




Faleolo International Airport: Design & Construct: Pavements, Drainage & Service Infrastructure

Contractor's Compound, Asphalt Plant & Laydown Area

Environmental Management Plan

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|-------------------------------------|--|---|
| | | |
| Project: | Samoa Aviation Investment Project (SAIP) Faleolo International Airport Design & Construct, Physical Works: Pavement, Drainage & Service Infrastructure | |
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| | |

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Approvals

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Figure 1: APW general existing airport layout (Source: Aerial photography from Google Earth Pro, dated 4 January 2015 via AECOM SAIP IESMP.).

Contractor's Compound - Approximate Location

RELATIONSHIP OF THIS PLAN TO OTHER FALEOLO MANAGEMENT PLANS

This Environmental Management Plan applies to facilities within the Contractor's Compound located as Figure 1 above.

This Contractor's Compound Environmental Management Plan (CCEMP) is a sub-plan of the Contractor's Environmental & Social Management Plan (CESMP) and the provisions of the CESMP and applicable sub-plans also apply to this site. The relevant sub-plans are:

- Traffic Management Plan
- Waste Management Plan

The Faleolo Project Grievance Redress Mechanism (GRM) applies to all activities on this site. GRM access details are included in the Compound's gate signage.

1.0 General

This Environmental Management Plan (EMP) has been prepared for the Ammann Asphalt Plant and associated office, laboratory, workshop and staff facilities, to be temporarily situated in Downers Compound/Laydown at Faleolo International Airport in Samoa. This Environmental Plan sets out the procedures which are designed to meet Company requirements and legislative obligations.

The main benefit of an effective Environmental Management Plan (EMP) is protection of the environment from the potential impacts of activities associated with the operation of the Asphalt Plant and associated facilities which will be temporarily operating at Faleolo International Airport, Samoa and to maintain and improve the quality of the environment.

This plan will reference, but not duplicate, what is adequately covered in Downer's ISO9001:2008 Certified Quality System, AS/NZS4801:2001 Health and Safety System and ISO14001:2004 Environmental Management System. This Plan should be read in conjunction with the Safety Management Plan, Quality Management Plan and the Contractor's Environmental & Social Management Plan (CESMP), as appropriate.

Other related documents include the Emergency Response Plan. Reference is made, as appropriate, to internal Downer procedures, work instructions and green pages, and external documents provided by regulatory bodies such as EPA, WorkSafe NZ and other relevant organisations.

This plan was initially prepared to support Downers application for a Development Consent from the Ministry of Natural Resources and Environment (MNRE) for the Contractor's Compound/Laydown site at Faleolo International Airport. In due course, it is expected that the Samoa Aviation Authority will seek a Development Consent for the overall Faleolo Project. Any Development Consent(s) gained and the contents of this EMP will be included in a future revision(s) of the Contractor's Environmental & Social Management Plan (CESMP).

1.1 Definitions

| | |
|---|---|
| Health & Safety Manager (HSM) aka Occupational Health & Safety Officer (OHSO) | The Health & Safety Manager (HSM)/Occupational Health & Safety Officer (OHSO) is a qualified safety and environmental professional. They will provide support to the Project Manager and Asphalt Manager and monitor environmental aspects of site operations. |
| Environmental Aspects | Any aspect of the planned work which has the potential to have a positive or negative impact on the environment. Environmental Management seeks to maximise positive impacts (e.g. improving drainage) and eliminate or reduce negative impacts. |
| Contractor's Compound, Asphalt Plant & Laydown Area | The area of SAA land at Faleolo International Airport where an asphalt plant was previously located for runway resurfacing work in 2000. It is proposed to temporarily set up a transportable asphalt plant on a 10,000 m ² area adjacent to Gate C4 to produce hot mix asphalt for apron, taxiway and runway resurfacing work. The Compound will also contain staff facilities (rest area & ablutions facilities etc), site office, quality control laboratory, aggregate and materials storage, plant parking and workshop. There will be no worker residential accommodation on site. |

1.2 Acronyms

| | |
|-----|--------------------------------|
| EGM | Executive General Manager |
| HSE | Health, Safety and Environment |

1.3 Environmental Management System

Downer operates an Environmental Management System certified to NZS 14001:2004. This Environmental Plan sets out the procedures which are currently practiced and designed to meet the Company requirements, legislative obligations, and the environmental expectations of site operation. This system is audited in all regions by Telarc SAI Limited on a sample audit basis. A copy of the current Certificate of Registration, which sets out of the scope of certification, is included in Appendix 12

2.0 Objectives of the Environmental Plan

2.1 Introduction

Environmental objectives are established to support our Environmental Policy, as set out above. Overall, this includes a commitment to delivering our services in a safe and environmentally responsible manner. This Environmental Plan sets out site-specific objectives, environmental control measures necessary and how they will be achieved on this temporary site at the Faleolo Airport.

The overall purpose of this EMP is as follows:

- Describe the management arrangement for eliminating or controlling environmental risks
- Promote acceptable standards of environmental management at the plant and associated facilities.

The Management Team's aim is to minimise potential for environmental harm.

2.2 Environmental Objectives and Targets

The Occupational Health & Safety Officer, in conjunction with the Management Team, is responsible for setting environmental objectives and targets which are consistent with Downer's Environmental Policy and national objectives and targets. The objectives and targets that apply to this site, taking into account both site specific requirements and national intent, will be set when the Development Consent conditions are known. These objectives are to be reviewed within 3 months to ensure they are specific to the temporary operation of the Ammann Asphalt Plant at the Faleolo Airport to ensure they are measurable, achievable, relevant and time bound.

When establishing or reviewing these environmental objectives, the following considerations are taken into account:

- Legal and other requirements (e.g. conditions associated with resource consents)
- Significant hazards / environmental aspects
- Technological options
- Financial requirements
- Operational requirements
- Business requirements
- The views of interested parties
- Emergency procedures and planning.

2.3 Communication

Objectives and targets are communicated to staff through toolbox and general meetings; posters and newsletters, and they are also displayed throughout the site.

This plan shall be communicated to all staff and sub-contractors to inform of the environmental effects, controls and opportunities associated with the operation of the Ammann Asphalt Plant while working at this temporary location at the Faleolo Airport.

Communication of the EMP will be undertaken and achieved, as a minimum, by the following means:

- EMP Operational Summary displayed on site
- A copy of the detailed EMP (this document) retained on site
- Personnel and subcontractor inductions
- Pre-start meetings
- Monthly or weekly site meetings

All aspects which have been identified as having potential to cause significant environmental harm will have detailed work instructions, Standard Operating Procedures or Significant Hazard Control Plans (SHCP's) as appropriate.

In addition, Downer has defined '10 Environmental Principles' which are to be displayed and communicated to all staff and subcontractors as set out in Appendix 10. The purpose of these principles is to establish key areas of focus in terms of our environmental management practices and to provide guidance on our minimum environmental expectations.

3.0 EMP Responsibilities

This section describes the organisational structure for environmental management and outlines the responsibilities of the key personnel responsible for implementing this Environmental Management Plan. Key personnel are the **Senior Plant Operator, Asphalt/Bitumen Plant Manager** and **Health & Safety Manager**. Further details are summarised below. In addition, all employees have a responsibility to identify and report all environmental aspects within the workplace to their immediate supervisor, and for monitoring the environmental awareness practices of our subcontractors. These responsibilities will be communicated to them during the site induction.

Commitment and continuous improvement to the environmental culture by management is critical to its success and continuation. An SQE Manager is employed and environmental matters are discussed at all management meetings, as appropriate, and as noted below, environmental responsibilities are written into employee job descriptions.

Key environmental responsibilities of relevance to this plant can be summarised below:

| Role | Environmental Responsibilities |
|---|--|
| Asphalt/Bitumen Plant Manager / Safeguards Specialist | <ul style="list-style-type: none">▪ Set environmental objectives and targets locally.▪ Review and approve any changes to this EMP within 3 months.▪ Monitor compliance with objectives and targets for the duration of this project.▪ Follow up on any preventative and corrective actions from audits. |
| Senior Plant Operator | <ul style="list-style-type: none">▪ Conduct weekly inspections of the site to ensure compliance with this plan, environmental legislation and Downer procedures.▪ Ensure compliance with Regional and District Plans, consents, permits and New Zealand legislation.▪ Ensure employees are conversant with the requirements of this plan.▪ Report and investigate environmental incidents, near misses or complaints and report with recommendations for prevention.▪ Respond to environmental incidents on site such as spills. |

| Role | Environmental Responsibilities |
|--------------------------------------|--|
| Occupational Health & Safety Officer | <ul style="list-style-type: none"> ▪ Ensure the EMP is reviewed, updated, implemented and monitored to ensure operations are carried out in accordance with the Plan. ▪ Ensure compliance with Regional and District Plans, consents, permits and New Zealand legislation. ▪ Develop and implement environmental audit programme; write up audit report and hold records. ▪ Conduct 6-monthly site audit to review site performance and compliance with this plan, legal requirements and progress against objectives and targets. ▪ Monitor induction training programme and store signed induction records. ▪ Co-ordinate training programme and assist training of employees. ▪ Ensure all staff are familiar with environmental requirements on site. ▪ Ensure that subcontractors have received an HSE induction and that records are retained. ▪ Identify, report and investigate environmental hazards within the workplace and maintain the significant hazard control plans. ▪ Prepare emergency procedures in conjunction with the Senior Plant Operator & Asphalt/Bitumen Plant Manager. <p>Report and investigate environmental incidents, near misses or complaints and report with recommendations for prevention.</p> |

In addition to the responsibilities defined above, all employees have a responsibility to identify and report all environmental hazards within the workplace to their immediate supervisor or manager, and for monitoring the environmental awareness practices of our contractors. These responsibilities will be communicated to employees during induction. All employees, including sub-contractors, have a responsibility to monitor and speak up regarding environmental issues, practices or solutions. All environmental aspects are to be reported in writing to the immediate Supervisor or Manager, who will arrange necessary action to manage them.

4.0 Environmental Aspects

The Occupational Health & Safety Officer, in conjunction with the Senior Plant Operator, Asphalt/Bitumen Plant Manager, employees and subcontractors (where appropriate), shall collate and maintain an environmental aspects (hazard) register for this plant. The current register for this plant is set out in Appendix 2.

This involves identifying those elements of activities that can interact with the environment. It includes normal and abnormal events. All environmental hazards will be rated with a level of significance, allowing objectives and targets for environmental performance to be set and prioritisation of activities to be made. Identification of hazards shall take account of the following (as applicable):

- Discharges to air (e.g. dust) or water (e.g. surface runoff; spills)
- Protection of native flora and fauna
- Disturbances to land
- Disposal of materials and wastes
- Hydrocarbon and materials management
- Weed control strategies
- Water take restrictions
- Legal and other requirements
- Sensitive environments

Significant environmental aspects (hazards) are those with a risk rating of red or orange. In the absence of work instructions, or Standard Operating Procedures (SOPs), Significant Hazard Control Plans (SHCPs) or aspect-specific management plans will be established, maintained and reviewed as required for all activities identified with the potential to cause significant adverse environmental effects.

This EMP and appendices will be reviewed within 3 months and updated where necessary. A review and update of the environmental aspect (hazard) register specifically can be prompted by, but may not necessarily be restricted to, any one of the following:

- An incident
- Changes to legislation or applicable Development Consents
- Reported aspects from employees/contractors
- Achievement of objectives and targets
- Changes to plant operation.

4.1 Air Quality Management

To meet common requirements in regards to discharges to air from industry, the filtration equipment installed on the Ammann Asphalt Plant will reduce total particulate discharge via the main stack to a concentration of less than 20 mg/Nm³. Levels of PM₁₀ discharged will be less than 20 mg/Nm³ and therefore at this level of concentration is considered less than minor.

This bag house will also remove larger particulate matter, mitigating the effect of suspended and deposited particulate matter.

Discharge to be via a chimney stack at least 12 metres above ground level, directed vertically into the air and shall not be impeded by any obstruction above the stack which decreases the vertical efflux velocity.

4.2 Dust

As a result of the bag filter system on this plant, the stack emissions of dust or particulate matter that may deposit on surfaces is expected to be minor.

To minimise the entrainment of dust in the air, a number of controls are in place such as reducing the drop distances between the hot bins and trucks, use of water sprinklers, water trucks and yard sweepers will also be used as appropriate.

4.3 Water Consumption and Management

With the exception of discharges to air, there are no additional discharges to water or land. The plant will be monitored by the Senior Plant Operator and a management system will be in place to ensure regular inspections, servicing and maintenance of the plant to ensure site discharges are kept to a practical minimum.

5.0 Site Drainage Systems

| | |
|--------------------------|--|
| On-site drainage systems | <i>There is no existing piped drainage system within the Compound area The site falls naturally to an area of waste ground covered by low value vegetation where runoff can infiltrate. Bunds will be formed to direct runoff to this area</i> <i>For details see the Erosion & Sediment Control Plan included in Appendix 2.</i> |
| Bunding in place | <i>Tanks will be bunded to contain any overflow or spills.</i> |

6.0 Sensitive Environmental Features

There are no sensitive environments in the proximity of this plant. *The temporary establishment of this asphalt plant is within the boundaries of the Airport which has been in operation for many years. The airport is an accepted part of the environment and the surrounding area.*

The nearest occupied dwellings to the site are beyond the 08 end of the runway approximately 1.5km to the east.

7.0 Asphalt Plant Erection, Dismantling & Site Rehabilitation

The asphalt plant is modern (made in 2015 in Germany by Ammann), fully transportable and requires no permanent foundations or structures to erect. It is located on the site so that its 12m high exhaust stack is below the 1:7 side slope for the Faleolo runway.

A medium size crane is required to lift elements into position.

The asphalt plant and other facilities on site will use water taken from the existing SAA supply to the airport.

Feedstock storage areas will have geotextile placed to prevent contamination of the stored aggregates. The geotextile, and any surplus aggregate, will be removed at the end of the Project. Stockpiles are intended to be continually replenished as the work progresses.

When the asphalt work is complete the plant will be taken apart, thoroughly cleaned and prepared for shipping to its next project.

All rubbish and waste will be removed from the site and the vegetation and topsoil placed in bunds during the original site preparation will be respread over the areas used for the asphalt plant, feedstock storage, laydown etc etc.

The whole area used for the office, materials storage and asphalt plant etc will be smoothly contoured and left without water retaining hollows.

8.0 Hazardous Substances

The principal hazardous substances stored and used on site at the Plant are:

- Hot Bitumen
- Diesel

All hazardous substances stored on site are listed in the Hazardous Substances Register in [Appendix 7](#), as are the hazard classes and approximate volumes stored.

Dangerous and hazardous substances shall be stored on site in appropriately banded and secure containers.

Spill control systems will be implemented as set out in the Site Emergency Response Plan, and as summarised in Section 15 below. The hazardous substances register is located in the Emergency Response Plan, and is used to record all hazardous substances that come onto the site.

9.0 Waste Management

Significant wastes produced from site activities are recorded in the Waste Management Register, set out in Appendix 8, which is subject to periodic review. Where practical, waste streams are segregated for re-use or recycling, and opportunities to minimise waste are implemented.

Special wastes, such as those that are hazardous to human health or the environment, are to be disposed of safely, through an appropriate contractor, authorised to handle, transport and process, or safely dispose of the waste concerned. Requirements will vary dependent upon the waste involved.

The companion Waste Management Plan prepared for this Project provides further and fuller detail.

10.0 Environmental Training

Suitable induction and ongoing environmental training programmes are established and maintained to ensure employees, and sub-contractors (where relevant), are aware of:

- The importance of conformance with the Environmental Policy and procedures and with the requirements of this Environmental Plan and company procedures.
- The significant environmental hazards, actual or potential, of their activities and the environmental benefits of improved personal performance.
- Their roles and responsibilities in achieving conformance with the environmental policy, company procedures and this plan.
- The potential consequences of departure from specified procedures.
- Spill response and emergency procedures.
- Accident and incident reporting and methods of prevention.

The Downer Integrated Business Management Systems (IBMS) are designed to ensure that personnel performing tasks associated with significant environmental hazards shall be competent on the basis of education, training and/or experience. Refreshers shall be conducted biannually, or when a change to the system requires it. The ZH Advisor co-ordinates these training programmes based on individual needs. Training implementation and competency is assessed during internal and external audits.

11.0 Site Inductions

The induction training programme, controlled by the Health & Safety Manager, will include core topics such as:

- company environmental policies and procedures, environmental awareness
- accident and incident reporting and methods of prevention (including EMSR01)
- spill response
- environmental hazard identification and management
- emergency procedures.

All personnel, including sub-contractors, will complete an induction prior to commencing work on this site

Signed induction records will be retained on the Induction Register.

12.0 Environmental Compliance Management and Review

While operating this plant, Downer staff and their contractors shall comply with the provisions of all applicable environmental legislation to ensure that adverse effects on the environment are avoided, remedied or mitigated.

The Asphalt/Bitumen Plant Manager, in conjunction with the Occupational Health & Safety Officer, is responsible for ensuring that verification of compliance with environmental legislation and objectives and targets is carried out on a regular basis.

Compliance shall be a regular agenda item at contract meetings, and plant management meetings, as appropriate. Minutes from each meeting shall record and assign actions to individuals as appropriate

12.1 Consultation with Regulatory Authorities

The Safeguards Specialist shall be advised of any formal consultation with regulatory bodies. A record shall be kept of all formal communications with regulatory bodies, where required.

12.2 Development Consents and Approvals

At all times, appropriate permissions need to be obtained prior to any change to operations or emissions at the site. If the need arises for new activities to be undertaken on site further consent will be obtained.

Specific activities that may require authorisation are likely to include (but not necessarily be limited to), the following:

- discharges to water
- discharges to air
- emission of unreasonable noise during works.

It is the responsibility of the Project Manager and Asphalt/Bitumen Plant Manager to ensure that all required consents have been obtained by Downer, that copies of the consents are kept on site (refer Appendix 3) and that all conditions are clearly identified and complied with. A copy of the resource consent and associated assessment of environmental effects shall be forwarded to the Occupational Health & Safety Officer for reference and uploaded to the Resource Consent database.

12.3 Monitoring, Measuring and Evaluation

In addition to auditing, on a regular basis, the key characteristics of plant operations and activities that can have a significant harm on the environment shall be monitored and measured, including the recording of information to track performance, relevant operational controls and conformance with Downer environmental objectives and targets. This shall include, but not be restricted to, compliance monitoring in relation to any development consent conditions that apply.

Monitoring equipment (where applicable) shall be calibrated and maintained, and records of this process shall be retained.

Provisions relating to environmental inspections and audits are set out in Sections 12.4 and Section 12.5.

12.4 Environmental Inspections

A weekly checksheet is provided in Appendix 55, to be utilised to perform routine weekly inspections of site conditions, plant activities and overall compliance with environmental requirements that apply. The intention is that this checksheet will take no more than 20 minutes to complete, and that results from the inspection will be provided to the ZH Manager within 24 hours of completion.

All Downer management and supervisory personnel are required to perform monthly site inspections and/or safe behaviour conversations, in order to confirm that environmental matters are being managed according to protocols. Responsibilities include remedying any defects, unsafe or environmentally unacceptable practices.

A monthly environmental inspection checklist for temporary sites is set out in Appendix 66, and sets out key environmental aspects that require ongoing monitoring and reporting to ensure compliance.

12.5 Environmental Audits

Downer will ensure, through the application of audits, workplace inspections and toolbox meetings, that all contractual, legislative, and site specific environmental management requirements are met.

Downer has established programmes and procedures for periodic (6 or 12 month) management system audits. In relation to this plant, the purpose of regular internal audits will be to determine the adequacy, effectiveness and appropriateness of the Environmental Management Plan. In addition, audits may include regulatory compliance inspections and reports, in line with resource consent conditions. A template for this purpose is set out in Appendix

12.6 Non-conformance, Corrective and Preventative Action

Downer has an established and maintained procedure for defining environmental responsibility and authority for handling and investigating non-conformance, taking action to mitigate any harm caused, and for initiating and completing corrective and preventative action.

The standard form for reporting non conformances (NCRs) and opportunities for improvement (OFIs) should be used if an environmental non-compliance incident occurs. An environmental investigation will be carried out and an NCR/OFI form completed and communicated with appropriate parties and recorded on the local NCR register.

Any corrective or preventative action taken to eliminate the causes of actual and potential non-conformance shall be appropriate to the magnitude of problems and commensurate with the level of environmental risk.

The Asphalt/Bitumen Plant Manager is responsible for ensuring that assessment and follow-up reviews on the effectiveness of corrective and preventive actions taken are carried out and the outcomes documented, communicated and implemented.

12.7 Disciplinary Procedures in Respect of Environmental Matters

Disciplinary procedures are outlined in the Downer New Zealand policy and procedure manuals. These are adopted for use at this plant.

Any employee or sub-contractor who commits a serious breach of an environmental consent or permit may be liable to summary dismissal/cancellation of contract. Downer will pursue the sub-contractor for losses incurred as a result of the breach(es).

12.8 Recognition of Positive Environmental Practices

Exemplary environmental behaviour will be regularly recognised at both site-wide and individual levels, as appropriate.

13.0 Purchasing Controls

Where possible, sustainability considerations are reflected in our purchasing decisions. All subcontractors and suppliers are contractually bound to Downer environmental requirements as outlined in the Subcontract Agreements A or B. Please refer to the Quality Management Plan for further information.

14.0 Sub-contractor Management

Sub-contractors will be inducted onto site, notified of the known environmental aspects relating to plant operation, the emergency procedures and site environmental plans. They will be responsible for doing the same to their subcontractors and labour hire personnel. Occupational Health & Safety Officers, Environmental Representatives and employees all share responsibility for monitoring the environmental awareness practices of our subcontractors. Training and induction materials shall be customised to the plant and nature of works undertaken.

15.0 Emergency Preparedness

The Emergency Response Plan sets out procedures and key emergency contacts. Downer employs a range of procedures to ensure appropriate precautions are taken to mitigate any environmental emergencies.

In addition, the following set out key considerations when dealing with a range of spill events, and the process to be followed when dealing with emergency spill and runoff incidents is summarised in Section 15.6.

15.1 Spill Response Kits and Capabilities

All required spill kits and associated equipment shall be made available to Downer employees. Sub-contractors are to supply their own spill kits. Personnel are to keep equipment at hand, and in a serviceable condition.

15.2 Fuel and Hazardous Substance Spills

Initial Response:

- Positively identify the material, and refer to Safety Data Sheet (SDS) information, as required. Safety Data Sheets relevant to this temporary operation will be held in the asphalt plant control room.
- Assess whether or not you can safely deal with the spill. **Do not, under any circumstances, attempt to contain any spills containing acids**, as these fumes are extremely dangerous. Immediately evacuate the area, and call the Fire Service with details of the product and approximate size of spill.
- If safe to approach the spilled product, follow spill response flow chart and the CESMP, as appropriate, and if not safe to do so, evacuate the area.

If large quantities of fuel, or a hazardous or unknown chemical are spilt:

- Call the Fire Service and advise the nature of the spill, and approximate quantity involved.
- If a possible risk to people exists, evacuate the area, ensuring that people remain upwind and the spill area is closed to public access.
- Remove all possible sources of ignition to prevent an explosion of flammable vapours.
- Only attempt to contain a spill if you have been trained in spill cleanup for the substance involved, and have the appropriate protective equipment to do so. Otherwise, do not approach or come into contact with the substance.
- If safe to do so, and necessary, reposition leaking containers to prevent further leakage.
- Where the possibility of the spill entering the drainage system, or migrating off site exists, create a temporary bund around any drainage sumps and flow paths, and contact the OHSO.

15.3 Bituminous Spills

Ensure that all sources of ignition are removed from the area.

Minimise the spill:

Turn off valves, reposition containers, shutdown pumps

Contain the spill:

If practical, build a dam around the spill (utilise basecourse, sand, earth), and use catch trays, drums etc.

Isolate the area:

Cover any drains, and if required, build a dam to ensure product cannot flow from work site.
Notify the Occupational Health & Safety Officer as soon as possible.

15.4 Emulsion, Kerosene, Diesel, Oil Spills

- Cordon off area, and for Kerosene, Diesel and Oil, remove all sources of ignition.
- Do not use water or wash down tankers or equipment.
- Use squeegees or similar to concentrate the volume of the spill.
- Mop up, pump, skim (or otherwise remove) as much product as possible, and place in leakproof containers (usually drums).
- Seal containers, and arrange for disposal in accordance with applicable waste disposal procedures.
- Sprinkle sand or Spill Sorb over the area.

Additional requirements specific to kerosene, diesel and oil:

- Removal all sources of ignition, and check for flammable vapours before deploying any machinery in the cleanup area.
- Do not use metal tools during cleanup.

15.5 Categories of Spills

All spills will be categorised by the Senior Plant Operator.

| | |
|---------------|---|
| Type 1 | A minor spillage within the boundaries of the site that has been, or is able to be, cleaned up by staff from the company involved and no damage to the environment has occurred. |
|---------------|---|

The Senior Plant Operator shall:

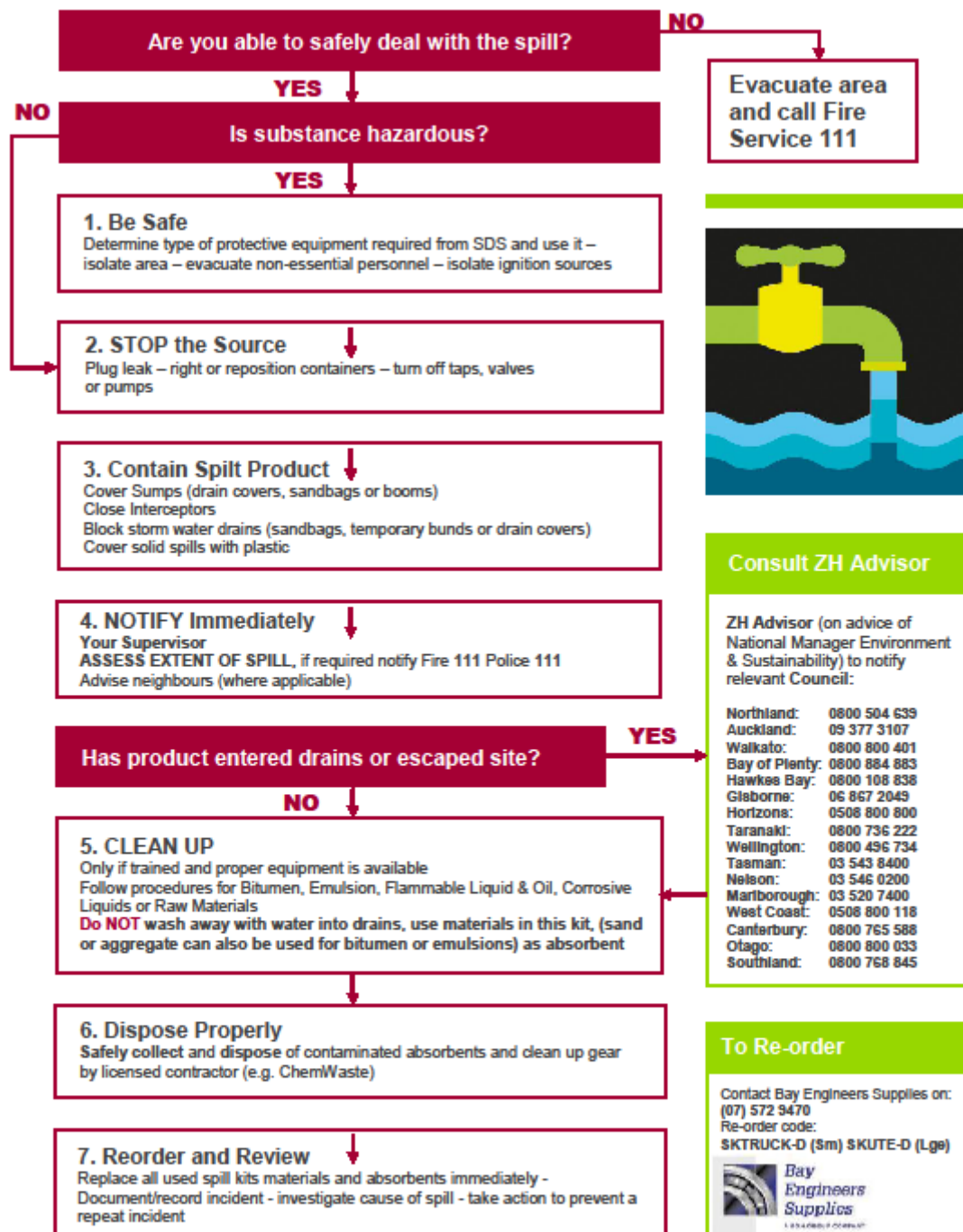
- Initiate and oversee clean-up
- Notify Occupational Health & Safety Officer and Asphalt/Bitumen Plant Manager

| | |
|---------------|--|
| Type 2 | A spillage that has flowed off-site or has the potential to leave the site (this includes vapours of flammable liquids), or that company staff are not able to clean up the spill and its effects safely. |
|---------------|--|

The Senior Plant Operator shall, in the first instance, notify the Occupational Health & Safety Officer, who will then advise on the appropriate course of action for notification of the parties below:

- | | |
|---|---|
| – | – |
| – | – |

15.6 Emergency Spill and Runoff Response



16.0 Grievance Redress Mechanism & Complaints

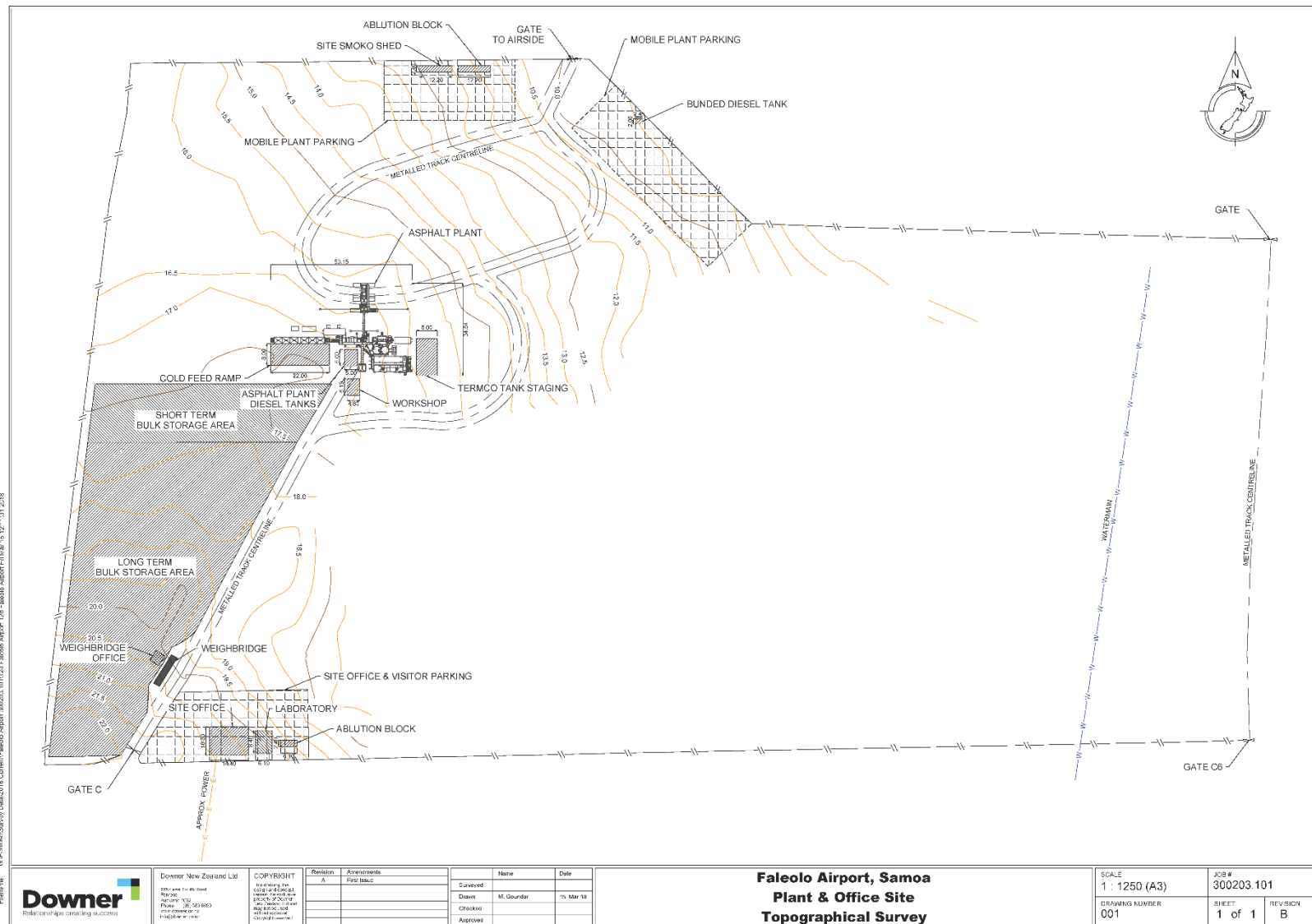
All complaints and grievances are handled within the Faleolo Project Grievance Redress Mechanism (GRM). Any complaints forwarded to Contractor's Compound personnel for investigation and resolution should be handled in a consultative way and promptly dealt with by site staff. If appropriate such enquiries, issues and environmental management-related complaints will be dealt with as non-compliance report (NCR) or an Opportunity for Improvement (OFI), recorded on the NCR/OFI Form.

Full details of the Project GRM are contained in the CESMP.

17.0 Approvals and Acceptance

| | Name | Signature | Date |
|---------------------------------|-------------|------------------|-------------|
| PREPARED BY | Craig Smart | | May 2018 |
| PROJECT MANAGER APPROVAL | Peter Murr | | May 2018 |
| | | | |

Appendix 1. Site Layout Plan



Appendix 2. Environmental Aspect & Impacts Register (Including Erosion & Sediment Control Plan)

| Environmental Aspects and Impacts Register | | | | | | | | | |
|--|--|--|------------------|-------------------|-------------------|--|---|--------------------------|----------|
| Ref | Aspect (hazard) | | Risk Rating | | | Potential Impact | Control Measures | Person responsible | Commentf |
| | | | Likelihood (1-5) | Consequence (1-6) | Significance(LxS) | | | | |
| 1.0 | SITE OPERATION (General) | | | | | | | | |
| 1.1 | Tidiness and condition of site. | | 3 | 4 | B | Health & safety risk, damage to brand. | Education of staff. Ensure waste and facilities management contractors service site regularly. Site inspection/housekeeping, site audits are done on a regular basis. | Senior Plant Operator | |
| 1.2 | Use of raw materials: bitumen and aggregates. | | 4 | 1 | C | Natural resource depletion, carbon emissions. | Recycling of materials where possible, consider life cycle cost of products, avoid over ordering. | Senior Plant Operator | |
| 1.3 | Feedstock Storage (crushed coarse & fine aggregate for asphalt production) | | 2 | 2 | D | Sediment contaminated runoff | Install perimeter bunds to prevent clean water runoff entering the stockpile area and intercept bunds to control water that runs off the storage area. Direct to a sediment trap then flow to vegetated area on lower part of site. | Senior Plant Operator | |
| 1.4 | Office & Laboratory - rubbish | | 2 | 3 | C | | Dispose of waste ias per provisions of the Waste Management Plan. | Senior Plant Operator | |
| 1.5 | Site Ablution Facilities – Septic Waste | | 3 | 3 | C | Septic overflow (from either in ground septic system or pump out storage tank) | Use septic tanker subcontractor to pump out tank and take waste to the designated area at Tafaigata Landfill. | Senior Plant Operator | |
| 1.6 | Workshop – hydrocarbon storage, disposal of waste oil etc | | 3 | 3 | C | Hydrocarbon spill or improper waste disposal | Hydrocarbon containers (oil drums etc) in secure bunded storage. Waste oil disposed of as per Samoan recycling requirements. | Senior Workshop Mechanic | |
| 2.0 | HAZARDOUS SUBSTANCES STORAGE | | | | | | | | |
| 2.1 | Bitumen Bulk Storage Tanks | | 3 | 3 | C | Accidental spill / leak from storage tanks. | Code of Practice RNZ “Safe Handling of Bituminous Materials Used in Roading”. Site inspection/housekeeping, spill response, procedures & training. | Senior Plant Operator | |
| 2.2 | Diesel Bulk Storage Tank | | 3 | 3 | C | Accidental spill / leak from storage tanks. | HSNO certification, self bunded tank (double skinned tank design), site inspection/housekeeping, spill response procedures & training, spill kits. | Senior Plant Operator | |
| 3.0 | ASPHALT SUPPLY AND MANUFACTURE | | | | | | | | |
| 3.1 | Discharge to air of fumes, dust, odour. | | 4 | 3 | B | Public health effect, air pollution, aviation zone. | Plant design – bag filter system (baghouse). Resource consent in place and compliance with all conditions monitored closely. Controlled operating | Senior Plant Operator | |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| | | | | | | | | |
|-----|---|--|---|---|---|--|--|-----------------------|
| | | | | | | hours (i.e. daily maximum). Regular maintenance. Reduction of drop distances between the hot bins and trucks. Use of water carts. Speed restrictions. Weekly site inspection – Refer WI005H Checklist. | | |
| 3.2 | Spills from diesel & bitumen transfer from road tankers to “on site” storage tanks. | | 4 | 2 | C | Danger to human health. Damage to environment through ground contamination. | Spill response procedures & training. Spill kits, transfer procedures followed, trained operators (two person transfer), contractor induction, overfill protection devices, certified hoses. | Senior Plant Operator |
| 3.3 | Disposal of solid waste | | 4 | 3 | B | Contamination of landfill, soil/ground contamination, waste of resources. | Use only licenced waste contractors and disposal sites. Look for alternative materials, segregate hazardous, non-hazardous and recyclable wastes. | Senior Plant Operator |
| 3.4 | Potential noise nuisance from machinery and moving vehicles. | | | | | Delivery trucks, loader operations (day and night). | This aspect has been considered and is not deemed to be a significant environmental aspect. This plant is a brand new plant with cutting edge technology intended to operate more quietly and efficiently. The proximity of neighbours is a significant distance away from this site. The nearest occupied building is over 1 km to the east. | |
| 3.5 | Potential lighting nuisance when the plant is operating at night. | | | | | Spot lights, vehicle headlights, site lighting. | This aspect has been considered and is not deemed to be a significant environmental aspect. | |

Downer Risk Scoring Framework

| | Likelihood | | | | | | Risk Ratings |
|-------------|------------|---|---|---|---|---|--|
| | | 1 | 2 | 3 | 4 | 5 | |
| Consequence | 6 | B | B | A | A | A | A = Unacceptable risk, plan out or add further controls B = Acceptable only with hazard control plan in place and if no other method viable C = Acceptable only with suitable controls D = Acceptable. No further action required |
| | 5 | C | B | B | A | A | |
| | 4 | C | C | B | B | A | |
| | 3 | D | C | C | B | B | |
| | 2 | D | D | C | C | B | |
| | 1 | D | D | D | C | C | |

Severity Ratings:

- 6:** Major environmental incident threatening public health, criminal liability
5: Serious environmental incident causing medium term impact, breach
4: Environmental incident, moderate impact, leading to breach of legislation

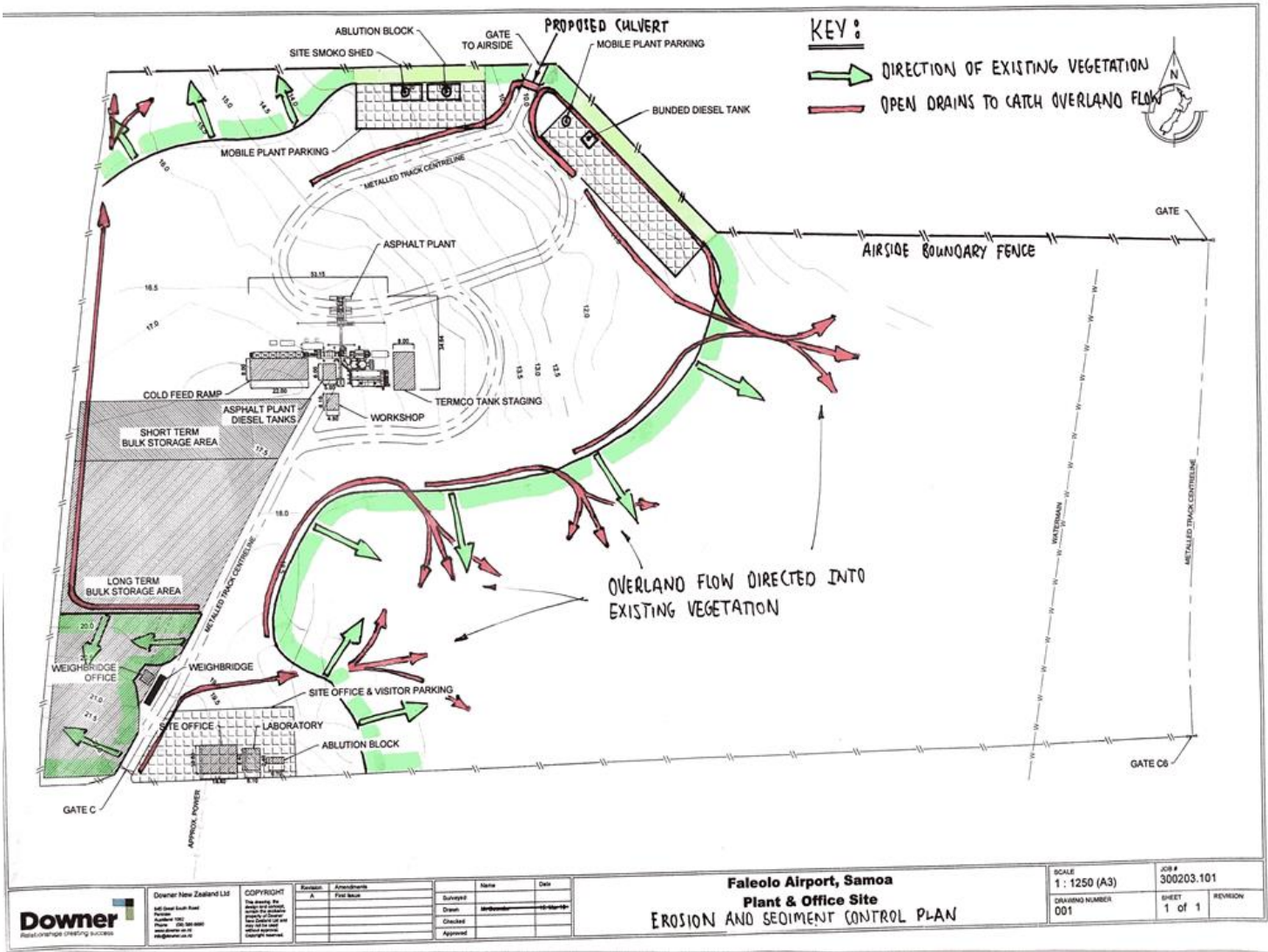
- 3:** Environmental incident, triggering damage or complaint
2: Environmental incident, limited impact, requiring management response
1: Negligible environmental impact

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan


Likelihood Ratings:

- 5: Almost certain (90%+ chance)
- 4: Probable (likely, 50-90% chance)

- 3: Possible (10-50% chance)
- 2: Remote (unlikely, 1-10% chance)
- 1: Improbable (rare, less than 1% chance)




Appendix 3. Permits and Consents Register


| | |
|---|---|
|  | Register of Current Environmental Permits and Consents Held |
|---|---|

| Site | Permit / Consent No. | Permit / Consent Holder | Consent Type and Description | Expiry Date | Person Responsible for Updating |
|------|----------------------|-------------------------|------------------------------|-------------|---------------------------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Appendix 4. Consent Conditions Audit Form

|  | | | |
|---|-----------|--------------|----------|
| Development Consent Development Consent Number: Expiry Date: | | | |
| No. | Condition | Met Y/N | Comments |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Auditor: | | Date: | |


Appendix 5. Weekly Environmental Checksheet

|  Weekly Environmental Checksheet | | Y/N/ N-A | If "No": Immediate action taken |
|--|---|-------------|---------------------------------|
| | Environmental Check | | |
| Documentation | Does the job start book identify all environmental hazards and controls on site? | N/A | |
| | Any recent environmental incidents, neighbour complaints or good ideas to share? If "Yes" has it been recorded? | | |
| Hazardous Substances | Is a spill kit and procedure on site (or reachable in max 3 min) and is it complete as per the inventory? | | |
| | Are liquid containers > 5L labelled and stored out of harm's way? | | |
| | Are ground and water free of oil sheens from leaking plant or spills? | | |
| Air discharge | Visually inspect stack exhaust gases for any contaminants. Stack emissions should appear clear against the blue sky and be free of dust or smoke. | | |
| | Are you confident the neighbour's washing drying outside won't have to be rewashed due to dust levels from the work site? | | |
| | If you lived in the closest house to this site, would you be happy with noise and odour levels? | | |
| Flora & Fauna | Are tree exclusion zones kept clear and fenced? (exclusion zone is greatest of drip line or ½ h of tree) | | |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| | | | |
|------------------------------|--|--|--|
| Stormwater management | Are all cesspits liable to receive runoff from site protected with bunds & witch's hat or geotextile? | | |
| | From observations of site, are you comfortable that the street won't flood in the event of heavy rain? | | |
| | Concrete/ emulsion runoff must NOT enter cesspits and cannot be filtered – are good controls in place? | | |
| | Is all water pumped from dewatering being treated by either sedimentation and/or filtration? | | |
| General | Is the site free of litter, looking tidy, clean and safe? | | |
| | Have you discussed all problematic issues identified during visit with the team on site? | | |

Appendix 6. Monthly Site Inspection Checklist (for a temporary site)

| | | | |
|---|--|---|-------------------------|
|  | | Site Name: Contractor's Compound & Asphalt Plant (Faleolo Airport) | Date: / / |
| Completed by: | | Consulted With: | Time: : |

| <input type="checkbox"/> 1. Environmental Documentation | Y/N/NA | Comments / Corrective Action |
|--|--------|---|
| Is the current EMP available on site? | | |
| Is the current Environmental policy & principles displayed on site? | | |
| Does induction contain information about environmental risks and are all staff and contractors inducted? | | |
| Are all necessary consents held and conditions monitored? | | Some conditions will need to be checked through the software system given the automation of this plant. |

| <input type="checkbox"/> 2. Erosion and Sediment Control | Y/N/NA | Comments / Corrective Action |
|---|--------|------------------------------|
| Is the Erosion and Sediment Control Plan (ESCP) current & does it reflect the controls on site? | | |
| Is the site entry and adjoining roadway free of sediment? | | |
| Are vehicle wash bays in place and used correctly? | N/A | |
| Are silt fences installed correctly as per the ESCP? | | |
| Is maintenance required on erosion or sediment controls? | | |
| Is the receiving environment free of silt or sediment deposition ? | | |
| Are sediment ponds maintained and capable of capturing the designed rainfall runoff? | | |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| | | |
|---|---------------|-------------------------------------|
| <input type="checkbox"/> 3. Water Management | Y/N/NA | Comments/ Corrective Action |
| Has all clean water been diverted around the site? | | |
| Has all dirty water been captured and treated? | | |
| <input type="checkbox"/> 4. Stockpiles | Y/N/NA | Comments / Corrective Action |
| Has top soil been segregated and stored for rehabilitation? | | |
| Are stockpile located away from natural drainage lines? | | |
| Are all stockpiles contained within silt fences or other appropriate barriers? | | |
| Are all stockpiles less than 2 metres high with a 2:1 or greater batter? | | |
| Are all stockpiles intended for storage greater than 10 days adequately stabilised covered? | | |
| <input type="checkbox"/> 5. Air and Dust Management | Y/N/NA | Comments / Corrective Action |
| Visually inspect stack exhaust gases for any contaminants. Stack emissions should appear clear against the blue sky and be free of dust or smoke. | | |
| Are all vehicles regularly serviced and maintained/ | | |
| Is there visible dust on site; is dust suppression required / effective? | | |
| Do vehicles transporting fill material have covered loads? | | |
| <input type="checkbox"/> 6. Hazardous Substances | Y/N/NA | Comments / Corrective Action |
| Are hazardous substances correctly stored (secure, segregated, banded)? | | |
| Are MSDS kept for all substances on site, and available? | | |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| <input type="checkbox"/> 6. Hazardous Substances | Y/N/NA | Comments / Corrective Action |
|--|---------------|-------------------------------------|
| Is there evidence of spills / leaks not contained / cleaned up? | | |
| Is there visible oil / hydraulic leakage from plant or equipment? | | |
| Are spill kits available for each work crew on site? | | |
| Have spills/leaks been contained/cleaned up and disposed of appropriately and reported to the Asphalt/Bitumen Plant Manager/ Occupational Health & Safety Officer? | | |

| <input type="checkbox"/> 7. Noise and Vibration | Y/N/NA | Comments / Corrective Action |
|---|---------------|-------------------------------------|
| Are all works restricted to the specified hours of operation? | | |
| Is there excessive noise generated by site activities? | | |
| Have any noise complaints been received? | | |

| <input type="checkbox"/> 8. Waste Management | Y/N/NA | Comments / Corrective Action |
|--|---------------|-------------------------------------|
| Is the site clean and litter free? | | |
| Is waste appropriately separated for disposal? | | |
| Are lids kept closed on waste bins? | | |
| Is all waste collected regularly by a licensed contractor? | | |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| <input type="checkbox"/> 9. Flora and Fauna | Y/N/NA | Comments / Corrective Action |
|--|---------------|-------------------------------------|
| Has site boundary fencing been installed to prevent unauthorised access? | | |
| Has vegetation clearance been conducted in compliance with the EMP? | | |
| Has any fauna been hurt or injured? | | |
| Have any weeds been removed / treated? | | |

| <input type="checkbox"/> 10. Fire Management | Y/N/NA | Comments / Corrective Action |
|---|---------------|-------------------------------------|
| Is adequate fire protection equipment available? | | |
| Is the designated smoking area being used and kept tidy/free of used cigarette butts? | | |

| <input type="checkbox"/> 11. Site Rehabilitation | Y/N/NA | Comments / Corrective Action |
|--|---------------|-------------------------------------|
| Have all exposed areas been revegetated and stabilised in accordance with the Rehabilitation Plan? | | |

| <input type="checkbox"/> 12. Cultural Heritage | Y/N/NA | Comments / Corrective Action |
|---|---------------|-------------------------------------|
| Have cultural heritage areas been protected from disturbance? | | |
| Have any new items of cultural significance been identified? | | |
| Other | | |

INSPECTION SIGN-OFF

Total number of corrective actions identified: _____
Number of Outstanding Actions (i.e. not able to be immediately rectified): _____
Corresponding INX Report Number(s):

Signatures of Inspection Team

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

Name: _____ Signature: _____ Date: _____


Name: _____ Signature: _____ Date: _____

Signature of Responsible Manager

Name: _____ Signature: _____ Date: ____

Manager Comments:


Appendix 7. Hazardous Substance Register

|  | | Hazardous Substance Register Location: Faleolo Contractor's Compound Date: March 2018 | | | | |
|--|----------|--|----------|---------------------|-------------------|-----------------------|
| Name of Chemical, Substance or Gas | DG Class | HSNO Class | Qty | Form (See below) | Type of Container | Controls / Thresholds |
| Refer to chemical cabinet inventory and Stationary Container System Test Certificate attached as Appendix 11 . | | | | | | |
| Bitumen Bulk Storage Tank | 9 | N/A | 36,000 L | Liquid | Above ground tank | |
| Bitumen Bulk Storage Tank | 9 | N/A | 29,000 L | Liquid | Above ground tank | |
| Diesel Bulk Storage Tank | 9 | 3.1D, 6.1E, 6.3B, 9.1B | 20,000 L | Liquid | Above ground tank | |
| LPG Bottle | 2.1 | | 9 kg | Compressed Gas | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Form: Compressed Gas (CS), Solid (S), Liquid (L), Powder (P), Crystal (C), Granular (G)

Please refer to [Chemwatch](#) for details of environmental controls required in relation to substances held on site

Appendix 8. Waste Management Register

|  | | Waste Management Register | | | | | |
|--|---------------|---------------------------|----------------|---------------------------------|---------------|------------------|-------------------|
| Waste Generated | From Activity | Approx. quantity /month | Onsite storage | Disposal/treatment collected by | Disposal site | Reduction Target | Reduction Actions |
| <i>Populate table with known waste quantities; use these to identify areas where reductions can be made.</i> | | | | | | | |
| General office waste | | | | | | | |
| Recyclables | | | | | | | |
| Stop/Start Waste | | | | | | | |
| Unused Manufactured Product (Asphalt) | | | | | | | |
| Other | | | | | | | |
| | | | | | | | |

Appendix 9. Roles and Responsibilities Register

| Title | Name | Accountable to: | Responsibilities | Initial |
|--------------------------------------|------------------|---------------------------------|---|----------------|
| Strategic Leadership | Jeff Oldman | Client | <ul style="list-style-type: none"> Oversee the strategic vision for Downer's health, safety and environmental philosophy and objectives, as they apply to this site. | [Sign] |
| Asphalt/Bitumen Plant Manager | Bob Humphries | Company | <ul style="list-style-type: none"> Ensure EMP is implemented, reviewed and updated Liaise with Occupational Health & Safety Officer Monitor and report progress towards objectives and targets. Carry out site visits on a regular basis. Conduct regular review of site performance Oversee the outcomes of pre-start meetings & site meetings (frequency may be weekly, fortnightly or daily) Develop and implement work instructions Be familiar with environmental legislation including Regional/District Plans Ensure timely corrective action of NCR/OFI's | [Sign] |
| Senior Plant Operator | Michael Hanrahan | Asphalt / Bitumen Plant Manager | <ul style="list-style-type: none"> Monitor operations in accordance with this EMP Take appropriate action to prevent unsafe or environmentally unacceptable working practices. Ensure all sub-contractors comply with requirements. Attend and participate in meetings related to environmental management. Maintain the environmental aspects register. Conduct environmental site inspections and audits. Induct all employees and subcontractors. Conduct pre-start and site meetings (frequency may be weekly, fortnightly or daily). Direct personnel during an emergency requiring evacuation. | [Sign] |
| Occupational Health & Safety Officer | | Project Manager | <ul style="list-style-type: none"> Supervise and monitor implementation of the EMP Develop, implement and maintain aspects-specific management plan(s) as appropriate Advise Asphalt/Bitumen Plant Manager, Senior Plant Operator and all staff on: <ul style="list-style-type: none"> Prevention of harm to the environment Improvements in work methods Legal requirements Provision and use of spill procedures and equipment Potential hazards and environmental aspects before work starts Assist with development/ implementation of work instructions Co-ordinate environmental audits Report inspections to the Asphalt/Bitumen Plant Manager & Senior Plant Operator. Ensure aspects register is maintained Oversee correct preparation of incident reports Analyse incident reports and recommend means of preventing recurrence Review overall environmental performance Co-ordinate training programmes Prepare emergency procedures in conjunction with the Asphalt/Bitumen Plant Manager & Senior Plant Operator. | [Sign] |

Contractor's Compound, Asphalt Plant Etc Environmental Management Plan

| | | | | |
|-----------------------|-------------|---------------------------------|---|--------|
| | | | <ul style="list-style-type: none"> ▪ Ensure compliance with legislation and regional/district plans. | |
| Safeguards Specialist | Craig Smart | Project Manager | <ul style="list-style-type: none"> ▪ Inspect sites to identify environmental aspects and report findings with recommendations for improvement ▪ Investigate incidents and report with recommendations for prevention ▪ Supervise and monitor implementation of this Plan ▪ Carry out random site inspections ▪ Assist in completing environmental incident reports | [Sign] |
| Individuals | All | Immediate Supervisor or Manager | <ul style="list-style-type: none"> ▪ Identify and report environmental aspects to supervisor ▪ Monitor environmental awareness practices of subcontractors | |

Appendix 10. Downer's 10 Environmental Principles



10 ENVIRONMENTAL PRINCIPLES

WORKPLACE PRINCIPLES TO PROTECT OUR NATURAL ENVIRONMENT

1



PROTECT STORM WATER DRAINS, HAVE SPILL KITS ON HAND AND CLEAN UP SPILLS

2



USE APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES

3



STORE HAZARDOUS SUBSTANCES SAFELY OUT OF THE WAY

4



MINIMISE WASTE THROUGH REUSE, RECYCLING AND RESPONSIBLE PROCUREMENT

5



PROTECT FLORA AND FAUNA FROM DAMAGE OR DISTURBANCE, MAINTAINING BIODIVERSITY

6



STOP WORK IMMEDIATELY, PROTECT AND REPORT ARCHAEOLOGICAL FINDS

7



OBTAIN APPROVALS AND USE APPROPRIATE PROTECTION WHEN WORKING IN OR AROUND A WATERWAY

8



ALWAYS LOOK TO MINIMISE OUR IMPACT ON THE COMMUNITY

9



REPORT UNSAFE ENVIRONMENTAL BEHAVIOUR, INCIDENTS AND NEAR MISSES

10



KEEP EVERY SITE SECURE, TIDY AND ENSURE NO LITTER IS LEFT BEHIND

Downer
Relationships creating success

 THIS POSTER IS PRINTED WITH RESPONSIBLE ECOMANAGEMENT INK AND PAPER.

Appendix 11. Stationary Container System Test Certificate



Environmental Compliance Management and Training

Envirocom (NZ) Ltd

PO Box 5236
Dunedin 9055
Phone 03 477 5966
Fax 03 477 5986
www.envirocom.co.nz

Stationary Container System Test Certificate

Issued pursuant to Section 82 of the
Hazardous Substances and New Organisms Act 1996

Issued To:

Downer NZ Ltd
P O Box 11326
Sockburn
Christchurch 8443
027 8893843

Certificate No: 000009-00030808

Site Location:

Queenstown Airport Resurfacing Facility
Cameron Kay
63 Grant Rd
Frankton
Queenstown 9371
027 8893843

This certificate is issued in accordance with Clause 91 of Schedule 8 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004. This certifies that the relevant requirements have been met for the stationary container system, substances and the maximum quantities as specified below.

Stationary Container Details:

Aboveground Tank + Bumer
Flammable Liquid
Design Standard: 3C
Designer: DG Approval - Ch01
Manufacturer: Taymac - Christchurch
Manufacturer Ref: DS-20K03
Year of Manufacture: 2001

Equipment Details:

Single DN50 Discharge with anti-siphon
check valve
DN50 fuel rated ball isolation valve
Ammann made aggregate burner

Max Fill Capacity: 20,000 litres

Substance:

Class 3.1D Flammable liquids: Diesel supplying Asphalt plant

Maximum Quantity:

20,000 litres

Conditions:

This certificate becomes invalid if, in accordance with Part 18 of the Transfer Notice 2004, the above Stationary Container System is repaired, altered, relocated or there is a change of service in respect of the contents of the container.

Unless surrendered, revoked or becomes invalid beforehand, this certificate shall remain in force until the expiry date stated below, at which time it may be renewed by an authorised Test Certifier.

This certificate must be produced at the request of an Enforcement Officer appointed under the HSNO Act 1996.

Rex Alexander

Test Certifier Registration No: 000009

Date Issued: 21 Jan 2016

Expiry Date: 20 Jan 2019

Appendix 12. ISO 14001:2004: Certificate of Registration



This is to certify that

Downer New Zealand Limited

130 Kers Road Wiri Auckland

having been assessed by Telarc SAI Limited and having been found to operate an integrated management system conforming to

AS/NZS ISO 9001:2008, AS/NZS ISO 14001: 2004, and AS/NZS 4801: 2001 is hereby designated

Telarc Registered

Quality No. 1773

Environment No. 86

Health & Safety No. 46

for the goods and services detailed on the schedule to this certificate.

Certificate Issued: 12 September 2016

Original Registration: 15 May 2006

Current Registration: 8 September 2016

Expiry Date: 14 September 2018

Chairperson

Chief Executive

David Bone

Philip Gray



Registered by Telarc SAI Limited 130 Kers Road Wiri Auckland 1014, New Zealand. Only the Telarc 2001, 2004, 2008, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 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3670, 3671, 3672, 3673, 3674, 3675, 3676, 3677, 3678, 3679, 3680, 3681, 3682, 3683, 3684, 3685, 3686, 3687, 3688, 3689, 3690, 3691, 3692, 3693, 3694, 3695, 3696, 3697, 3698, 3699, 3700, 3701, 3702, 3703, 3704, 3705, 3706, 3707, 3708, 3709, 3710, 3711, 3712, 3713, 3714, 3715, 3716, 3717, 3718, 3719, 3720, 3721, 3722, 3723, 3724, 3725, 3726, 3727, 3728, 3729, 3730, 3731, 3732, 3733, 3734, 3735, 3736, 3737, 3738, 3739, 3740, 3741, 3742, 3743, 3744, 3745, 3746, 3747, 3748, 3749, 3750, 3751, 3752, 3753, 3754, 3755, 3756, 3757, 3758, 3759, 3760, 3761, 3762, 3763, 3764, 3765, 3766, 3767, 3768, 3769, 3770, 3771, 3772, 3773, 3774, 3775, 3776, 3777, 3778, 3779, 3780, 3781, 3782, 3783, 3784, 3785, 3786, 3787, 3788, 3789, 3790, 3791, 3792, 3793, 3794, 3795, 3796, 3797, 3798, 3799, 3800, 3801, 3802, 3803, 3804, 3805, 3806, 3807, 3808, 3809, 3810, 3811, 3812, 3813, 3814, 3815, 3816, 3817, 3818, 3819, 3820, 3821, 3822, 3823, 3824, 3825, 3826, 3827, 3828, 3829, 3830, 3831, 3832,

Appendix 13. Contractor's Compound & Asphalt Plant Development Consent



Government of Samoa

MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Matāgaluega o Puna'oa Faalenatura ma Siosiomaga

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Faamolemole faatuatausi uma mai fesootaiga
uma i le Ofisa Sili*

SUSTAINABLE DEVELOPMENT

NOTICE OF DECISION

Application Reference: DCA №: 175/18

DECISION DATE: 26 March 2018

| | |
|---|---|
| <u>Applicant:</u> | Samoa Airport Authority (SAA) |
| <u>Site Location:</u> | Faleolo, Aana III District |
| <u>Proposal:</u> | To appropriately clear and level the subject site for a lay down area and an asphalt plant |
| <u>Legal Description:</u> | Government Land |
| <u>DCA Received:</u> | 22 March 2018 |
| <u>Supporting Documentation:</u> | <ol style="list-style-type: none">1. Site Plan, submitted 22 March 20182. Environmental Management Plan prepared by Downer NZ Ltd and dated 22 March 2018, submitted 23 March 20183. Topographical Survey Plan, submitted 22 March 20184. Cover Letter from Downer NZ Ltd dated 22 March 2017, submitted 23 March 2018 |
| <u>Other Considerations:</u> | <ol style="list-style-type: none">1. The subject site is located within the Flood Hazard Zone2. Status of Works: Land Clearance have commenced |

THE DECISION

The Planning and Urban Management Agency, under delegated authority from the Board, pursuant to sections 34(2), 47, 48, 50 of the Planning and Urban Management Act 2004, grant development consent, to the above application, subject to the following conditions:

Conditions:

General:

1. The proposed activity shall be carried out in accordance with the plans and all information submitted as part of the application DCA 175/18, being:
 - a) Report titled "*Faleolo International Airport: Design & Construct Pavements, Drainage & Service Infrastructure, Contractor's Compound, Asphalt Plant & Laydown Area, Environmental Management Plan*" prepared by Downer NZ Ltd, dated 22 March 2018 and submitted on 23 March 2018.
2. Any other development works not included in this development consent application (including construction of building(s) or other structures on site), requires a separate development consent application.
3. The consent holder shall notify any person(s) that is likely to be affected prior to the commencement of works.
4. The consent holder shall ensure that the minimum distance measured from any boundary line to the vertical line that passes through the nearest point of any part of the new building shall be 1.5m or as required in Section A and the "deemed-to-satisfy provisions Section B, all inclusive of the *National Building Code- 1992* for Samoa.
5. The consent holder shall ensure that the minimum distance measured from the boundary line to the nearest part of any services structures, example a septic tank, shall be 1.5m as per the *National Building Code 1992*.
6. The consent holder shall ensure that the minimum distance measured from the near edge of a stream or a water source to the nearest part of any service waste disposal structure, example a septic tank, shall be 15m as per the *National Building Code 1992*.
7. The consent holder shall ensure that the minimum distance from a well source to the nearest part of any waste disposal service structure shall be 15m from an absorption drain field or 30m for soak pits as per the *National Building Code 1992*.
8. The consent holder shall ensure that all fire safety features for the proposed development are in accordance with requirements of the *Fire and Emergency Services Authority (FESA)* and the *Fire and Emergency Services Act 2007*.
9. The consent holder shall ensure that fire requirements shall satisfy the *National Building Code 1992*.
10. All storm water discharged from the subject land shall be conveyed by means of an open drain and absorbed on site by means of absorption trenches and/or storage tanks. Onsite drainage systems including connection to the major drainage network shall be designed to minimize potential for accumulation of silt and waste, including provision for its collection and removal at accessible locations.
11. The consent holder shall provide fire safety features for the proposed development which shall be in accordance with the *Fire and Emergency Services Act 2007* as well as requirements of the *Fire and Emergency Services Authority (FESA)*.
12. The use and development must be managed so that the amenity of the area is not compromised, by excessive noise, excessive dust, visually offensive signage, poor airspace, excessive traffic generation, smell, fumes and waste materials.

Asphalt Plant Operation:

13. The consent holder shall ensure that noise generated from the plant shall be minimized as far as practicable during operations on site and shall be in accordance with the Agency's *Noise Policy 2011*. Noise levels shall not exceed the following limits:

| "Noise Source" (Average dBA, L _{10mins}) | "Receiving Property" (LAeq, 10 minutes) | | | | | | | | | | | |
|---|---|-------------------|-------|----------------|-------------------|-------|---------------|-------------------|-------|----------------|-------------------|-------|
| | Residential Use | | | Commercial Use | | | Religious Use | | | Industrial Use | | |
| | Day | Even ⁿ | Night | Day | Even ⁿ | Night | Day | Even ⁿ | Night | Day | Even ⁿ | Night |
| Industrial Use | 65 | 60 | 55 | 70 | 65 | 60 | 70 | 65 | 60 | 75 | 70 | 65 |

*Note: Day period is defined as 0700 to 1800, evening period is defined as 1800 to 2200 and night period is defined as 2200 to 0700. Construction activities conducted at times not specified in the table above will require special approval from relevant authorities. These may include the Night period, Sundays and all other times within Residential and Tertiary Educational compounds.

14. The consent holder shall ensure that the plant is not located within 100 meters of a natural waterbody or wetland or 250 meters from a dwelling.
15. The consent holder shall ensure that all goods and materials associated with the use shall be contained behind the gate at all times.
16. The consent holder shall ensure that mud and soil from vehicular movements to and from the site shall not be deposited on the road.
17. The consent holder shall ensure that all waste materials stored on site are to be contained within a designated area such as a waste bay or bin to ensure that no waste materials are allowed to enter neighbouring properties.
18. The consent holder shall ensure that the plan and equipment is to be operated, maintained and serviced in accordance with the relevant manufacturer specifications and recommendations to ensure it operates in a proper and efficient manner.
19. The consent holder shall ensure that loading and unloading of hot mix asphalt and of fuel, oils, chemicals or any other liquid material shall only take place in a bunded area.
20. The consent holder shall check the plume from the asphalt plant on a daily basis by visually checking the discharge from the main stack after the steam has dissipated and shall records the results in the environmental log.
21. The consent holder shall record in the environmental log all problems occurring at the asphalt plant and the corrective or maintenance action taken.
22. No person shall burn or bury waste at the asphalt plant.
23. The consent holder shall ensure that spills of hazardous substances and waste dangerous goods shall be reported and cleaned up.
24. The consent holder shall ensure that all practical measures are taken to clean and remediate all equipment and property that may have been impacted by the plant's operation.
25. The Agency may visit the plant site at any reasonable time to inspect and assess the facility's operation.
26. Nuisance complaints may result in an investigation of the facility's operation at the discretion of the Agency.

Construction:

27. That all earthworks shall be in accordance with the *Code of Environmental Practice for Earthworks 2007* and that all erosion and sediment controls must be installed prior to the commencement of earthworks and maintained in an effective capacity at all times during construction works.
28. The consent holder shall ensure that noise shall be minimized as far as practicable during works on site and must be in accordance with the Agency's *Noise Policy 2011*. Noise levels shall not exceed the following limits:

| "Noise Source" (Average dBA, L _{10mins}) | "Receiving Property" (LAeq, 10 minutes) | | | | | | | | | | | |
|---|---|-------------------|-------|----------------|-------------------|-------|---------------|-------------------|-------|----------------|-------------------|-------|
| | Residential Use | | | Commercial Use | | | Religious Use | | | Industrial Use | | |
| | Day | Even ⁿ | Night | Day | Even ⁿ | Night | Day | Even ⁿ | Night | Day | Even ⁿ | Night |
| Construction Works | 75 | 60 | - | 75 | 60 | - | 75 | 60 | - | 75 | 65 | - |

*Note: Day period is defined as 0700 to 1800, evening period is defined as 1800 to 2200 and night period is defined as 2200 to 0700. Construction activities conducted at times not specified in the table above will require special approval from relevant authorities. These may include the Night period, Sundays and all other times within Residential and Tertiary Educational compounds.

29. The consent holder shall ensure that loose soil from earthworks must be dampened to control dust levels during construction.
30. The loading and unloading of all vehicles and stockpiling of materials and equipments associated with the development shall take place within the site boundaries of the application. All stockpiles and waste materials associated with construction shall be stored on site before use or disposal.
31. All waste materials shall be disposed of at the Tafaigata landfill.
32. The hours of construction shall be limited to between the hours of 7:00am and 6:30pm on Mondays to Saturdays and no activities shall be carried out on Sundays or public holidays unless there is a written agreement with the Agency.

Operational:

33. The consent holder shall ensure that all activities during operation shall be carried out in accordance with the *Occupational Health and Safety Act 2002*.
34. The consent holder shall ensure that the forecourt and surroundings of the building including pavements and gutters are to be kept clean and free of litter at all times.
35. All wastes generated on the premises shall be stored and disposed of in an environmentally acceptable manner. An adequate number of suitable waste containers shall be kept on the premises for storage of garbage.
36. The consent holder shall ensure that fire control measures and on site drainage are regularly maintained.

Restoration:

37. Upon completion of construction activities, all areas which were disturbed by the development shall be stabilized so that accelerated erosion or sedimentation or both will be prevented.
38. The consent holder shall ensure that the site is appropriately restored to its original state or to the satisfaction of the Agency.

Advisory notes:

- 1 *The Agency has considered all submitted information as accurate, if proven otherwise, this consent may be revoked.*
- 2 *A building permit must be obtained from the Ministry of Works Transport and Infrastructure prior to the commencement of construction of works.*
- 3 *The Agency or any employee is not liable for any damage, or loss resulting from any act, omission, or default in the exercise of the development consent function.*
- 4 *A copy of this consent should be held on site at all times during the construction.*
- 5 *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*
- 6 *Non-compliance with this development consent may result in enforcement and legal proceedings under the Planning and Urban Management Act 2004.*
- 7 *The consent shall lapse two (2) years after the date on which it was granted unless it has been given effect before the end of that period.*

Approved by:



Toleafoa Fetoloai Yandall-Alama, Assistant Chief Executive Officer: PUMA
ACTING UNDER DELEGATED AUTHORITY