, be correctly wired at terminals and tagged by a licensed electrician. Leads must not be over extended or overloaded. They must be raised to prevent hazards in respect to mobility of other workers, contamination by moisture or damage by chemicals, work processes, materials or waste;
- Damaged or incomplete electrical equipment will not be used;
- Core balance earth leakage devices shall protect all final and sub circuits and generators used on the site;
- Circuit breakers or fuses shall not be modified to permit operation above safe circuit limits. They shall be secured to prevent interference by unauthorised persons; and

Note: All electrical wiring installations and equipment used in construction work will be in accordance with the Solomon Island Consolidation Legislation Safety at work Act 1982 and Electricity Act 1996 Edition

7.6.2 Hot Work in Hazardous Areas

Hot work is work which could generate fire, naked flame, heat, spark or other sources of ignition. Hot works are to be controlled in accordance with the clients permit to work system

Hot Work includes, but is not limited to:

- Welding, soldering, hot riveting;
- Burning, flame cutting, flame heating;
- Grinding, shot blasting;
- Lighting a fire of any kind (all zones);
7.6.2.1 Welding and Oxy Cutting

Welding operations are to be conducted strictly in accordance with the applicable parts of the following Australian / New Zealand Standards:

- AS/NZ 1338:2012 Filters for Eye Protectors;
- NZS 4781:1973 Code of practice for safety in welding and cutting
- WTIA Technical Note 7: Health & Safety in Welding.

Welding goggles are to be worn at all times when oxy/acetylene welding, cutting or gouging and by all persons in the near vicinity.

Area ventilation is to be installed to ensure that persons involved in welding operations are provided with an adequate supply of fresh air and are protected from welding fumes and gases.

Welding screens of non-flammable materials are to be used and positioned appropriately, to prevent other persons on-site being affected by welding processes and, where welding is carried out in elevated places, barricades and signs or physical shields are to be used to protect persons from falling slag, etc.

Gas bottles will be stored, travelled and used in an upright and secured condition so as to prevent damage to control valves. Gas will be turned off at the bottles when not in use and pressure bled from hoses. Oxygen and acetylene cylinders in use or being lifted shall always be supported in cradles.

Flash arresters will be installed on both hoses, at the regulator and handset on every oxy /acetylene set.

Gas hoses will be checked prior to each use for cuts or perishing and re-terminated or replaced as required.

While in Storage, Gas bottles will be clearly identified as to their contents. Oxygen and Acetylene will be kept 3 meters apart or have a fire barrier between them.

In addition to the above undertaking hot work shall have due regard to any fire bans or fire restrictions.

The specific project criteria for the use of hot work permits during the construction phase requires the issue of hot work permits for all hot works conducted on site, this includes all welding, cutting, grinding and gouging.

7.6.3 Hazardous Substances and Dangerous Goods

The handling, transport, storage, use and licensing of Dangerous Goods and Hazardous Material/Substances shall be carried out in compliance with the Fletcher Building Standard and other relevant local legislation.

No substance or dangerous goods shall be brought onto a Fletcher Construction site for use or trial without a Safety Data Sheet (SDS) having first been obtained and a risk assessment completed to ensure that it poses no major health or environmental risks. The risk assessment and SDS must be forwarded to the Site Manager for approval.

7.6.4 Manual Tasks


Manual Handling will be in accordance with the National Code of Practice for Manual Handling.

Wherever possible, a reduction in the amount of heavy manual handling must be sought by providing adequate mechanical means.
Risk assessments will take into consideration; the action and movements, duration and frequency, location of loads, distances moved, weights and forces, skills and experience, age, working posture and position.

Where identified by the Risk Assessment process, control measures are to be used to reduce and minimize the risk of injury by such measures as:

- Job redesign;
- Modify object or workplace layout;
- Use mechanical handling equipment;
- Modify task; and
- Training and instruction

7.6.5 Plant and Equipment

All plant and equipment used, including the hire of external plant, on the site shall be controlled in accordance with company policies and procedures.

Internal company owned plant shall be serviced, maintained and repaired in accordance with the plant’s relevant procedure.

Daily pre-operational checks shall be carried out on all items of plant by the operator/driver.

The Project Manager will ensure that only competent persons with the necessary certificates of competency / licenses and / or equivalent industry experience will be engaged in the use and operation of plant as required by local legislation. Copies of certificates/ licenses shall be kept on file with the Site HSE Advisor / Administration Officer.

- Potential hazards associated in the use of plant and equipment are to be identified, and appropriate controls implemented. Such controls shall include but are not limited to the following:
  - A Permit to Dig is to be completed prior to the commencement of excavation works;
  - Personnel to remain clear of the swing area of cranes, excavators, backhoes and other similar plant;
  - Where personnel are required to approach working plant and equipment, contact must be established with the plant operator;
  - All plant and equipment are to be provided with operational reversing beeper;
  - Blades, buckets, hook ends etc. on dozers, front end loader, back hoes, cranes and hoists etc must be lowered when not in use;
  - Blades, buckets etc are to be secured with an appropriate fixing pin. Hydraulically securing of blades, buckets etc only will not be sufficient;
  - Keys from all vehicular type plant, compressors and fixed cranes must be removed during non-working hours; and
  - Exhaust gases and toxic fumes generated by plant and equipment are to be expelled from poorly ventilated work areas.

7.6.6 Crane Safety

All cranes and hoists and lifting gear used on Fletcher Construction sites and examination of such equipment shall comply with AS 2550:2011 Cranes, Hoists & Winches – Safe Use. Part 1 General requirements, relevant parts of ISO4309:2010 s5.3.3 Cranes – Wire ropes – Care and Maintenance, inspection and discard, and Approved Code of Practise for Load-Lifting and Rigging

Cranes and hoists to be used on sites shall be certified by qualified external organisation. The logbooks and a copy of the registration certificates are to be held with the Site Administration Officer. The South Pacific Plant Manager is to ensure that the registration number agrees with the registration certificate and is legible and prominently marked on each crane and hoist.

The test certificates for all wire ropes used on cranes and hoists are to be with the plant logbooks. A competent person shall carry out inspections required by ISO4309:2010 s5.3.3 and AS/NZS 2550.
The Local Health and Safety Advisor is to ensure that there is a written inspection checklist for each crane and hoist for a daily inspection. The inspection checklists are to be signed by the person performing the inspection and filed in the logbook.

A person shall not operate a crane or hoist unless authorised and familiar with the specific operational manuals.

The operation of cranes and hoists is to be strictly in accordance with AS/NZS 2550.

All lifting gear used on Fletcher Construction sites shall comply with the relevant ISO4309:2010 s5.3.3 and AS2550. A test certificate for lifting gear and lifting attachments shall be held in a register on the project.

The slinging of all loads is to be carried out by or under the direct supervision of a person deemed competent for crane operator, dogman or rigger.

Lifting gear, slings and shackles shall be marked and checked for compliance.

7.6.7 Positive and Effective Isolation

Fletcher Construction manages plant isolation using the Permit to Work system. This system details the isolation and tag out processes that are designed to protect individuals from unauthorised energising of plant whilst it is being worked on. The Permit to Work system complies with:

- Electrical Safety Regulations 2010,
- AS/NZS 3012:2010 Electrical installations - Construction and demolition sites
  - Fletcher Construction Isolation and Tag Out system indicates:
    - That identified items of plant are de-energised;
    - Such identified plant must not be operated;
  - The status of the plant that should not be altered by anyone other than the job supervisor or the person that placed the tag; and
  - That people are working on the tagged out plant and the isolations are critical to their safety.
  - The tag system encompasses:
    - The Personal Danger tag which is primarily designed to give protection to individuals; and
    - The Out of Service tag which is intended to prevent the use of unsafe equipment or to prohibit the use of plant or machinery as necessary in the interests of the safety or operational requirements.

7.6.8 Protective Clothing and Equipment

The Fletcher Construction Site Health & Safety Coordinator will ensure that all personnel receive instruction on the requirements of wearing and use of Personal Protective Equipment (PPE) at site induction with follow up and further instruction at tool box meetings when appropriate or applicable. In the workplace the Site Manager will be directly responsible for enforcement of these rules.

General rules for Fletcher Construction worksites, requires that the following PPE be worn, and be in accordance with the following Australian Standards and Codes of Practice:

- AS/NZS 1336:2014 Eye and face protection – Guidelines
- AS/NZS1800 Occupational Protective Helmets: Selection, Care and Use;
- AS/NZS 1270 Hearing Protection (as required); and
- AS/NZ 2161 Industrial Safety Gloves (as required).
It is the responsibility of Fletcher Construction to provide all necessary PPE and training in its correct use to its employees; it is the responsibility of the user to maintain this equipment in good order and item. Minimum PPE requirement at Fletcher Construction sites are:

- Safety glasses;
- Safety gloves
- Hard hats; and
- Safety boots.

**7.6.9 Working at Heights**

Work at a place, above or below ground level, where a person could be injured if they fell from that place (that is, falling from one level to another).

Access and egress (except by a staircase in a permanent workplace) to, or within a place of work, and measures preventing injury to persons from falling objects or materials.

Where a person may fall and assessing and controlling the risks, consideration should be given to

- previous injuries, “near miss” incidents or accidents arising from falls which have occurred at the workplace or other similar workplaces;
- relevant codes of practice and guidance notes;
- consultation with employees, safety and health representatives, safety and health committees, self-employed people and contractors to find out what problems may be associated with performing tasks/jobs;
- walk through inspections of the workplace (consider using checklists); and
- other records or statistics which indicate potentially unsafe work practices.

Key things to check at the workplace include:

- levels;
- structures;
- the ground;
- the raised working area;
- scaffolding;
- edges;
- hand grip;
- openings or holes which will require identification or protection or unguarded shafts;
- excavations;
- proximity of employees to unsafe areas;
- movement of plant or equipment;
- access to, egress from and movement around the working area;
- manual handling;
- lighting;
- weather conditions;
- footwear and clothing;
- ladders; and
- young, new or inexperienced employees.

**7.6.10 Ladder Safety**

All ladders used at Fletcher Construction will comply with the relevant part of AS/NZS 1892.5:2000 Portable Ladders.

- Make sure that ladders are not broken or damaged in any way;
- A ladder must be place securely against a solid backing at a safe angle of 75 degrees;
- A ladder must extend at least one metre above the work level, and must be securely lashed in place;
- Never stand on the top step or rung of a ladder;
- Step ladders are not to be over three metres high;
- Never splice two ladders together or use a step ladder as a straight ladder; and
- Ladders should be stored horizontally
- Ladders should be used for access only
7.6.11 Digging & Excavation

All excavations and trenches deeper than 1.5 metres shall comply with the requirements of the APPROVED CODE OF PRACTICE FOR SAFETY IN EXCAVATION AND SHAFTS FOR FOUNDATIONS 2000

If there is a risk of entrapment of people in any excavations and / or trenches must provide suitable controls to prevent entrapment.

Excavation Monitoring and Observation.

All excavations and trenches deeper than 1.5 metres shall be benched, battered or shored. All excavation and trenches shall be provided with a suitable barrier or fence and be positioned appropriately in relation to the excavation or trench in accordance with the type of barrier, and must be signposted.

No material is to be stacked closer than 1 metre to the edge of the excavation or trench. This will prevent potential side loading or material falling into the trench. Adequate strength shoring (or other approved means) shall be used to support any dislodgment of earth, rock or other materials within the excavation.

Site access and egress shall be provided to all excavation sites where people will undertake work. Safe access means placement of ladders, ramps or stairways. Ladders must extend a minimum of 1 metre above the top of the excavation and be secured and anchored.

Always make sure that operating plant exhaust gases and fumes do not affect personnel within or around excavations.

Excavations and trenches are to be inspected prior to entry at the start of shift or after heavy or continuous rain.


7.6.12 Emergency Preparedness and Response

The Emergency Response Procedure has been developed using the technology that includes monitoring and detection equipment for the control and prevention of the hazards that may occur at site. Employees and all contractors that come to site are required to be trained on the application of the Emergency Response Procedure and their responsibilities within the procedure. This training is provided when they initially come on site and are required to review the procedure every 12 months.

While on site each employee typically carries a mobile radio and a mobile phone and has direct access to the Control Room Operator with the ability to report an emergency when required. In the control room, the Control Room Operator has access to the land telephone system, mobile phone and the internet should they be required to initiate an emergency response.

An Emergency could include:

- Medical Emergency
- Fire / Bush Fires / Explosions;
- Chemical, Fuel, Oil Spill
- Vehicle Incidents;
- Flooding
- Civil Disturbance (Protests)
- Injured person;
- Serious Injury / Fatality;
- Next of Kin Notification;
- Gas Incidents;
- Environmental Incidents;
- Electrical Incidents;
- Confined Space;
- Pipeline Incidents; and
- Threatening Phone Call / Bomb Threat.
All of which could require the assistance of outside emergency services.

When an emergency occurs on site, each person has a responsibility for their safety, and that of their fellow workers. When an emergency occurs, it must be immediately reported and the Emergency Response Procedure must be activated for the initiation of the appropriate emergency action.

The Emergency Response Plan includes the requirements for a site evacuation. The site evacuation is tested as required to:

- Facilitate a smooth and orderly evacuation;
- Ensure that the warning system is working and is heard by everyone onsite; Ensure that everyone is aware of the location of the evacuation assembly area; Ensure that exit paths and walkways are clear at all times;
- Ensure that there is a process for the accounting of all workers and visitors at the site; and
- Emergency response teams are notified as required.
- Refer to the Fletcher Construction Emergency Response Plan for further information

7.6.13 First Aid

Fletcher Construction provides first aid coverage at all worksites and offices, this includes:
- providing immediate first aid treatment of illness and injury at work;
- arranging for transportation to hospital, or ensuring the person requiring treatment is able to return home safely;
- maintaining treatment records;
- providing first aid services during emergency evacuation;
- identifying and reporting measures to reduce the incidence of repeat injuries;
- identifying and reporting health hazards; and
- Participation in first aid training and associated training programs

7.6.14 Emergency Response Equipment

Emergency response equipment shall be checked against lists to ensure full response and repair capability at all times.

8. Measure and Evaluation

8.1 Monitoring and Measurement

8.1.1 Pre-Employment Medicals and Health Surveillance

Prior to engagement, Expat employees will be required to undergo a pre-employment medical. The necessity for a pre-employment medical is determined through risk evaluation, which takes into account the nature of the work to be performed. Pre-employment medicals ensure they are fit and capable to work in tropical and remote areas and any pre-existing conditions will not impact upon duties. Refer to Fletcher Construction Medical Report on applicant for overseas appointment.

Local employees are self-assessed. The Company is committed to ensuring that work processes are assessed for the identification and measurement of hazards, in this case, specifically health hazards.

Where employees are exposed to hazards which can affect the employee’s health, Fletcher Construction is committed to minimizing the risk by ensuring that the requirements of the relevant standard for the control of the specific hazards are met.

Fletcher Construction will regularly access workplaces, with employee consultation, for the purpose of identifying hazards and risk potential. Where necessary and upon reasonable request, the Company will provide for the monitoring of an employee’s health in relation to exposure to specific hazards.
Fletcher Construction will ensure that employees are informed of risks that they may be exposed to. When new hazards are identified current employees at risk of exposure will be advised and appropriate action taken.

- Appropriate health surveillance processes will be implemented where the identified health hazards:
  - Have the potential to cause an identifiable disease or illness;
  - When there is an effective technique for detecting the health effect; and
  - When there is a reasonable likelihood that exposure to the hazard will exceed set exposure limits (or the expected exposure levels to the hazard are unknown).
- Fletcher Construction health surveillance program includes:
  - Asbestos monitoring; and.
  - Silica monitoring.

Health surveillance is not a control measure. It is a means of reviewing the effectiveness of control measures.

8.1.2 Fit for Duty
Fletcher Construction identifies that an individual’s physical and psychological wellbeing can be affected by their interaction within and external to the work environment. These effects can adversely influence how they function within the workplace and can lead to an increase potential for injuries and or illnesses to occur.

The fit for duty program is underpinned with a specific Fletcher Construction policy and consists of:

- Pre-employment medicals for all Expat staff;
- Voluntary grief and stress professional counselling;
- Work environment guidelines in the areas of weather considerations, work hours and supervision;
- Critical incident counselling following a workplace incident;
- Work and non-work related injury management;
- Management of alcohol and other drugs; and
- Management of fatigue.

8.1.3 Inspection Program
Inspections are intended to identify areas of health and safety improvement and are intended to provide a proactive inspection regime intended to identify any health and safety issues on site. Fletcher Construction runs a proactive inspection regime to identify and manage risks. Site inspections are carried out as per the site inspection schedule.

8.2 Incident Management and Corrective Actions
Incident management is an integral element of this SMP and is the process of managing an incident should the risk control measures fail. The management of incidents include immediate actions, notification, reporting, recording, investigation and corrective action associated with health & safety, environmental, operational, security, information technology and fraud incidents.

Management actions taken in response of an incident are to initially protect and minimize the impact on persons, environment, facilities, production and the off-site community. Corrective measures implemented following an incident reduce the likelihood of reoccurrence.

The incident management process starts when the incident occurs and includes:

- providing injury treatment;
- recording the incident;
- conducting an incident investigation;
- implementing corrective actions; and
- reporting and/or external notification to the regulator.
8.2.1 Incident Reporting and Recording

All incidents including work related illness, disabling injuries, damage to plant, equipment or property, minor first aid injuries, near miss incidents and other serious incidents that could put workers or plant at risk, are to be reported to Fletcher Construction and investigated, in order to reduce the likelihood of their re-occurrence. Incidents are recorded in the incident management database.

8.2.2 Investigation

The purpose of an incident investigation is to ensure that:

- the root cause/s of the incident is identified;
- control measures are implemented to eliminate or reduce the risk of the incident occurring again;
- accurate reports are provided to regulatory authorities; and
- accurate records of workplace injuries/incident are created and maintained.

Once an incident has been reported, the respective manager will initiate an initial incident investigation as soon as possible. If a significant incident occurs, senior management are to be notified immediately and a significant incident investigation shall be conducted. Interviews with people involved in the incident including witnesses shall be taken as part of the investigation process. Photographs should be taken to support the findings from an investigation. These steps are vital to ensure that all relevant facts are fresh in the minds of those involved.

The respective manager shall identify control measures and corrective actions, then introduce preventative action to stop the re-occurrence of future incidents.

Corrective action measures must be implemented at the earliest opportunity. Copies of the investigation report and incident report need to be kept on file for future reference.

The Incident Management Matrix

<table>
<thead>
<tr>
<th>Incident Level</th>
<th>Category</th>
<th>Health and Safety Environment</th>
<th>Financial Costs / Impact</th>
<th>Notification (minimum)</th>
<th>Reporting (date required) (minimum)</th>
<th>Stopping (date required) (minimum)</th>
<th>Notification (minimum)</th>
<th>Stopping (date required) (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor</td>
<td>Employee fatalities</td>
<td>$300,000</td>
<td>2 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High impact workers</td>
<td>$100,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment</td>
<td>$200,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loss of large company</td>
<td>$500,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost to plant, equipment, and</td>
<td>$1,000,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Property</td>
<td>$1,500,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to company</td>
<td>$2,000,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to equipment</td>
<td>$3,000,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to property</td>
<td>$4,000,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Damage to company</td>
<td>$5,000,000</td>
<td>3 days</td>
<td>3 days</td>
<td>3 months</td>
<td>1 day</td>
<td>1 day</td>
</tr>
</tbody>
</table>

In all cases, the company is to be notified as soon as practicable.

Notification

Incidents shall be notified to appropriate roles within Fletcher Building depending on their actual or potential severity; additionally they shall be notified to external organisations as required by local regulations.

The respective manager shall identify control measures and corrective actions, then introduce preventative action to stop the re-occurrence of future incidents.

Corrective action measures must be implemented at the earliest opportunity. Copies of the investigation report and incident report need to be kept on file for future reference.

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8.2.3 Incident Notification to Fletcher Building

Figure 7 – Incident Notification to Fletcher Building

Business Unit Incident Notification Guideline

LEVEL 1-2
Incident Criteria for Notification:
- Multiple people involved
- Injuries or critical medical staff
- Business unit affected
- Risk to environment or community

LEVEL 3-4
Incident Criteria for Notification:
- Multiple fatalities
- Major structure damage
- Loss of lives
- Extensive environmental damage
- Media interest

External Notification

8.2.4 Incident Notification to Regulator

External Notification

If the incident involves a potential requirement to report to a regulator, then:

- The manager/supervisor will immediately notify the BU GM, EHS Manager and FB legal
- The Business Unit GM, EHS Manager or delegate must ensure that regulatory reporting requirements are met
- Once appropriate care has been provided for persons involved, the incident scene must be frozen and protected from other people disturbing any possible evidence
- Photographs of the scene are to be taken, to document as much evidence of the incident as possible
- We may want some documents to be prepared under legal privilege – speak to your local FB Legal contact, and they can help here

8.3 Continuous Improvement and Corrective Actions

Fletcher Construction endeavors to attain continuous improvement and this is monitored through the audit, inspection and review processes. Some methods by which continuous improvement is achieved is by the use of hazard reports, general reports, audits, inspections, incidents, employee suggestions, and reviews of legislation, risk, procedures and plans.

Corrective and general actions are tracked through the Fletcher Construction management meetings and it is the responsibility of the person assigned to address the corrective action, to ensure its timely close out. Ultimately the Island Manager is responsible for the implementation and sign off.
8.4 Records and Records Management
Fletcher Construction is required to obtain and maintain records that are necessary to safely operate and maintain the project according to the Records Management Plan.

These records will include:

- Design, construction and commissioning records;
- Operation and maintenance records; and
- Abandonment records

8.5 Operation and Maintenance Records
Fletcher Construction maintains extensive records that provide traceability of the design, standard of operation and maintenance of the assets, correspondence and all records related to the safety management system. Greater detail is provided in the Document Control Procedure.

Typical records will include:

- Permit to Work documentation;
- Procedures and work instructions;
- Supplier and contractor information;
- Emergency contact details;
- Training records;
- Annual goals and targets and progress reviews;
- Employee role purpose statements;
- Risk assessments;
- Inspection, calibration and maintenance activities;
- Incident reports;
- Induction records;
- Change management requests;
- Audit and inspection reports; and
- Asset Drawings

8.6 Safety Statistics
Health and safety incident and statistical reporting is used to record and report information regarding work related injury, disease, dangerous occurrence, near miss and plant and equipment damage. A summary of incidents and statistical information is produced on a monthly basis.

The Health & Safety Coordinator is responsible for ensuring all statistical information is compiled and issue a monthly report.

8.7 Auditing
Fletcher Construction will audit compliance with all health and safety management systems including project specific safe operating systems, according to the Auditing Management Plan.

Auditing provides a systematic and structured method of verifying that activities, protocols and practices comply with Fletcher Construction targets and goals. These audits will be conducted against criteria set out within this SMP and will seek to identify compliance and performance. Other audits will be conducted using criteria such as compliance with Fletcher Construction risk management practices, return to work programs completed, compliance with legislative obligations, and health and safety practices including any systems implemented by contractors.

Both internal and external audits shall occur and be conducted by experienced auditors. Fletcher Construction is committed to conducting one full safety management system and operating audit at least annually. The degree of other systems auditing is outlined in Table 6 below. All audits shall follow accepted auditing practice and reports shall be generated following completion of an audit. This is to allow review by the team members involved and to have documented corrective actions.
Table 2 - Audit Details

<table>
<thead>
<tr>
<th>Area of Management System</th>
<th>Frequency</th>
<th>Responsible Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace inspections</td>
<td>Monthly</td>
<td>All staff</td>
</tr>
<tr>
<td>Facilities</td>
<td>Asset specific</td>
<td>All Staff</td>
</tr>
<tr>
<td>Workshops</td>
<td>Six monthly</td>
<td>Site Manager</td>
</tr>
<tr>
<td>Bases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Method Practices</td>
<td>6 monthly</td>
<td>All Staff</td>
</tr>
<tr>
<td>Inspections to measure conformance with Procedures and Work Instructions</td>
<td>Annually</td>
<td>All Staff</td>
</tr>
<tr>
<td>Full internal system audit, compliance with Procedures, Work Instructions and JSEA’s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Management System</td>
<td>Two yearly</td>
<td>Health &amp; Safety Coordinator</td>
</tr>
<tr>
<td>Full external systems audit</td>
<td>Annually</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Full internal systems audit</td>
<td></td>
<td>Operations Manager</td>
</tr>
<tr>
<td>Preventive Maintenance</td>
<td>Annually</td>
<td>SP Health &amp; Safety Coordinator</td>
</tr>
<tr>
<td>Full system audit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Response Plan</td>
<td>Annually</td>
<td>SP Health &amp; Safety Coordinator</td>
</tr>
<tr>
<td>Full internal system audit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training and Competency Management</td>
<td>Annually</td>
<td>SP Health &amp; Safety Coordinator</td>
</tr>
<tr>
<td>Compliance Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full internal system audit</td>
<td>Annually</td>
<td>SP Health &amp; Safety Coordinator</td>
</tr>
</tbody>
</table>

8.7.1 Audit Findings

Information gathered during audits will support or augment health and safety data submitted to the Company within monthly or quarterly reports.

Audit findings will be discussed and agreed with the person responsible for the area being audited. Identified non-conformances shall, where possible, determine a corrective action and time frame for finalizing.

Copies of the audit reports shall be issued to Site Manager. Where appropriate these audit findings and recommended corrective action shall be discussed during:

- Toolbox Talk meetings;
- Health and safety management meetings; and

All action taken to correct non-conformances shall be subjected to a further audit. The timing of these further audits will vary depending upon such considerations as:

- The nature and extent of non-compliance.
- The presence of risk at the workplace.
- The timing of any other audits planned for the site

8.8 Management Review

To achieve continual improvement, it is essential to develop and implement corrective actions to address any system deficiencies. Corrective actions related to the safety management system may be derived through:

- workplace inspection non-conformances;
- audit reports – corrective actions;
- incident report corrective actions;
- hazard reports;
- emergency response exercise reports;
- change Management request evaluations;
- regular feedback and workplace inspections;
- risks identified in JSEA and other work activity risk reviews;
- working towards annual health and safety system management goals and targets;
- employee health surveillance briefs;
- changes in legal or industry requirements;
- insurance workplace inspections;
- meetings (e.g. team, safety, management); and
- Fletcher Construction requirements.

### 9. Referenced Documents

#### Table 3 - Referenced Documents Table

<table>
<thead>
<tr>
<th>Fletcher Document #</th>
<th>Document Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor Penetration Protection Guidance HSM47</td>
<td></td>
</tr>
</tbody>
</table>
EMERGENCY RESPONSE PLAN

Pacific Aviation Investment Project (PAIP)

Fua’amotu International Airport (TBU) Air Traffic Control Tower

ST311-TAL

Tonga

2018

“Our Goal is Zero Harm to all persons on site”

*It is important that all site employees and subcontractors read and comply with this document*

The information contained herein focuses primarily on Project/Site Specific items. It does not exempt any person from their responsibilities as required by the local Health and Safety regulations and any applicable Codes of Practice, Guidelines or Standards.
# EMERGENCY RESPONSE PLAN

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Company Number</td>
<td>0065</td>
</tr>
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<td>Client</td>
<td>Pacific Aviation Investment Project (PAIP)</td>
</tr>
<tr>
<td>Project Number</td>
<td>ST311-TAL</td>
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<td>Other detail</td>
<td>Project GPS coordinates</td>
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<tr>
<td></td>
<td>21°14'46.6&quot;S 175°08'41.4&quot;W</td>
</tr>
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<td></td>
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<th>Page/Area Amended</th>
<th>Revision Number</th>
<th>Revised By</th>
<th>Approved By</th>
<th>Comments</th>
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<td>Nina Donaldson</td>
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<td>New Document</td>
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<td>15/03/2018</td>
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<td>2</td>
<td>Nina Donaldson</td>
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<tr>
<td>10/04/2018</td>
<td>Reviewed</td>
<td>3</td>
<td>Nina Donaldson</td>
<td>Joshua Collins</td>
<td>Project specific</td>
</tr>
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</table>
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1. Document Control

Tonga, Air Traffic Control Tower Emergency Response Plan (ERP) can only be updated or changed by the Crew Project Manager. The Crew ERP will be updated to address changes in the operational environment. Log all revisions below. After the new page has been inserted destroy all previous pages.

<table>
<thead>
<tr>
<th>Date</th>
<th>Page/Area Amended</th>
<th>Revision Number</th>
<th>Revised By</th>
<th>Approved By</th>
<th>Comments</th>
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</thead>
<tbody>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Emergency Communication Chart

EMERGENCY RESPONSE COMMUNICATION CHART

INCIDENT

Onsite First Aiders Respond
- Assess Incident
- Apply First Aid
- Notify Site Supervisor / Project Manager

MINOR CASE

Site Supervisor / Project Managers
Simon Kite
+676 786424
Activate Emergency Response

SERIOUS CASE

CALL EMERGENCY SERVICES
- And/or transport to Emergency Services
- Phone number
- Location of medical Services

LOCAL HSE ADVISOR
Nina Donaldson
+676 786 3125

SOUTH PACIFIC BRANCH MANAGER
Josh Collins
+676 786 3125
Authorised for Media Response, Relative Response, AIG Travel Guard

SOUTH PACIFIC EHS COORDINATOR
Nina Donaldson
+64 27 568 889
Authorised for AIG Travel Guard

SOUTH PACIFIC CONTRACTS MANAGER
Craig Kyle
+64 27 568 8897

SOUTH PACIFIC GENERAL MANAGER
Brent Leach
+64 27 247 8207
Authorised for AIG Travel Guard, Media Response, Relative Response

CLIENT FIELD REPRESENTATIVE
Paul Drobig
+64 786 066 0023

FCC CHIEF EXECUTIVE & FCC HSE MANAGER
### 3. Contact Information

#### 3.1 South Pacific Head Office

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Office</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brent Leach</td>
<td>General Manager</td>
<td>+64 9 525 4931</td>
<td>+64 21 729 659</td>
</tr>
<tr>
<td>Craig Kylie</td>
<td>Contracts Manager</td>
<td>+64 27 568 8897</td>
<td></td>
</tr>
<tr>
<td>Gary Low</td>
<td>Project Manager</td>
<td>+64 525 4985</td>
<td>+64 21 0277 3618</td>
</tr>
<tr>
<td>Nina Donaldson</td>
<td>EHS Co-Ordinator</td>
<td>+64 9 525 4913</td>
<td>+64 27 595 2524</td>
</tr>
</tbody>
</table>

#### 3.2 Branch / Project Contact

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Office</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Josh Collins</td>
<td>Assistant PM / Branch Manager</td>
<td>+676 786 3125</td>
<td></td>
</tr>
<tr>
<td>Simon Kite</td>
<td>Site Supervisor</td>
<td>+676 7886424</td>
<td></td>
</tr>
</tbody>
</table>

#### 3.3 Client

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Office</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Drobig</td>
<td>Project Manager</td>
<td>+44 786 066 0923</td>
<td></td>
</tr>
<tr>
<td>Fisilau Leone</td>
<td>Programme Project Manager</td>
<td>+676 27620</td>
<td>+676 781 7004</td>
</tr>
<tr>
<td>Malakai Kaufusi</td>
<td>Social Safeguards Specialist</td>
<td>+676-888-2000</td>
<td></td>
</tr>
</tbody>
</table>

#### 3.4 Emergency Services

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td></td>
<td>922</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td>933</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td>944</td>
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</tr>
<tr>
<td>Fire</td>
<td></td>
<td>999</td>
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</tr>
<tr>
<td>Eastern District</td>
<td></td>
<td>927</td>
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</tbody>
</table>

#### 3.5 Medical / Aviation Services

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone Number</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>AIG Travel Guard</td>
<td><a href="https://www.travelguard.com/">https://www.travelguard.com/</a></td>
<td>+088 3636 1345</td>
<td></td>
</tr>
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</table>
4. Administration

4.1 INTRODUCTION
This Emergency Response Plan for the Project (referenced from here on in as the ERP) addresses the major emergencies identified for the Air Control Tower at this time. This ERP should be revised as new hazards are identified and assessed as having the potential to become a major emergency. This ERP plan is to be used as a guide to prepare the project site to deal with emergencies in a safe manner.

4.2 SCOPE
This ERP addresses potential emergencies that may occur on the project to include:
- Medical emergency
- Fire Emergency
- Spill Emergency
- Vehicle Emergency
- Natural Disaster Emergencies
- Civil Un-Rest Emergencies

4.3 PURPOSE
The purpose of the ERP is to develop, implement, and maintain a system which when activated in an emergency will minimise effects on:
- injury or health to persons
- the environment
- the company or third party property
- image and reputation

4.4 RESPONSIBILITY
The Project Manager is the custodian of the ERP. Duties include:
- ensuring all personnel; both company and contractor fully understand this document
- revision of the ERP as needed to address changes in the operational environment
- ensuring the ERP is technically correct and updated throughout the operation
- ensuring training is conducted to share ERP objectives with all personnel and contractors
- ensuring a copy of the ERP is available to all relevant personnel

4.5 DISTRIBUTION CONTROL
The Project Manager issues the Crew ERP. Copies should be distributed to the:

<table>
<thead>
<tr>
<th>DATE</th>
<th>QTY</th>
<th>FIELD DISTRIBUTION</th>
<th>DATE</th>
<th>QTY</th>
<th>OFFICE DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>FFC SP Branch Manager</td>
<td>1</td>
<td>1</td>
<td>Client Representative</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>FCC Contracts Manager</td>
<td>1</td>
<td>1</td>
<td>Client Representative</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Project Manager</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Local EHS Advisor</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Site Supervisor</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Emergency Responsibilities

To provide organised lines of communication, personnel should assume the following duties:

- **Branch Manager;** maintains communication with the Senior Management of Fletcher South Pacific, Tonga Airports Ltd (Client) and the local Government Authorities. Organises transport of injured personnel from hospital to point of origin.

- **Project Manager;** initiates initial response to incident. Maintains communication between the Client Representatives and the Fletcher South Pacific Office. Logs all communications. Collects all essential information, and arrives at a specific response plan in consultation with the Branch Manager.

- **EHS Advisors;** Conduct immediate initial incident investigations. Report all incidents to management as soon after the incident as possible. Collect and preserve all evidence that may be useful in an investigation

- **All Employees;** immediately report all incidents and injuries to their supervisor. Assist as requested in all emergency response situations. Read and maintain a copy of the Emergency Communications Flowchart in all vehicles.

- **Emergency Management Team (EMT);** contact initiated from on-site Project Manager to report any major/significant incidents (refer to Section 6). For medical emergencies involving personnel, Onsite Project Manager/delegate will contact the EMT and advise the destination of definitive medical care from which point the EMT will take control of the injured person/s.

5.1 Emergency Response Teams

The Project Manager shall designate and train a sufficient number of persons to assist in a safe and orderly emergency response. The following staff are trained to respond.

<table>
<thead>
<tr>
<th>MEDEVAC / NATURAL DISASTERS</th>
<th>FIRE</th>
<th>SPILL</th>
<th>VEHICLE</th>
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</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Project Manager</td>
<td>Project Manager</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Site Supervisor</td>
<td>Site Supervisor</td>
<td>Site Supervisor</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>EHS Advisor</td>
<td>EHS Advisor</td>
<td>EHS Advisor</td>
<td>EHS Advisor</td>
</tr>
<tr>
<td>First Aider</td>
<td>Head Mechanic</td>
<td>Head Mechanic</td>
<td>Head Mechanic</td>
</tr>
<tr>
<td>First Aider</td>
<td>First Aider</td>
<td>First Aider</td>
<td>First Aider</td>
</tr>
</tbody>
</table>

5.2 Training Requirements

The employee’s direct supervisor shall review with each employee upon initial assignment those parts of the plan and procedures which the employee must know to protect them and others in the event of an emergency. The Project Manager shall ensure the plan is reviewed with each employee covered by the plan at the following times:

- When the employee joins the crew
- Whenever the employee’s responsibilities or designated actions under the plan change
- Whenever the plan is changed
6. Emergency Reporting

<table>
<thead>
<tr>
<th>MINOR</th>
<th>SIGNIFICANT</th>
<th>MAJOR</th>
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<tbody>
<tr>
<td>PERSONNEL</td>
<td>PERSONNEL</td>
<td>PERSONNEL</td>
</tr>
<tr>
<td>No threat to public health/safety</td>
<td>Worksite threat to health/safety</td>
<td>Threat to public beyond worksite</td>
</tr>
<tr>
<td>First Aid Case (FAC)</td>
<td>Medical Treatment Case (MTI)</td>
<td>Near Miss w/potential to cause death or permanently disable</td>
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<tr>
<td>Near Miss</td>
<td>Restricted Work Case (RWC)</td>
<td>Hospitalisation of 3 or more</td>
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<tr>
<td>Lost Time Injury (LTI)</td>
<td>Lost Time Injury (LTI)</td>
<td>Fatality FCC Personnel, contractor, 3rd party</td>
</tr>
<tr>
<td>Near Miss w/ potential for injury</td>
<td>Near Miss w/ potential for injury</td>
<td>Near Miss w/ potential for injury</td>
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</table>

<table>
<thead>
<tr>
<th>VEHICLE / EQUIPMENT</th>
<th>VEHICLE / EQUIPMENT</th>
<th>VEHICLE / EQUIPMENT</th>
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<tbody>
<tr>
<td>Any damage &lt; $1K</td>
<td>Any damage &lt; $10K</td>
<td>Any damage &gt; $10K</td>
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<tr>
<td>Any vehicle citation</td>
<td>Any vehicle citation</td>
<td>Any incident w/o injuries</td>
</tr>
<tr>
<td>Environmental</td>
<td>Environmental</td>
<td>Environmental</td>
</tr>
<tr>
<td>Hydrocarbon spill &lt; 25 litres</td>
<td>Hydrocarbon Spill 25-200 litres</td>
<td>Hydrocarbon spill &gt; 200 litres</td>
</tr>
<tr>
<td>Recovered &amp; cleaned immediately</td>
<td>Recovered &amp; cleaned immediately</td>
<td>Any amount of hydrocarbon spill into waterways / sensitive areas</td>
</tr>
<tr>
<td>No off site impact potential</td>
<td>Off site impact possible</td>
<td>Off site impact occurs</td>
</tr>
<tr>
<td>Report to Local Authorities (If required) as per local requirements</td>
<td>Report to Local Authorities (If required) as per local requirements</td>
<td>Report to Local Authorities (If required) as per local requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FINANCIAL</th>
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<th>FINANCIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential property loss &lt; $5K</td>
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<td>Potential property loss &gt; $ 25K</td>
</tr>
<tr>
<td>REPUTATION</td>
<td>REPUTATION</td>
<td>REPUTATION</td>
</tr>
<tr>
<td>No impact on FCC South Pacific or Client</td>
<td>Minor impact on FCC South Pacific or Client</td>
<td>Major impact on FCC South Pacific or Client</td>
</tr>
<tr>
<td>No media attention</td>
<td>Police/Fire, Media involved</td>
<td>Negative Media coverage</td>
</tr>
<tr>
<td>Breach of Contract / Company rules</td>
<td>Breach of Contract / Company rules</td>
<td>Violation of legal requirements</td>
</tr>
</tbody>
</table>

**EMPLOYEE reports to:**
- Supervisor
- Supervisor
- Supervisor

**SUPERVISOR reports to:**
- Project Manager
- EHS Advisor
- EHS Advisor

**PROJECT MANAGER reports to:**
- Client
- Branch Manager
- Contracts Manager

**BRANCH MANAGER reports to:**
- Contracts Manager
- General Manager
- Contracts Manager
- General Manager
7. Emergency Map

The map below shows the road from the Airport to the Medical Facilities Vaiola Hospital. Further directions from the Airport area to name are on the next page.

Directions from Site to Medical Facility

1. Head southeast
2. Continue straight
3. Turn left
4. Turn left onto Tuku'Aho Rd
5. Turn right toward Tua'afeahau Rd
6. Turn left onto Tua'afeahau Rd
7. Turn left onto Vaiola Rd
8. Medical Emergency

8.1 Equipment Requirements

- Radio or mobile phone or satellite phone; one per vehicle / site
- Vehicle First Aid Kit; one required in each Fletcher Construction South Pacific vehicle
- First Aid Kit on-site situated visibly and conveniently

8.2 Emergency Action Principles

In the event of a medical emergency, the Project Manager will be immediately notified of the incident location and first aid measures applied. The Project Manager will be the primary source of information for the communication of the patient’s initial treatment and medical evaluation plans if required.

After the critical events of the initial treatment have taken place by the First Aider, the Project Manager will discuss a plan of action based on the following assessment criteria:

- **GREEN - FIRST RESPONSE**: One casualty with trauma or medical emergency. Paramedic/First Aider will proceed with casualty to medical facility.

- **YELLOW - MASS CASUALTY INCIDENT**: Two or more casualties with trauma or medical emergency. First Aider/Project Manager and patient’s progress towards medical facility

- **RED - MEDEVAC**: One or more casualties with major trauma that requires specialist medical care. Air transport to hospital with specialist(s) qualified to handle medical emergencies. Interface with AIG Travel Guard Resources, **You must inform them that there is an emergency.**

The Branch Manager will recommend to Fletcher Construction South Pacific Senior Management who have the authority to determine the need for a medevac. The Branch Manager shall notify the Project Manager to communicate the plan to the Client Representative and other Client senior personnel.

The Project Manager will keep the Fletcher Construction South Pacific Contracts Manager updated of events.

It is noted that access to professional medical treatment is limited to where the individual is eligible to receive medical services. i.e. Country of citizenship.

If required and eligible, an air medevac will be conducted in cooperation with International SOS. Once the casualty has been transferred to professional medical treatment / services, or AIG Travel Guard the medevac will proceed under their control, in consultation with Fletcher Construction South Pacific personnel.

In the event of local emergency medical services being unavailable, the Project Manager will delegate personnel to transport the casualty/casualties to appropriate medical facilities Vaiola Hospital.
8.3 Appropriate Airstrips

<table>
<thead>
<tr>
<th>Airstrip Location</th>
<th>Description</th>
<th>GPS Coordinates</th>
<th>Day Use</th>
<th>Night Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fua'amotu International Airport</td>
<td>Community</td>
<td>21°14′46.6″S 175°08′41.4″W</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>
9. Incident / Illness

-- Incident / Illness --

Stay Calm & Assess the Situation

Assess Injury & Provide First Aid

Take command & Call for Help
Manage Incident scene safety

Maintain communications
Guide Paramedic

Provide First Aid
Danger – check for danger to the casualty and yourself
Response – check the casualty’s response – call out their name, grab their hand
Airway is open
Breathing – check for signs
Circulation – check for pulse/serious bleeding
Conduct physical exam
Treat injuries by priority
Treat for shock

Medical Evacuation
Describe injuries, time of incident
Treatment given / condition of injured
GPS coordinates / Brief area description
Number of casualties / Weight of patients
10. Fire Emergency

10.1 Equipment Requirements

- Radio or mobile phone or satellite phone; one per vehicle/site
- Vehicle Fire Extinguisher (ABE – General Use); one required in each Fletcher Construction South Pacific vehicle
- Fire Extinguishers on-site situated visibly and conveniently and appropriately.

10.2 Emergency Actions Principles

It is the responsibility of all employees to understand their duties and responsibilities in case of a fire emergency. When the alarm sounds, all employees shall move to the muster point upon detection of fire, no matter how small:

- **Sound Alarm** – ring bell and yell *Fire, Fire, Fire*
- **Move to muster point immediately**; account for all personnel
- If safe to do so – fight the fire with the firefighting equipment available (fire extinguishers, fire rakes, fire beaters, water truck / trailer)
- Project Manager to contact relevant local emergency services to advise of fire (If appropriate)
- Relay the following information about the fire:
  - Exact location
  - Size of the fire
  - Area of involvement
  - Whether there are people trapped by the fire
  - Injuries caused by the fire
  - Other pertinent facts or complications regarding the fire
- After relaying the information, DO NOT HANG UP ON THE Operator

- **Fight the Fire**: determine whether to fight the fire or leave the area. Fletcher Construction South Pacific personnel may elect to attempt to fight the fire if the fire is small and can be successfully extinguished by means of a fire extinguisher or smothering with sand.

- **Rule of Thumb**: if the flame height exceeds 1.2 metres (4 feet), do not attempt to fight the fire. The type of combustible involved and the extent of the fire may also preclude fighting a fire with smaller flames. Report the fire to the Project Manager even if it is successfully extinguished and little or no damage is done.

- **Sealing off Area**: if the fire is too large to fight close the doors and windows to the involved area. This action compartmentalises the fire, robbing it of necessary oxygen.

- **If trapped**: Seal door/window cracks and ventilation grills with tape (preferably duct tape) or towels and/or clothing (preferably wet) to keep smoke out. To signal rescuers, hang a large article of cloth out of a corner of the window. Close the window again and seal cracks. Keep window closed to prevent outside smoke from entering. Do not break the window unless the room has been invaded by smoke and you must get air to survive. Remember, stay close to the floor for air. If it is necessary to filter smoke, tie a towel or clothing (preferably wet) around the nose and mouth.
If out in field; determine whether to fight the fire or leave the area. **If there is a possibility of becoming trapped evacuate the area immediately.** Fire beaters, fire rakes and fire extinguishers will all be available in each vehicle. Fletcher Construction South Pacific personnel may elect to attempt to fight the fire if the fire is small and can be successfully extinguished using equipment available. If fire is too large, contact other vehicles in the area and advise them of position, location, size of fire and wind direction. Make contact with Basecamp/Recorder immediately advising of position, location and size of fire. Observer/Project Manager to control evacuation of area.

10.3 Fire On-site Flow Chart

**Fire On-site**

Stay Calm & Assess the Situation

Take command & Sound Alarm

Assess Fire & Call for Help
- Location of Fire
- Size of Fire - area involved
- Injured People - Injuries & treatment given

Assist fire Team as requested
- Use available fire fighting equipment (fire extinguishers, fire rakes, fire beaters, water truck / trailer)

Manage Incident Scene Safety
- Evacuate to assembly point
- Account for all employees

Clothes on Fire
- **STOP, DROP & ROLL**
  - Roll person around on floor to smother flames with a fire blanket, or drench with water if a safety shower is immediately available
  - Seek Medical attention immediately

**SECURE INCIDENT SCENE**

Large and small fires must be investigated.
11. Spill Flow Chart

1.1 EQUIPMENT REQUIREMENTS

- Radio or mobile phone or satellite phone; for supervisors.
- Vehicle Fire Extinguisher; one required in each Fletcher Construction South Pacific vehicle.
- Vehicle First Aid Kit; one required in each Fletcher Construction South Pacific vehicle.

1.2. EMERGENCY ACTION PRINCIPLES

Remove the Source
- Determine how the source of the spill can be stopped to limit the amount spilled.

Envelop the Spill
- Circle the spill with absorbent materials to stop it from spreading and from entering Waterways.

Absorb and Accumulate
- Use more absorbent material to soak up the spill area.

Contain / Clean up
- Collect the contaminated soil and absorbent materials and place it in a container.

Report to the Project Manager / Island Manager
- Report what you spilled, where it occurred and what you did to respond to the spill.
- For intermediate or major spills, fill out a Spill Report Form.
- Notify necessary regulatory authorities with any major spill occurrence.

Any fuel / hazardous material (hazmat) storage areas should be set up with liners and secondary containment, with enough capacity to hold 140% of the maximum capacity of any storage container. Any spill (regardless of size) that takes place must be treated / reported as an incident and the date, location & size of the spill must be recorded. Clean up all spills and properly dispose of spill response materials and contaminated soils / water.

- Hoses & containers must be kept in good shape and leak free.
- Drips must be prevented.
- You must contact your Supervisor immediately for any spill.
- Mobilise to the site the needed safety & response equipment:
- Fire extinguishers, fire prevention equipment
- Absorbent materials.
- Plastic tarps & liners.
- First Aid Equipment.
- Special PPE (neoprene gloves, aprons, goggles).
- Containers for spill response materials.
- Assess the scene for hazards to yourself AND the public
- Evacuate the area.
- Notify the public in the area, if necessary.
- Eliminate the hazard if you can do so safely.
- Contact the proper authorities to eliminate hazard if necessary.
• Take steps to prevent fires or explosions.
• Stop the source of the spill as soon as it is safe to do so.
• Contain the extent of the material / liquids already spilled.
• Clean up the contaminated area.

When working around water
• With regard to oil spill response equipment, use booms and / or sorbents.
• On water; place boom around the spill and any downstream discharge pipes to prevent contamination from spreading. Place absorbent mats over the spill area.
• If it is necessary to call in external assistance to a spill, call the local provider of spill equipment or governing authority.

Note: Peat is not to be used as it has been proven ineffective in a marine environment. While it does absorb the spill, it sinks and therefore does not resolve the matter of removing the contamination.

Under no circumstances release any information to other companies, or the public. A proper response would be: “FCCSP has had an incident. No details are available. We are currently dealing with the situation and have initiated our emergency procedures”. And then refer them to the Branch Manager. If the family of an injured employee calls, refer all calls to the Branch Manager.
12. Vehicle Emergency

12.1 EQUIPMENT REQUIREMENTS

- Radio or mobile phone or satellite phone; for Drivers.
- Vehicle Fire Extinguisher; one required in each Fletcher Construction South Pacific vehicle.
- Vehicle First Aid Kit; one required in each Fletcher Construction South Pacific vehicle.

12.2 EMERGENCY ACTION PRINCIPLES

If you are involved in a vehicle incident, the first priority is to make the incident site safe by assessing further hazards and getting those involved away from any potential danger. If there are any casualties provide First Aid until help arrives. Call the Project Manager with the following:

- Nature and location of incident
- Number of casualties
- Seriousness of injuries
- Vehicle(s) involved

Once the incident scene is secured and injured personnel treated, collect all necessary data:

- **Incident Data**
  - Date
  - Landmark
  - Place
  - Roadway
  - Photos
  - Time

- **Injury**
  - Persons injured
  - Persons killed
  - Persons transported for medical treatment
  - Who transported them

- **Investigation**
  - Was the incident investigated by the Police?
  - Dept. Name
  - Badge #
  - Officer Name
  - Citations issued?
  - List persons cited
  - Alcohol and Drug Test

- **Vehicle Information**
  - Make
  - Model
  - Year
  - Driver
  - Address
  - License & Phone
  - Owner
  - Address
  - Phone #
  - Insurance Company
Vehicle Incident

Stay Calm & Assess the Situation

Call Project Manager
Location of incident
Number of casualties
Seriousness of injuries
Vehicles involved

Assess Injury & Provide First Aid

Contact Emergency Services
Time and exact location of the incident
Number of casualties
Extent of injury
Description of incident, vehicles involved
Needs for additional equipment & support at the scene

Maintain Communications
Assist Emergency Services

Manage Incident Scene Safety
Stop vehicle and turn on flashers
Do not move vehicle from scene
Set up warning triangle or flagman
Provide Police with information
Name, address & driver’s license
FCC South Pacific address
Vehicle registration #
Comply with any required alcohol/drug test
Obtain information with form above
Do not admit fault to anyone
Secure vehicle and equipment if towed
13. Civil Disturbance (Protest)

Projects at times are faced with demonstrations, theft or sabotage of equipment and may also face a potential for violence against its personnel. The crew must at all times remain aware of this threat throughout the project operation, regardless of it being during working hours or off duty. All employees must maintain a low profile to avoid drawing unwanted attention to themselves or the project and should never volunteer any information to the public no matter how trivial it may seem.

It must be remembered that many demonstrations are perfectly legal, thus any response on site must be appropriate and where possible coordinated with the police.

13.1 Objective

The objective during any civil disturbance is to:

- Assure the safety of all crew and other stakeholders
- Continue operations without detriment to efficiency or performance
- Preserve the Client and FCC South Pacific reputation
- Protect the environment
- Prevent damage and disruption

13.2 Guiding Principles

Unlawful activity or incursion into private land or equipment may vary dramatically from case to case, and as such there is no set guideline on how to deal with these incidents as each has its own individual characteristics. Listed below is a set of guiding principles to remain aware of leading into a project and also during a project should such an incident take place or the potential for such an incident to be deemed high.

- Identify hazardous points that if compromised have potential to cause injury or environmental damage.
- Identify vulnerable points that if damaged could prevent normal operations from continuing for unacceptable periods.
- Identify alternate access routes to avoid protest activity should be established and communicated to all employees and contractors.
- If confronted by media intrusion recording using cameras, notes or other methods, remain polite and give a response of “No Comment”.
- Reduce equipment and personnel requirements off-site to a minimum during periods of protest or expected protest activity.
- Ensure employees always work in pairs and remain in contact with their immediate supervisor.
- No employee should speak to or respond in any way to the protestors.
- Ensure employees are aware what their expectations are during protest activity
- Avoid holding gatherings of employees such as the morning Toolbox in areas where protestors are likely to congregate
- Assign muster points on private land out of sight of potential protest activity locations.
- The Project Manager in liaison with the Client Representative should notify the police of any protest activity.
- Notify the police if protestors are on private property, are acting in a threatening manner, or use any violence or threats of violence.
- Liaise with the client regarding possible alternate task locations for the day.
- Where protest activity, sabotage or theft of crew equipment is deemed high risk the Project Manager may require the use of contract security services.
14. Natural Disasters

14.1 a. Floods
Floods can be easily identified by considering the local topography. Assessment requires consideration of the local rain pattern, flood history, etc. Flooding may be caused by the overflowing of rivers, lakes and reservoirs caused by heavy rains (not necessarily rainfall at the place where flood occurs).

Heavy rain can rapidly produce torrents where there was a dry riverbed or a build-up in a narrow channel or behind a barrier which then gives way to a rushing wall of water that envelope everything in its path.

Persistent rainfall over a long period after a dry spell and heavy storms should alert you to keep clear of water channels and low-lying ground, but a flood can affect much wider areas. If the water is rising, move to higher ground. In hilly areas, keep out of valley bottoms that are particularly prone to flooding.

14.1 b. Flood Planning
During start-up when muster points are assigned the Branch Manager must take into account the potential for flooding in the area. Muster points, and strategic areas should be located on high ground clear of dry creek beds or low-lying areas. Safe access routes will be mapped to ensure access in or out of a flooded area to recover equipment or personnel prior to or during a period of flooding.

Avoiding flood-prone areas altogether normally controls the hazard of floods. Should this be impossible, the hazard can be reduced by minimising access or operations in these areas.

The EHS Advisor and Project Manager are to stay up to date on flood warnings during periods of heavy rain or where heavy rains are forecast. They will utilise local Meteorology Services. https://www.windy.com and 90.0 FM Radio

Where adequate warning of an impending flood is provided the Project Manager should remove or secure all equipment from the project and ensure it is secured on high ground. Any hazardous material (e.g. fuel storage) must be moved as a priority. Once all equipment is moved from the area or secured, personnel may then be evacuated. This may require coordination with local authorities depending on the severity of the flood.

14.1 c. Flash Floods
In times of heavy rainfall keep operations out of low-lying areas and creek beds, both during and after rainfall. When flood warnings are given an evacuation of all equipment and personnel from the area is the best action.

14.1 d. Operating in Flood Areas
- Avoid driving in flooded areas.
- Enter flooded areas only if absolutely essential and safe to do so, and proceed slowly and steadily.
- Don’t enter flood waters.
- Upon leaving a flooded area, dry out brakes by applying light pressure until grip returns.
- If your vehicle becomes stranded in flood water, leave it and move to higher ground before the water rises further.
- Avoid driving in flooded areas at night - potholes and clean water cannot be seen.
- Do not wade, even in shallow flood water, it is usually contaminated and often contains hidden snags, strong currents and other hazards.
- If you must enter shallow water, ensure you are wearing adequate shoes (work boots will suffice). Don’t proceed beyond waist-depth unless absolutely necessary (and only if there is no obvious current).
- Keep in contact with other people.
- Always operate in pairs.
- Do not go anywhere alone.
- Ensure you maintain contact with the Project Manager while operating in a flooded area. Journey management must be enforced with routine call-ins essential.

14.1 e. Flood Aftermath

Where returning to flooded areas:
- Wait until authorities have declared the area safe before entering a flood zone.
- Wear work boots and gloves.
- If you are going into an isolated area notify the proper authorities. (If applicable)
- Treat every electrical item with the greatest respect.
- If travelling on foot through a flood zone, observe overhead electrical lines for broken wires or evidence of arcing. Avoid power lines if possible. If you must cross them, cross under them only midway between supporting poles.

14.2 a. Severe Weather

Severe Weather refers to any dangerous meteorological phenomena with the potential to cause damage, serious social disruption, or loss of human life. Types of severe weather phenomena vary, depending on the latitude, altitude, topography, and atmospheric conditions. High winds, hail, excessive precipitation, and wildfires are forms and effects of severe weather, as are thunderstorms, downbursts, lightning, tornadoes, waterspouts, tropical cyclones, and extratropical cyclones and Heat waves.

14.2 b. Severe Weather Planning

During start-up when muster points are assigned the Branch Manager / Project Manager must take into account the potential for damage in the area. Muster points, and strategic areas should be sheltered from High Winds or clear of potentially unsafe areas. Safe access routes will be mapped to ensure access in or out of an area to recover equipment or personnel prior to or during a severe weather pattern/s.

Secure large heavy objects or remove any item which can become a deadly or damaging missile. List items that may need to be secured or moved indoors when strong winds are forecast.

Avoiding hazard areas altogether normally controls the hazard. Should this be impossible, the hazard can be reduced by minimising access or operations in these areas.

Secure large heavy objects or remove any item which can become a deadly or damaging missile. List items that may need to be secured or moved indoors when strong winds are forecast.

The EHS Advisor and Project Manager are to stay up to date on weather warnings during periods where severe weather are forecast. They will utilise local Meteorology Services. [https://www.windyty.com](https://www.windyty.com) and 90.0 FM Radio

Where adequate warning of an impending severe weather is provided the Project Manager should remove or secure all equipment from the project and ensure it is secured on high
ground, or sheltered area. Any hazardous material (e.g. fuel storage) must be moved as a priority. Once all equipment is moved from the area or secured, personnel may then be evacuated. This may require coordination with local authorities depending on the severity of the weather pattern.

14.2 c. Severe Weather Aftermath

Where returning to damaged areas:

- Wait until authorities have declared the area safe before entering the zone.
- Wear work boots and gloves.
- If you are going into an isolated area notify the proper authorities. (If applicable)
- Treat every electrical item with the greatest respect.
- If travelling on foot through a damaged zone, observe overhead electrical lines for broken wires or evidence of arcing. Avoid power lines if possible. If you must cross them, cross under them only midway between supporting poles.
- If your property or equipment are damaged take notes and photographs.

14.3 a. Earthquakes

An earthquake is the shaking of the surface of the Earth, resulting from the sudden release of energy in the Earth's lithosphere that creates seismic waves. Earthquakes can be violent enough to toss people around and destroy whole cities. The seismic activity of an area refers to the frequency, type and size of earthquakes experienced over a period of time.

14.3 b. Earthquake Planning

During start-up when muster points are assigned, the Branch Manager must take into account access routes, which will be mapped to ensure access in or out of a given area to recover equipment or personnel. Muster points will be in strategic areas.

Practice Drop, Cover and Hold.

Identify safe places within the project Site.

14.3 c. During an Earthquake

- If you are inside a building, move no more than a few steps, drop, cover and hold. Stay indoors till the shaking stops and you are sure it is safe to exit.
- If you are outdoors when the shaking starts, move no more than a few steps away from buildings, trees, streetlights, and power lines, then Drop, Cover and Hold.
- If you are at the beach or near the coast, drop, cover and hold then move to higher ground immediately in case a tsunami follows the quake.
- If you are driving, pull over to a clear location, stop and stay there with your seatbelt fastened until the shaking stops. Once the shaking stops, proceed with caution and avoid bridges or ramps that might have been damaged.
- If you are in a mountainous area or near unstable slopes or cliffs, be alert for falling debris or landslides.
14.3 d. Earthquake Aftermath

- Listen to your local radio stations as emergency management officials will be broadcasting the most appropriate advice for your community and situation.
- Expect to feel aftershocks.
- Check yourself for injuries and get first aid if necessary. Help others if you can.
- Be aware that electricity supply could be cut. Check for, and extinguish, small fires.
- If you are in a damaged building, try to get outside and find a safe, open place. Watch out for fallen power lines or broken gas lines, and stay out of damaged areas.
- Only use the phone for short essential calls to keep the lines clear for emergency calls.
- If you smell gas or hear a blowing or hissing noise, get everyone away quickly and turn off the gas if you can. If you see sparks, broken wires or evidence of electrical system damage, turn off the electricity at the main fuse box if it is safe to do so.
- If your property is damaged, take notes and photographs.

14.4 a. Tsunami

A tsunami also known as a seismic sea wave, is a series of waves in a water body caused by the displacement of a large volume of water, generally in an ocean or a large lake. Earthquakes, volcanic eruptions and other underwater explosions), landslides, glacier calving’s, meteorite impacts and other disturbances above or below water all have the potential to generate a tsunami. Unlike normal ocean waves which are generated by wind, or tides which are generated by the gravitational pull of the Moon and Sun, a tsunami is generated by the displacement of water.

14.4 b. Tsunami Planning

During start-up when muster points are assigned the Branch Manager must take into account the potential for flooding in the area. Muster points, and strategic areas should be located on high ground. Safe access routes will be mapped to ensure access in or out of a flooded area to recover equipment or personnel prior to or during a period of flooding.

14.4 c. During a Tsunami

- Move immediately to the nearest higher ground, or as far inland as you can. If evacuation maps are present, follow the routes shown.
- Walk or bike if possible and drive only if essential. If driving, keep going once you are well outside the evacuation zone to allow room for others behind you.
- If you cannot escape the tsunami, go to an upper story of a sturdy building or climb onto a roof or up a tree, or grab a floating object and hang on until help arrives.
- Boats are usually safer in water deeper than 20 metres than if they are on the shore. Move boats out to sea only if there is time and it is safe to do so.
- **Never go to the shore to watch for a tsunami.** Stay away from at-risk areas until the official all-clear is given.
- Listen to your local radio stations as emergency management officials will be broadcasting the most appropriate advice for your community and situation. (If available)
- Do not go anywhere alone.
- Ensure you maintain contact with the Project Manager while operating in a flooded area. Journey management must be enforced with routine call-ins essential.
14.4 d. Tsunami Aftermath

- Continue to listen to the radio for civil defence advice and do not return to the evacuation zones until authorities have given the all-clear. (If available)
- Be aware that there may be more than one wave and it may not be safe for up to 24 hours, or longer. The waves that follow the first one may also be bigger.
- Check yourself for injuries and get first aid if needed. Help others if you can.
- Wear work boots and gloves.
- Do not go sightseeing.
- When re-entering homes or buildings, use extreme caution as floodwaters may have damaged buildings. Look for, and report, broken utility lines to appropriate authorities.
- If your property is damaged, take notes and photographs.

14.5 a. Volcanic Activity

Volcanoes usually have short active periods, separated by longer dormant periods. Volcanoes produce a wide variety of hazards that can kill people and destroy property nearby as well as hundreds of kilometers away. Hazards include widespread ashfall, very fast moving mixtures of hot gases and volcanic rock, and massive lahars.

14.5 b. When a Volcanic eruption threatens

- Put all machinery inside a shed, or cover with large tarpaulins to protect them from volcanic ash.
- Protect sensitive electronics and do not uncover until the environment is totally ash-free.

14.5 c. During a Volcanic Eruption

- If outside at the time of eruption, seek shelter in a car or a building. If caught in volcanic ashfalls, wear a dust mask or use a handkerchief or cloth over your nose and mouth.
- Stay indoors as volcanic ash is a health hazard, especially if you have respiratory difficulties such as asthma or bronchitis.
- When indoors, close all windows and doors to limit the entry of volcanic ash. Place damp towels at thresholds.
- Do not tie up phone lines with non-emergency calls.
- If you have to go outside use protective gear such as masks and goggles and keep as much of your skin covered as possible. Wear eyeglasses, not contact lenses as these can cause corneal abrasions.
- Disconnect drainpipes/downspouts from gutters to stop drains clogging. If you use a rainwater collection system for your water supply, disconnect the tank.
- Stay out of designated restricted zones.

14.5 d. Volcano Aftermath

- Listen to your local radio stations for civil defence advice and follow instructions. (If available)
- Stay indoors and away from volcanic ashfall areas as much as possible.
- When it is safe to go outside, keep the gutters and roof clear of ash as heavy ash deposits can collapse your roof.
• Avoid driving in heavy ashfall as it stirs up ash that can clog engines and cause serious abrasion damage to your vehicle.
• Use a mask or a damp cloth and eye protection when cleaning up. Moisten the ash with a sprinkler before cleaning.
• If your property is damaged, take notes and photographs
• Wear work boots and gloves.

15. Communication – Radio and Telephone

Emergency situations require communication discipline. All official Fletcher Construction South Pacific communications regarding an emergency must be handled by management. The following procedures will help deal with any outside inquiries regarding an emergency.

All information provided to outside authorities shall be limited to facts. Speculative causes of the accident should not be discussed. Information should be provided on a ‘need to know’ basis.

Any calls received, which request information about an emergency must be recorded on a time log. This phone log must record the nature and time of the call. The log will be maintained until the emergency is over for use in the accident investigation.

Under no circumstances release any information to other companies, or the public. A proper response would be: “No Comment”. Then pass the inquiry on to the appropriate people as per the Communication Flow Chart.

If the family of an injured employee calls, refer all calls to the Branch Manager.

15.1 Radio and Telephone Log Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Callers Name</th>
<th>Nature of Call</th>
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</table>
Contractor and Subcontractor Safety and Environmental Management Procedures

To be completed and returned to Fletcher Construction prior to commencement of work on site. Please read these questions in conjunction with the attached explanatory notes.

Island: ........................................................................................................ Project: ........................................................................................................

Subcontractor: .................................................................................................................................

Trade/s: ..........................................................................................................................................  

1. Site Safety Representative:

   The name of our site safety representative for this project is: ..........................................................

2. Notifiable Works:

   We have Notifiable Works associated with our subcontract ☐ Yes ☐ No

3. Hazard Management:

   We have knowledge of the common hazards provided by Fletcher Construction ☐ Yes
   We understand a Task Analysis form is to be completed and provided to the Fletcher Site Representative for significant work associated with our subcontract ☐ Yes
   We understand new hazards created by our work will be notified to Fletcher Construction without delay ☐ Yes
   Hazardous products are associated with our subcontract works ☐ Yes ☐ No

   (If yes, the appropriate material safety data sheets must be attached)

4. Communication/Employee Participation:

   The methods of communicating safety information to our Employees are by: (tick methods used)
   ☐ Toolbox Talks ☐ Pre-task Planning Meetings ☐ Notice Board ☐ Co-ordination Meetings
   ☐ Other .................................................................................................................................

5. Emergencies:

   We are familiar with and will adopt the Fletcher Construction’s Emergency Procedure ☐ Yes
   We have read and understand the Fletcher plan and understand what to do in an emergency on site involving persons under our control ☐ Yes
   We have procedures in place and will have a first aid kit on site to render assistance in the event of an accident or emergency involving our workers ☐ Yes
   In the event of a site emergency evacuation, persons under our control will assemble at the evacuation area nominated by Fletcher Site Management and report to: ........................................................................................................

6. Accident/Incident: Reporting/Investigation/Recording:

   We are familiar with and will adopt the Fletcher Kwaimani Reporting/Investigation/Recording system:
   All accidents will be reported to Fletcher Construction Site Management along with a copy of our accident report ☐ Yes
   We acknowledge we are required to report hours worked; Lost Time Injuries, Medical Treatment Injuries and First Aid Injury numbers ☐ Yes

7. Training/Induction:

   We acknowledge that all persons under our control on site are:
   • required to comply with all rules and conditions relating to the project
   • to be provided with a Site Specific Safety Induction
   • Appropriately competent or fully supervised.

Approved: ............................................ signed: ............................................ date: ............................................

Subcontractor Representative

Received: ............................................ signed: ............................................ date: ............................................

Fletcher Representative

Status: Issued for Use

Revision: 30 July, 2015
Subcontractor Safety and Environmental Management Procedures
Explanatory Notes

1. Site Safety Representative
This person must actively promote and ensure safe practice and environmentally friendly practice on site for all personnel employed by your company, including those on contract. This person may be a dedicated person, a supervisor, or one of your senior workers who is designated to act on behalf of your company. It is preferable that this person is familiar with FCC – South Pacific HSE Practises.

2. Notifiable Works
Where notifiable work, as defined in the local Island Legislation is to be carried out by your company, you must notify the appropriate local authority in writing at least 24 hours prior to commencement of such work. A copy of the notification is to be forwarded to our site management. If engaged on notifiable work then your Supervisor should be deemed competent to carry out such duties.

3. Hazard Management/Task Analysis/ Risk Analysis
All hazards must be identified and the risk of each hazard analysed to ensure all controls are put in place. The standard Fletcher Task Analysis Sheet may be one to the tools used to analyse the various tasks within your trade work; identify the significant safety hazards and detail the method of control. All hazardous substances used on site are to have an appropriate material data sheet maintained and accessible on site.

4. Communication
Appropriate on-site communications must be established within your site management team to disseminate all information concerning safety and environmental requirements. This will include notification of hazards brought onto site or created during the course of the work. This may be done by posting the hazard sheets on notice boards; the main site hazard board; or be advised during regular toolbox talks. The aim is to ensure that all workers on site are aware of the hazards as they arise and equally are advised when they no longer exist. If English is the second language of your employees or contractors then you must maintain on site a liaison person who can effectively communicate with our site management team.

5. Emergencies
In the event of a site evacuation your workers must promptly evacuate the site. The Fletcher Site Management team will advise all workers on the location of the assembly point. Emergencies affecting your workers that you may need to prepare for and have a procedure to deal with include spillage of hazardous substances, serious harm accidents, and rescue of a fall-arrest victim. You need to have a person on site who is trained in First Aid in case of an injury to any of your workers.

6. Accident/Hours Worked Reporting
You are required to provide your safety data to the Fletcher Site Management team each month. All safety and environmental incidents and accidents must be reported immediately to Fletcher Construction Site Management and serious harm only accidents also reported to the local authority as appropriate. Accident and investigation reports are to be copied to the Fletcher Site Representative within 48 hours. Accident scenes for serious harm accidents must not be disturbed until a full and complete accident investigation has been undertaken, unless an unsafe condition exists.

7. Safety Inspections and Safety Reviews
Your site personnel are expected to carry out regular documented safety inspections (when requested by Fletcher) of your own work areas while on this site. Copies of the inspection reports are to be forwarded to Fletcher Construction Site Management team and maybe a topic for discussion at safety meetings. Any recommended/completed corrective action will be agreed at these meetings.

8. Training/Inductions
Your Safety Representative will be advised of our site specific safety rules, hazards, and emergency evacuation procedures. It is your responsibility to ensure that all persons under your control are similarly advised. You will be required to supply a list of all your personnel working on this site, and ensure all workers have attended and understood the Site induction of your Safety Representative. Where appropriate, Fletcher Construction will require you to provide evidence of your workers’ skills and training. For example, Trade Qualifications, Certificates of competency, etc.
<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>How did it happen?</th>
<th>Instance</th>
<th>Description of Hazard</th>
<th>Location(s) of Hazard</th>
<th>Current Risk Rating</th>
<th>Incentive of Control</th>
<th>Control Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile plant and equipment</td>
<td>Exposure</td>
<td>All Mobile Plant &amp; Equipment</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>20</td>
<td>Admin</td>
<td>Designated work areas and exclusion zones in place</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Collision - on site</td>
<td>All Mobile Plant &amp; Equipment</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>22</td>
<td>Engineering</td>
<td>Parking lights on all items of mobile plant</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Collision - on site</td>
<td>All Mobile Plant &amp; Equipment</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>22</td>
<td>Admin</td>
<td>Promptly pull up and drive at slow speed, stopping and backing away, etc.</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Exposure</td>
<td>All Mobile Plant &amp; Equipment</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>22</td>
<td>Admin</td>
<td>Only appropriately trained operators to use mobile plant</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Equipment failure</td>
<td>Forklifts, Loaders</td>
<td>Person, Vehicle, Stationary Object</td>
<td>Locations</td>
<td>22</td>
<td>Engineering</td>
<td>Speed governing to relevant site speed limit</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Environment</td>
<td>Forklifts, Loaders, Excavators</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>22</td>
<td>Engineering</td>
<td>Protect work areas from mobile plant items</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Environment</td>
<td>Forklifts, Loaders</td>
<td>Person, Vehicle, Stationary Object</td>
<td>Locations</td>
<td>22</td>
<td>Admin</td>
<td>Regular servicing of mobile plant areas</td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Equipment failure</td>
<td>Dump Trucks</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>22</td>
<td>Engineering</td>
<td>Pro's to be covered to prevent uncontrolled accross of tray</td>
</tr>
<tr>
<td>Work at Height</td>
<td>Equipment failure</td>
<td>Ladders</td>
<td>Mechanical failure</td>
<td>All Locations</td>
<td>25</td>
<td>Substitute</td>
<td>Ladder with ladder only to be used with weight rating en</td>
</tr>
<tr>
<td>Work at Height</td>
<td>Equipment failure</td>
<td>Forklift, EWP</td>
<td>Mechanical failure</td>
<td>All Locations</td>
<td>25</td>
<td>Admin</td>
<td>Regular checks of EWP ladders</td>
</tr>
<tr>
<td>Fixed plant and equipment</td>
<td>Entanglement / snag</td>
<td>Conveyor belts</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>19</td>
<td>Engineering</td>
<td>Equipment failure</td>
</tr>
<tr>
<td>Biological agents</td>
<td>Uncertified / unvaccinated discharge</td>
<td>Animal (in case or when used as a precaution)</td>
<td>Person, Vehicle, Stationary Object</td>
<td>All Locations</td>
<td>12</td>
<td>Engineering</td>
<td>Risk: Can adversely affect a person's health if it is created or ingested</td>
</tr>
<tr>
<td>Biological agents</td>
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<td>12</td>
<td>Admin</td>
<td>Risk: Can adversely affect a person's health if it is created or ingested</td>
</tr>
</tbody>
</table>

### Control Details

- **Control Implemented?**
  - Yes
  - No
- **Residual Risk Rating**
  - 1 - 25
- **Monitoring Frequency**
  - Daily
  - Weekly
  - Monthly
  - Yearly
- **Monitoring Responsibility**
  - Site Supervisor
  - Site Manager
- **Review Frequency**
  - Monthly
  - Annually
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Biological agents</td>
<td>Exposure</td>
<td>All Locations 12 Admin</td>
<td>Wear a respirator when painting, drilling, and concrete cutting.</td>
<td>Yes</td>
<td>Site Supervisor</td>
<td>Weekly</td>
<td>Yes</td>
<td>7</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>Exposure</td>
<td>All Locations 12 Admin</td>
<td>Safe working with power tools and equipment.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Monthly</td>
<td>Yes</td>
<td>10</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemicals</td>
<td>Exposure</td>
<td>All Locations 12 Admin</td>
<td>Ensure PPE is provided and worn.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Weekly</td>
<td>Yes</td>
<td>9</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material and product storage</td>
<td>Unclassified / unapproved discharge</td>
<td>Concrete Pumping (associated hazards)</td>
<td>Maintain Hazardous Substances and Products Register.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Monthly</td>
<td>Yes</td>
<td>9</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust and Fumes</td>
<td>Exposure</td>
<td>All Locations 12 Admin</td>
<td>Wear protective gloves.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Weekly</td>
<td>Yes</td>
<td>5</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemicals</td>
<td>Exposure</td>
<td>All Locations 12 Admin</td>
<td>Ensure PPE is provided and worn.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Weekly</td>
<td>Yes</td>
<td>9</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work at height</td>
<td>Fall</td>
<td>All Locations 12 Admin</td>
<td>Work safely, avoid high pressure, etc.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Weekly</td>
<td>Yes</td>
<td>10</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Geotechnical / trapped</td>
<td>Concrete Cutting</td>
<td>Holes must be drilled in accordance with the consultant's instructions.</td>
<td>Yes</td>
<td>Site Manager</td>
<td>Monthly</td>
<td>Yes</td>
<td>10</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
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<td>Yes</td>
<td>Site Manager</td>
<td>Monthly</td>
<td>Yes</td>
<td>10</td>
<td>Site Manager</td>
<td>Annually</td>
<td>Site Manager</td>
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<td></td>
</tr>
<tr>
<td>Hazard Category</td>
<td>How did it happen?</td>
<td>Instance</td>
<td>Description of hazard</td>
<td>Frequency</td>
<td>Risk Category</td>
<td>Control Details</td>
<td>Who is Implementing the control</td>
<td>Implementation</td>
<td>Frequency</td>
<td>Responsibility</td>
<td>Frequency</td>
<td>Review Responsibility</td>
<td></td>
</tr>
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<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Contact with mobile plant, suspended</td>
<td>Drilling Penetration holes</td>
<td>Risk: Drilling through concrete, falling material, equipment jam.</td>
<td>12</td>
<td>Eliminate</td>
<td>All services on the underside of the slab must be either isolated or removed before the hole is drilled.</td>
<td>Yes</td>
<td>3</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Contact with mobile plant, suspended</td>
<td>Drilling Penetration holes</td>
<td>Risk: Drilling through concrete, falling material, equipment jam.</td>
<td>12</td>
<td>Ablate</td>
<td>A core drill should not work alone – there must be a spotter below</td>
<td>Yes</td>
<td>3</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Contact with mobile plant, suspended</td>
<td>Drilling Penetration holes</td>
<td>Risk: Drilling through concrete, falling material, equipment jam.</td>
<td>12</td>
<td>Engineering</td>
<td>Area below be isolated to prevent access</td>
<td>Yes</td>
<td>3</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Contact with mobile plant, suspended</td>
<td>Drilling Penetration holes</td>
<td>Risk: Drilling through concrete, falling material, equipment jam.</td>
<td>12</td>
<td>Engineering</td>
<td>Where possible the hole should be drilled to 80% and the core broken off. The remaining 20% then easier to control.</td>
<td>Yes</td>
<td>3</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Contact with mobile plant, suspended</td>
<td>Drilling Penetration holes</td>
<td>Risk: Drilling through concrete, falling material, equipment jam.</td>
<td>12</td>
<td>Ablate</td>
<td>Refer to: Fletcher FCC South Pacific Region Drug &amp; Alcohol Program.</td>
<td>Yes</td>
<td>3</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social factors or behaviours</td>
<td>Substances</td>
<td></td>
<td>Drugs and/or Alcohol</td>
<td></td>
<td></td>
<td>Safety process drugs and/or alcohol</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust and Fumes</td>
<td>Exposures</td>
<td>Dust</td>
<td>Risk: Inhalation of dust particles including silica, wood, fumes.</td>
<td>10</td>
<td>Engineering</td>
<td>Low level extraction and containment on power tools where possible</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust and Fumes</td>
<td>Exposures</td>
<td>Dust</td>
<td>Risk: Inhalation of dust particles including silica, wood, fumes.</td>
<td>10</td>
<td>Engineering</td>
<td>Keep clear of moving vehicles</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust and Fumes</td>
<td>Equipment</td>
<td>Dust</td>
<td>Risk: Inhalation of dust particles including silica, wood, fumes.</td>
<td>10</td>
<td>Engineering</td>
<td>Use local extraction and containment on power tools where possible</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>Exposure</td>
<td>Electrical Hazards</td>
<td>Risk: Electrical and electric shock.</td>
<td>10</td>
<td>Engineering</td>
<td>Ensure electricity supply is disconnected before demolition starts</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Exposure</td>
<td>Electrical Hazards</td>
<td>Risk: Electrical and electric shock.</td>
<td>10</td>
<td>Engineering</td>
<td>Ensure electrical equipment out of water and damp areas</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Electricity</td>
<td>Exposure</td>
<td>Electrical Hazards</td>
<td>Risk: Electrical and electric shock.</td>
<td>10</td>
<td>Engineering</td>
<td>Use RID or other approved safeguard at all times</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Exposure</td>
<td>Electrical Hazards</td>
<td>Risk: Electrical and electric shock.</td>
<td>10</td>
<td>Ablate</td>
<td>Treat all existing electrical cables as live</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
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<td>Risk: Electrical and electric shock.</td>
<td>10</td>
<td>Engineering</td>
<td>Discard or de-energy circuit before installing brings around electrical fittings</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<tr>
<td>Extreme natural events</td>
<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Refer to: Site emergency plan for the site</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Where possible, sudden loss of services to the building (e.g. gas to prevent fire and gas leak consequences)</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Assist work areas before drilling, to check - Safe zones for evacuation Areas that are unstable (e.g. water trickles)</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Maintain clear exits</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Provide propagating or support to damaged areas</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Check for damaged electrical fittings</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
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<td>Extreme natural events</td>
<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Check for broken or voids in floors and ground</td>
<td>Yes</td>
<td>10</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
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<td>Natural event</td>
<td>Earthquake</td>
<td>Risk: Structural collapse, falling debris</td>
<td>10</td>
<td>Engineering</td>
<td>Refer to: Worksafe Best Practice Guidelines for Mobile Elevating Work Platforms: Safety process machinery</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Give a clear visible or verbal signal to the operator and await permission to enter the swing area of the plant being used.</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Isolate work area as possible</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Keep clear of moving vehicles</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Silly signage</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Wind hunting protectors for noise reduction</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Breach of exclusion zone</td>
<td>Earthworks</td>
<td>Risk: Contact with mobile plant, suspended loads.</td>
<td>8</td>
<td>Engineering/Isolation</td>
<td>Ensure material handling in water is under monitoring, without engineering machinery</td>
<td>Yes</td>
<td>9</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Fletcher Building Risk Register Template

002 Appendix G Risk Register
<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>How did it Happen?</th>
<th>Instance</th>
<th>Description of Hazard</th>
<th>Location(s) of Hazard</th>
<th>Current Risk Rating</th>
<th>Inheritance of Control</th>
<th>Control Details</th>
<th>Status of Control</th>
<th>Frequency</th>
<th>Review Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings Structures Earthworks</td>
<td>Partial collapse</td>
<td>Incidents</td>
<td>Risk: collapse, contact with mobile plant, suspended loads.</td>
<td>All locations</td>
<td>10</td>
<td>Engineering / Isolation</td>
<td>Admin Covers over openings in floors, with materials and support adequate in strength to withstand the weight of a person falling. Admin Erect safety fences to open perimeters of floors and floor openings. Admin Erect guardrails to openings in walls. Admin Use ladders for light intermittent work only. Admin Penetration. Don't remove. Obtain FCC Approval. Admin Erect and maintain screens to prevent items falling. Refer: Fletcher Ladder Policy and &quot;Stepping up to Zero Harm Poster&quot; Refer: Worksafe ACOP for Excavation Refer: Worksafe ACOP for Operator Protective Structures Refer: Worksafe ACOP for Excavation on Flooded Excavations Refer to: Fletcher Construction Work at Height Policy</td>
<td>Yes</td>
<td>9</td>
<td>As arises Site Supervisor Annually Site Manager</td>
</tr>
<tr>
<td></td>
<td>Partial collapse</td>
<td>Incidents</td>
<td>Risk: collapse, contact with mobile plant, suspended loads.</td>
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<td>Yes</td>
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<td>As arises Site Supervisor Annually Site Manager</td>
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<td>As arises Site Supervisor Annually Site Manager</td>
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<td>Yes</td>
<td>9</td>
<td>As arises Site Supervisor Annually Site Manager</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Exposure Exposure to Second hand cigarette smoke</td>
<td>Risk: Inhalation of toxic chemicals</td>
<td>All locations</td>
<td>3</td>
<td>Admin Refer to: Worksafe ACOP for Excavation Refer: Worksafe ACOP for Operator Protective Structures Refer: Worksafe ACOP for Excavation on Flooded Excavations Refer to: Fletcher Project Manager</td>
<td>Yes</td>
<td>9</td>
<td>As arises Site Supervisor Annually Site Manager</td>
<td></td>
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<tr>
<td>Work at height</td>
<td>Fall</td>
<td>Fall from a floor level (fall from an open perimeter of a floor, through floor opening, through wall opening.)</td>
<td>All locations</td>
<td>10</td>
<td>Admin</td>
<td>Admin</td>
<td>Admin</td>
<td>Admin</td>
<td>Admin</td>
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<td>10</td>
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<td>All locations</td>
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<td>All locations</td>
<td>10</td>
<td>Admin</td>
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<td>Admin</td>
<td>Admin</td>
<td>Admin</td>
<td>Admin</td>
</tr>
<tr>
<td>Hazard Category</td>
<td>Description of Hazard</td>
<td>Location(s) of Hazard</td>
<td>Current Risk Rating</td>
<td>Hierarchy of Control</td>
<td>Control Details</td>
<td>Implemented?</td>
<td>Residual Risk Rating</td>
<td>Monitoring Frequency</td>
<td>Monitoring Responsibility</td>
<td>Review Responsibility</td>
</tr>
<tr>
<td>-----------------------------------------</td>
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</tr>
<tr>
<td>Buildings Structures Earthworks</td>
<td>Partial collapse</td>
<td>Walkway and/or Formwork Collapse</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Check foundations, vertical supports, horizontal bearings and bracing</td>
<td>Yes</td>
<td>5</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Buildings Structures Earthworks</td>
<td>Partial collapse</td>
<td>Walkway and/or Formwork Collapse</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Enclose formwork is correctly installed in accordance with its design</td>
<td>Yes</td>
<td>5</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Buildings Structures Earthworks</td>
<td>Partial collapse</td>
<td>Walkway and/or Formwork Collapse</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Enclose formwork is designed by a competent person (engineer) for all load, dead and environmental loading</td>
<td>Yes</td>
<td>5</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Buildings Structures Earthworks</td>
<td>Partial collapse</td>
<td>Walkway and/or Formwork Collapse</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Enclose Manufacturer's specifications are followed</td>
<td>Yes</td>
<td>5</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Fires are not to be on site</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>In the event of a fire, evacuate to the indoor assembly, evacuate First if possible, call emergency services (Fire) and evacuate if fire cannot be immediately extinguished</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Keep combustible material and other sources of ignition to a minimum</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Provide correct fire extinguishers</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Regularly empty rubbish containers</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Sealing in designated areas only</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Use lids on rubbish bins and other means of containment/storage</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Where building construction includes installation of a permanent fire hydrant system, it’s to be progressively, installed and brought into commissioning engineering (As R/A)</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Fire</td>
<td>Risk: Uncontrolled Fire</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>When work occurs on an existing building that has a fire hydrant system and/or a sprinkler system, where possible, maintain its service so as to function in the event of a fire</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Work at height</td>
<td>Struck objects</td>
<td>Floor Penetrations</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Cover overheads in floors, with materials and support adequate to withstand the weight of a person falling</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Work at height</td>
<td>Struck objects</td>
<td>Floor Penetrations</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Cover overheads in floors to secure and marked “FORBIDDEN Penetration. Don’t Remove (liber All Access)”</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
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<td>Work at height</td>
<td>Struck objects</td>
<td>Floor Penetrations</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Below this floor penetration locations PPE for: glove, hard hat, safety glasses or greater than table caption</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Biological agents</td>
<td>Exposure</td>
<td>95% (Influenza)</td>
<td>All locations</td>
<td>9</td>
<td>Admin</td>
<td>Wash hands and washcloths properly</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Cranes and other lifting equipment</td>
<td>Collision – on site</td>
<td>Hoistift</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Enclose signage to separate forklift trucks from workers and other persons</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Cranes and other lifting equipment</td>
<td>Collision – on site</td>
<td>Hoistift</td>
<td>All locations</td>
<td>12</td>
<td>Admin</td>
<td>Include safety requirements in inductions</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
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<td>Cranes and other lifting equipment</td>
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<td>Admin</td>
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<td>Cranes and other lifting equipment</td>
<td>Collision – on site</td>
<td>Hoistift</td>
<td>All locations</td>
<td>12</td>
<td>Admin</td>
<td>Establish temporary traffic control</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Cranes and other lifting equipment</td>
<td>Collision – on site</td>
<td>Hoistift</td>
<td>All locations</td>
<td>12</td>
<td>Admin</td>
<td>Operations function “lib” for (basics license and thorough Linear ‘Y’ enhancement</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in and above ground tanks, including remaining residue, removal, demolition</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Meet with exclusion zone around tank(s)</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in and above ground tanks, including remaining residue, removal, demolition</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Maintain spill kit on site during removal stage</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
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<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in and above ground tanks, including remaining residue, removal, demolition</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Evacuate</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in and above ground tanks, including remaining residue, removal, demolition</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Below electric HD (displacement of large HD Work at Height &amp; Fire)</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in Electric</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Below a spill kit is available on site engage a qualified contractor to install inline plant</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fuel in Electric</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Cover exposed parts of body</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
<tr>
<td>Fuels</td>
<td>Uncontrolled / unsupervised discharge</td>
<td>Fueling Electric</td>
<td>All locations</td>
<td>18</td>
<td>Admin</td>
<td>Below establish site emergency plan and is provided correct respiratory protection</td>
<td>Yes</td>
<td>9</td>
<td>Annually</td>
<td>Site Supervisor</td>
</tr>
</tbody>
</table>
Dust and Fumes
- Uncontrolled / unapproved discharge
- Loss of load

Feeds
- Uncontrolled / unapproved discharge
- Flash back arrestors are to be fitted to oxy-fuel gas systems
- Loss of load

Manual handling and material handling
- Handling of materials
- Handling of equipment
- Handling of materials
- Handling of equipment

Hand tools and equipment
- Safety device
- Equipment / technique failure
- Equipment / technique failure
- Equipment / technique failure

Social factors or behaviours
- PPE
- PPE
- PPE
- PPE

Powered tools and equipment
- Equipment / technique failure
- Equipment / technique failure
- Equipment / technique failure
- Equipment / technique failure

Work at height
- Dropped objects
- Dropped objects
- Dropped objects
- Cables and other lifting equipment
- Loss of load
- Cables and other lifting equipment
- Loss of load
- Cables and other lifting equipment
- Loss of load

Fletcher Building Risk Register Template
002 Appendix G Risk Register
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<tbody>
<tr>
<td>Cranes and other lifting equipment</td>
<td>Loss of load (resultant force &amp;/or impact) from moving objects.</td>
<td>Mobile Mechanical Plant</td>
<td>Exposure to hazardous energy, mobile mechanical plant: Adapted control measures with moving equipment.</td>
<td>All Locations</td>
<td>18 Engineering / Isolation</td>
<td>Installing controls to reduce the risk of contact with moving equipment.</td>
<td>4</td>
<td>Yes</td>
<td>Admin</td>
<td>9</td>
<td>Annually</td>
<td>Site Manager</td>
<td>3</td>
<td>Site Manager</td>
</tr>
<tr>
<td>Cranes and other lifting equipment</td>
<td>Loss of load, Lift-carry objects, contact with moving object.</td>
<td>Mobile Mechanical Plant</td>
<td>Exposure to hazardous energy, mobile mechanical plant: Adapted control measures with moving equipment.</td>
<td>All Locations</td>
<td>18 Admin</td>
<td>Installing controls to reduce the risk of contact with moving equipment.</td>
<td>9</td>
<td>Yes</td>
<td>Admin</td>
<td>9</td>
<td>Annually</td>
<td>Site Manager</td>
<td>3</td>
<td>Site Manager</td>
</tr>
<tr>
<td>Manual handling and material handling</td>
<td>Manual handling of materials, Manual handling of materials, Manual handling of materials, Manual handling of materials, Manual handling of materials, Manual handling of materials.</td>
<td>Mobile Mechanical Plant</td>
<td>Exposure to hazardous energy, mobile mechanical plant: Adapted control measures with moving equipment.</td>
<td>All Locations</td>
<td>12 Admin</td>
<td>Installing controls to reduce the risk of contact with moving equipment.</td>
<td>4</td>
<td>Yes</td>
<td>Admin</td>
<td>4</td>
<td>Annually</td>
<td>Site Manager</td>
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<td>Annually</td>
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<td>4</td>
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<td>All Locations</td>
<td>12 Admin</td>
<td>Installing controls to reduce the risk of contact with moving equipment.</td>
<td>4</td>
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<td>Admin</td>
<td>4</td>
<td>Annually</td>
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</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Nail Guns [impulse type (Paslode) or compressed air tools]</td>
<td>Risk: Serious harm from equipment malfunction.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Each operator must have a deadman's switch and a kickback mechanism.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Nail Guns [impulse type (Paslode) or compressed air tools]</td>
<td>Risk: Serious harm from equipment malfunction.</td>
<td>All Locations</td>
<td>18</td>
<td>PPE</td>
<td>Correct loading procedure.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Nail Guns [impulse type (Paslode) or compressed air tools]</td>
<td>Risk: Serious harm from equipment malfunction.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Operation are to be tripped into the safe use or supervised by a trained person.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Nail Guns [impulse type (Paslode) or compressed air tools]</td>
<td>Risk: Serious harm from equipment malfunction.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Regular maintenance of tool</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Equipment / technique failure</td>
<td>Risk: Serious harm from equipment malfunction.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Refer to Worksafe Guidelines for nailers and staplers</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Portable Grinders</td>
<td>Risk: Contact with disc, stone while in operation.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Obtain any close proximity authentication from service owners and use a quota to ensure safe distances are maintained.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Powder actuated fastening tools - high velocity and low velocity.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
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<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Ensure other persons are not the line of fire.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Isolate the soundness of the background into which the fastener is being fired.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
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<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Operations are to be certified as required by regulation</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Ensure under loading for certification are under the direct supervision of a certified operator</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
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<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Refer to Worksafe ASOP for Powder Actuated, High Velocity Fastening.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>Powered tools and equipment</td>
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<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Refer to the Electric Policy on High Velocity Powder Actuated, High Velocity Fastening.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Refer to the Electric Policy on High Velocity Powder Actuated, High Velocity Fastening.</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
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<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Admin</td>
<td>Wear eye and ear protection when firing</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>Powered tools and equipment</td>
<td>Equipment / technique failure</td>
<td>Powered Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>When not in use, the tool, chargers and accessories are to be securely locked in the lockable carry bag or other secure lockable containment</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
</tr>
<tr>
<td>Work at height</td>
<td>Equipment / technique failure</td>
<td>Powder Actuated Tools - Ramset, Hilti</td>
<td>Risk: Serious harm from contact with compressed air tools.</td>
<td>All Locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Isolate work area from other persons</td>
<td>Yes</td>
<td>12</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>18</td>
<td>Admin</td>
<td>Refer to Worksafe ASOP for Powder Actuated, High Velocity Fastening.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
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<td>18</td>
<td>Admin</td>
<td>Refer to the Electric Policy on High Velocity Powder Actuated, High Velocity Fastening.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
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<tr>
<td>Social factors or behaviours</td>
<td>Public Safety</td>
<td>Risk: Harm to persons beyond our control</td>
<td>Risk: Harm to persons beyond our control.</td>
<td>All Locations</td>
<td>12</td>
<td>Admin</td>
<td>Ensure appropriate signage in place.</td>
<td>Yes</td>
<td>1</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>Risk: Harm to persons beyond our control</td>
<td>Risk: Harm to persons beyond our control.</td>
<td>All Locations</td>
<td>12</td>
<td>Admin</td>
<td>Site to be securely fenced or hoarded off from the public.</td>
<td>Yes</td>
<td>1</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
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<td>Risk: Harm to persons beyond our control</td>
<td>Risk: Harm to persons beyond our control.</td>
<td>All Locations</td>
<td>12</td>
<td>Admin</td>
<td>Traffic Management Plan to be implemented</td>
<td>Yes</td>
<td>1</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<td>Public Safety</td>
<td>Risk: Harm to persons beyond our control</td>
<td>Risk: Harm to persons beyond our control.</td>
<td>All Locations</td>
<td>12</td>
<td>Admin</td>
<td>Footpaths and other areas outside the site boundary to remain clear of any site activity.</td>
<td>Yes</td>
<td>1</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
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<td>Public Safety</td>
<td>Risk: Harm to persons beyond our control</td>
<td>Risk: Harm to persons beyond our control.</td>
<td>All Locations</td>
<td>12</td>
<td>Admin</td>
<td>Ensure scaffolds over 3 metres in height are checked, tagged and hoarded over for use.</td>
<td>Yes</td>
<td>9</td>
<td>As site supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td>Yearly</td>
<td></td>
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<tr>
<td>Work at height</td>
<td>Fall / equipment / positioning</td>
<td>Scaffolding</td>
<td>Risk: collapse, distortion, fall from height, falling objects and materials.</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Ensure scaffolds are erected, maintained, aligned and dismantled by a competent scaffold worker is in place. Refer to: Scaffolding and Rigging New Zealand Best Practice Guidelines for Scaffolding.</td>
<td>Yes</td>
<td>9</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
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<td>Work at height</td>
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<td>9</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Social factors or behaviours</td>
<td>Extreme behaviour</td>
<td>Security</td>
<td>Risk: attack when working outside of normal hours and in areas where staff is isolated.</td>
<td>All locations</td>
<td>9</td>
<td>Engineering / Isolation</td>
<td>Keep areas locked to prevent entry from unauthorized personnel. Provide adequate lighting and traffic control if required.</td>
<td>Yes</td>
<td>9</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Social factors or behaviours</td>
<td>Extreme behaviour</td>
<td>Security</td>
<td>Security of site</td>
<td>All locations</td>
<td>9</td>
<td>Engineering / Isolation</td>
<td>Place a high intensity light on site with radius to ensure no vehicles and access to authorized vehicles only.</td>
<td>Yes</td>
<td>9</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Natural event</td>
<td>Severe Weather (including tornadoes)</td>
<td>Risk: death or serious harm from falling and windblown objects and materials.</td>
<td>All locations</td>
<td>25</td>
<td>Habitat</td>
<td>Refer to SI Emergency Response plan. Monitor the marine weather watch and warning system. Staff are to be aware that thunderstorms may lead to tornado-like downbursts from windows and seeks safety inside a permanent building, centre of a permanent building.</td>
<td>Yes</td>
<td>11</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Condition of the workplace</td>
<td>Housekeeping</td>
<td>Slip, Trip and Falls</td>
<td>Risk: harm from slips, trips or falls.</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Report any defects immediately. Ensure good housekeeping is in place. Keep aisles and other clear ways free of trip and obstruction. Ensure power leads are not trip hazards. Where power leads can’t be relocated, keep to floor or elevate (e.g. over doorways; supported by wall or a structure)</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Condition of the workplace</td>
<td>Housekeeping</td>
<td>Housekeeping</td>
<td>Risk from obstacles become a hazard and sucked into appliance engines.</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>Use lids on rubbish bins and other means of containment. Schedule regular clean ups. Ensure all areas of the issue regular.</td>
<td>Yes</td>
<td>6</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Extreme natural events</td>
<td>Natural event</td>
<td>Solar Radiation</td>
<td>Risk: includes all skin cancers, e.g. melanoma.</td>
<td>All locations</td>
<td>9</td>
<td>IPS</td>
<td>Refer to Section 8; Measure and Evaluation, Safety Management Plan. Use personal protective equipment worn on the skin. Work in the shade or indoors where possible when UV index is above 5 to between the hours of 10am and 4pm from September to April.</td>
<td>Yes</td>
<td>5</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Condition of the workplace</td>
<td>Housekeeping</td>
<td>Suspended Ceiling Hanging Tins</td>
<td>Risk: eye damage</td>
<td>All locations</td>
<td>9</td>
<td>IPS</td>
<td>Build away out of the way Wear hard hat Wear safety glasses</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Vehicles</td>
<td>Loss of control - on site</td>
<td>Traffic (site)</td>
<td>Risk: death or serious harm from contact with moving vehicle.</td>
<td>All locations</td>
<td>18</td>
<td>Engineering / Isolation</td>
<td>The site is to be fully isolated and fenced. Isolation zones are to be specified in the construction.</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Vehicles</td>
<td>Loss of control - on site</td>
<td>Vehicle plant movement on site, and between sites and roads. (includes transport)</td>
<td>Risk: death or serious harm from contact with moving vehicle.</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Do not walk, walk, or move behind vehicles. Establish traffic movement routes about the site. Traffic control is to be in place on movements between road and site. Refer to WorkSafe AcOP for Operator Protective Systems.</td>
<td>Yes</td>
<td>9</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
</tr>
<tr>
<td>Mobile plant and equipment</td>
<td>Loss of control - on site</td>
<td>Mobile  (also refer to the hazard of fire)</td>
<td>Risk: uncontrolled fire, welding flashes.</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Remove all combustible materials from the area. Ensure fire extinguisher is available. Desire work permit. Site safety officer may be required. Provide screens to prevent welding flash for people in the vicinity. Provide for blanks to contain sparks.</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
<td></td>
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</table>
## Hazard Category

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<th></th>
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<tbody>
<tr>
<td>Mobile plant and equipment</td>
<td>Loss of control</td>
<td>Woodworking Machinery, Metal Working Machinery</td>
<td>Risk: Contact with moving parts, noise, dust and material given off.</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Correct PPE to be worn for eye and ear protection; some machines may require hand protection. Guards are to be correctly adjusted and protection against contact to be provided.</td>
<td>Mining areas are to be guarded. Operations are to be positioned so that noise, dust and material are not given off.</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
</tr>
<tr>
<td>Vibration</td>
<td>Exposure</td>
<td>Plant and machinery close to neighbours</td>
<td>Storage to property or services due to vibration (especially pile driving, use of vibro hammer, breakers or vibrating rollers)</td>
<td>All locations</td>
<td>12</td>
<td>Engineering / Isolation</td>
<td>Drive pile driving/Vibro hammer: Use for pile driving near neighbours will be coordinated with the Main Contractor Environmental Reps in advance so that neighbours can be informed and monitoring can be undertaken.</td>
<td>Confirm condition assessments completed by Main Contractor.</td>
<td>Yes</td>
<td>8</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
</tr>
<tr>
<td>Manual handling and material handling</td>
<td>Handling of materials</td>
<td>Work near known archaeological sites or Work in areas archaeological sites may be found</td>
<td>Storage to archaeological sites, not recognizing newly discovered archaeological site and subsequently damaging them.</td>
<td>All locations</td>
<td>8</td>
<td>Engineering / Isolation</td>
<td>Ensure Archaeological sites are identified and fenced off before starting work, and team briefed on location and significance. Contact Main Contractor Enviro Rep/Project Archaeologist to arrange stand over if entry is required. If a suspected archaeological discovery is made (e.g. midden, bones, brick): Stop works in the immediate area (10-20m). Notify the Main Contractor Env Rep/Archaeologist immediately; do not restart until directed. Notify the Environmental Manager.</td>
<td>Yes</td>
<td>4</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
<td>Site Manager</td>
</tr>
<tr>
<td>Condition of the workplace</td>
<td>Housekeeping</td>
<td>Housekeeping / Waste</td>
<td>Missed opportunity to reuse/ recycle materials</td>
<td>All locations</td>
<td>15</td>
<td>Engineering / Isolation</td>
<td>Waste to be recycled where possible and placed in appropriate bins.</td>
<td>Refer to Waste Management Procedure ENV-14</td>
<td>Yes</td>
<td>7</td>
<td>As arises</td>
<td>Site Supervisor</td>
<td>Annually</td>
</tr>
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</table>
• Provide site HS & E plan and a Traffic management for this site.

• Parking will be located at a specified area of site.
• Signs shall be placed along the access road to indicate path.

• The Proposed site area will be fenced with chain link fencing to ensure vehicles do not leave proposed area.

• Employees understand company policies regarding the Airport operations and Traffic Management.

• Company vehicles and equipment that are not personally allocated are locked and disabled overnight and on the weekends.

• There is only one main entrance / exit to the site.
• All site entrances are monitored by security personnel.
Scope of Traffic Management

Traffic Management

Scope

The routes need to be suitable for the persons or vehicles using them, in suitable positions and sufficient in number and size.

The term ‘vehicles’ includes: cars, vans, heavy vehicles, low-loaders and mobile plant such as excavators, lift trucks and site dumpers etc.

Construction site vehicle incidents can and should be prevented by the effective management of transport operations throughout the construction process.

Key issues in dealing with traffic management on site are:

- Keeping pedestrians and vehicles apart
- Minimising vehicle movements
- People on site
- Turning vehicles
- Visibility
- Signs and instructions

Inadequate planning and control is the root cause of many construction vehicle accidents.

Control site access

The job site should have only one access point, allowing for close monitoring of comings and goings from the site. Employee / contractor parking areas will be outside the construction fence or in a clearly designated area within the fence line; workers should be easily identified and have credentials that indicate site access. No trespassing signs shall be posted in conspicuous areas throughout the job site and a list of employees who have after hour access to the property should be available to the police.
Responsibilities of a Security Guard

- Site security guard shall be available at gate to control entry of contractor personnel. This Guard will be TAL appointed at FCC cost.
- Security guard at gate shall have the authority to allow visitors with prior approval from Branch Manager and Project Manager.
- Security guard shall enter such visitor in their register with name of the person, purpose, time in and time out.
- Security guard will also have to register the registration number of the vehicle.

Keeping pedestrians and vehicles apart

The following actions will help keep pedestrians and vehicles apart:

- Entrances and exits - provide separate entry and exit gateways for pedestrians and vehicles.
- Walkways - provide firm, level, well-drained pedestrian walkways that take a direct route where possible.
- Crossings - where walkways cross roadways, provide a clearly signed and lit crossing point where drivers and pedestrians can see each other clearly;
- Visibility - Drivers driving out onto public roads can see both ways along the footway before they move on to it.
- Obstructions – Walkways will be clear of obstructions so that pedestrians don’t have to step onto the vehicle route
- Barriers – Barriers will be installed between the roadway and walkway.

Minimising vehicle movements

Good planning can help to minimise vehicle movement around a site. For example, landscaping to reduce the quantities of fill or spoil movement.

- To limit the number of vehicles on site:
- We shall provide car and van parking for the workforce and visitors away from the work area.
- We shall control entry to the work area.
- Plan storage areas so that delivery vehicles do not have to cross the site.
People on site

- Fletcher shall take steps to make sure that all workers are fit and competent to operate the vehicles, machines and attachments they use on site by, for example:
  - checks when recruiting drivers/operators or hiring contractors;
  - training and inductions shall be given to drivers and operators;
  - manage the activities of visiting drivers.

People who direct vehicle movements (spotters) shall be trained and authorised to do so.

Turning vehicles

- The need for vehicles to reverse shall be avoided where possible as reversing is a major cause of fatal accidents.
- One-way systems can reduce the risk, especially in storage areas.
- A turning circle could be installed so that vehicles can turn without reversing.

Visibility

If vehicles reverse in areas where pedestrians cannot be excluded the risk is elevated and visibility becomes a vital consideration.

Fletcher shall consider:

- Aids for drivers - mirrors, CCTV cameras or reversing alarms that can help drivers can see movement all-round the vehicle.
- Spotters - who can be appointed to control maneuvers and who are trained in the task.
- Lighting - so that drivers and pedestrians on shared routes can see each other easily. Lighting may be needed after sunset or in bad weather.
- Clothing - pedestrians on site shall wear high-visibility clothing.
Signs and instructions

All drivers and pedestrians shall know and understand the routes and traffic rules on site.

- Use standard road signs where appropriate
- Provide induction training for drivers, workers.
- Visitors will be accompanied while on site at all times

Degradation of site access

Site access will be monitored on a weekly basis. Up keep and maintenance shall be done when required to ensure the only access point is in good order.
Proposed Site Access Plan

Proposed Access route into site

Approx Site area (Indication only)

THE FLETCHER CONSTRUCTION COMPANY
Document Status

The most recent revision of this document is listed on FCC-MN-8001 Integrated Management System Documentation Schedule.

Introduction

1.1 Purpose

This procedure describes the measures to be taken to prevent adverse environmental effects associated with construction waste.

1.2 Scope

The following procedure is applicable to all solid and liquid waste generated from project activities, including waste from office and domestic facilities, litter and solid waste created during construction but excluding storm water and run off.

References

Resource Consent and Project Specification requirements (as applicable)

HSG15 Hazardous Substance Storage and Handling

ENV-10 Waste Concrete and Grout

Templates

Waste Management Plan Template

2 Procedure

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsibility</th>
<th>Key Actions</th>
<th>Records</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning the Work</td>
<td>Project Manager / Project Environmental Rep / Environmental Manager</td>
<td>▶ Review Specifications and requirements of Sustainability Rating.</td>
<td>Waste Management Plan</td>
<td>Project Specifications Sustainability Rating Manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▶ Ensure required environmental plans, and any other required documentation is submitted and approved to the relevant parties, e.g. the client, prior to commencing site works.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▶ Ensure systems are in place to monitoring the implementation of the plan and track progress with targets.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>▶ Ensure the relevant people have received the appropriate training to competently carry out their duties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Construction Manager/ Project Engineers</td>
<td>▶ Assist the Environmental Manger in waste management duties.</td>
<td>Induction Toolbox talks</td>
<td>Waste Management Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▶ Where possible identify and implement waste minimisation or reuse schemes.</td>
<td></td>
<td>Construction Environmental Management Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▶ Communicate waste management requirements to all relevant site personnel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environmental Manager/ Project Environmental Manager</td>
<td>▶ Monitor waste management procedures to ensure compliance with this procedure and project requirements</td>
<td>Inspection records</td>
<td>Waste Management Plan</td>
</tr>
</tbody>
</table>
2.1 Environmental Effects

The key potential environmental aspects and impacts related to waste generation include the following:

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste generated from construction, office activities etc.</td>
<td>Disposal to landfill leading to reduced capacity, landfill gas and leachate generation.</td>
</tr>
<tr>
<td></td>
<td>Loss of positive benefits of reuse/recycling.</td>
</tr>
<tr>
<td></td>
<td>Potential impacts of hazardous waste storage and disposal.</td>
</tr>
<tr>
<td></td>
<td>Hazards to aquatic and terrestrial wildlife.</td>
</tr>
<tr>
<td>Generation and dispersal of litter</td>
<td>Visual impacts</td>
</tr>
<tr>
<td></td>
<td>Health and safety hazard</td>
</tr>
<tr>
<td>Generation of waste water from office and other facilities</td>
<td>Pollution of ultimate receiving water body.</td>
</tr>
</tbody>
</table>

2.2 Waste Reduction

As far as practicable, the generation of waste will be minimised toward the ultimate aim of zero waste to landfill through the following mechanisms:

- Consideration of material life cycle and potential waste arising during the design phase,
- Careful programming of work and purchase of materials to minimise wastage, and
- Minimising the footprint of the works as far as practicable.

2.3 Reuse of Waste

Where the generation of waste cannot be prevented options for its reuse will be adopted where practicable, for example:

- Reuse of soil, sand and aggregates generated from earthworks within the project or at alternative sites where practical,
- Reuse of vegetation that can be retained or transplanted, and
- Reuse of empty containers, drums etc. where practical (excluding hazardous substance containers).
- Suitable timber or steel may be sold for reuse.

2.4 Recycling of Waste

Where practicable waste arising from all activities will be segregated and recycled, for example:

- Waste metal can be recycled by a third party.
- Hardfill, i.e. waste concrete, can be recycled by a third party.
- Timber waste can be recycled by a third party.
- Vegetation unsuitable to be replanted can be mulched for reuse along the route.
- Cardboard can be recycled by a third party.
Waste arising from the office compound will be segregated, including:
- All waste paper generated within the office is to be placed into paper recycling bins for collection by the recycler on a regular basis;
- Waste printer ink cartridges and toners are to be returned to the supplier for recycling;
- All waste glass, cans and plastic will be segregated and recycled where possible.
- All organic/food waste will be segregated and composted where possible.

2.5 Hazardous Waste
Hazardous wastes will be generated as a result of site works, these are likely to include:
- Waste oils
- Waste chemicals
- Contaminated rags and spill material
- Hazardous Substance Containers.

All hazardous waste must be managed in accordance with HSG15 Hazardous Substance Storage and Handling.

2.6 Storage of Waste
- As far as possible wastes will be segregated for reuse and recycling with storage containers provided for each waste type.
- No waste will be stored uncontained.
- No liquid waste will be discharged direct to the ground or water bodies.
- All hazardous wastes must be stored in secure containers within the Hazchem depots.

2.7 Litter
- Sufficient waste collection points will be provided in order to avoid the generation of litter.
- All personnel on site are responsible for the collection and appropriate disposal of litter generated on site.

2.8 Waste disposal
All waste disposed off-site must be transported and disposed of by approved contractors.
## Document History and Status

<table>
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<th>Status</th>
<th>Author</th>
<th>Date</th>
<th>Revision Description</th>
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<tr>
<td>1</td>
<td>Issued for use</td>
<td>Sandra Edwards</td>
<td>27/02/2017</td>
<td>Initial Procedure</td>
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<td>Reviewed by</td>
<td>Sandra Edwards</td>
<td>Infrastructure National Environmental and Sustainability Manager</td>
<td>27/02/2017</td>
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<td>Infrastructure National Environmental and Sustainability Manager</td>
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