




## Faleolo International Airport: Design & Construct: Pavements, Drainage & Service Infrastructure Traffic Management Plan

<b>Project:</b>	<b>Samoa Aviation Investment Project (SAIP)</b> Faleolo International Airport Design & Construct, Physical Works: Pavement, Drainage & Service Infrastructure	
<b>Contract No:</b>	ICB: SAA/ICBW/S-A15.4	 <small>Health &amp; Safety AS/NZS 4801</small>
<b>Employer:</b>	Samoa Airport Authority	
<b>World Bank:</b>	P 143308	
<b>Contract Plan Issue Date</b>	<b>Document Preparation &amp; Control Safeguards Specialist</b>	<b>Document Authorisation Project Manager Major Projects North</b>
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## Revision Register

Revision No	Description	Date
01	Internal	14 Feb 18
02	Draft for Consideration	16 Feb 18
03	Draft for Consideration	April
04	Approved for Implementation	May

## Approvals

	Name & Position	Sign	Date
Downer Originator	Craig Smart Safeguards Specialist		
Downer Submission	Peter Murr Project Manager		
Employer Acceptance			


## **Table of Acronyms and Abbreviations Commonly Used on the Faleolo Project**

AC	Asphalt concrete
ACP	Apia Concrete Products
ACM	Asbestos Containing Material
AGL	Aeronautical Ground Lighting
AGMO	Assistant General Manager for Operations
AP	Affected Person/People
APW	Faleolo International Airport
ARFF	Aircraft rescue and firefighting
ATC	Air Traffic Control
CARs	Civil Aviation Rules
CESMP	Contractors Environmental and Social Management Plan
COEP	Codes of Environmental Practice
CEAR	Comprehensive Environmental Assessment Report
CVOR	Conventional VOR
DBA	Decibel
D&B	Design and Build Contract
EA	Executing Agencies
EHS	Environmental and health and safety
EIA	Environmental impact assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
FOD	Foreign Object Debris
GDP	Gross domestic product
GoS	Government of Samoa
Ha	Hectares
HF	High Frequency communication equipment
HMA	Hot mix asphalt
HSM	Health & Safety Manager (ref Technical Requirements - synonymous with
OHSO)	
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IA	Implementing Agency
ICAO	International Civil Aviation Organisation
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
IPCC	Intergovernmental Panel on Climate Change
IESMP	Integrated Environmental and Social Management Plan
ILS	Instrument Landing System
LAeq	Equivalent Continuous Level
LIRL	Low Intensity Runway Edge Lights
LTA	Land Transport Authority
MAF	Ministry of Agriculture and Fisheries
MNRE	Ministry of Natural Resources and Environment
MOWP	Method of Works Plan
MWTI	Ministry of Works, Transport and Infrastructure
NAVAIDS	Navigational Aids
NDB	Non Directional Beacon
NGOs	Non-government organisations
OHS	Occupational Health and Safety
OHSO	Occupational Health & Safety Officer (ref Bid Doc - synonymous with HSM)

OP	Operational Policy
PAIP	Pacific Aviation Investment Program
PAPI	Precision Approach Path Indicator
PCCSP	Pacific Climate Change Science Program
PEAR	Preliminary Environmental Assessment Report
PESMP	Project Environmental and Social Management Plan
PIB	Public Information Bulletin
PISA	Preliminary Integrated Safeguards Assessment'
PPE	Personal protective equipment
PSC	Project Steering Committee
PST	Project Support Team
PUMA	Planning and Urban Management Agency
PUM Board	Planning and Urban Management Board
PWD	Public Works Department
PAP	Recycled Asphalt Pavement
RCP	Representative Concentration Pathway
RFS	Rescue Fire Service
RWY	Runway
SAA	Samoa Airport Authority
SAA PST	Samoa Airport Authority SAIP Project Support Team
SAIP	Samoa Aviation Investment Project
SCG	Shanghai Construction Group
SDS	Safety data sheets
STD	Sexually transmitted diseases
STEC	Samoa Trust Estate Corporation
SWA	Samoa Water Authority
SWM	Solid Waste Management
SWMP	Solid Waste Management Plan
TFSU	Technical and Fiduciary Services Unit
THR	Threshold
TMP	Traffic Management Plan
TWY	Taxiway
VHF	VHF communications equipment
VOR	VHF Omnidirectional
WB	World Bank
WMA	Waste Management Act 2010

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 Relationships creating success	<b>TRAFFIC MANAGEMENT PLAN</b>
<b>Project</b>	SAIP: Faleolo International Airport: Design & Construct: Pavement, Drainage & Services Infrastructure.
<b>1. Location</b>	Faleolo Airport and the route used to access Olo Quarry and cart aggregate to the Contractor's Compound.
<b>2. Application</b>	<p>This plan applies to all vehicles of all types engaged on the Faleolo contract under the control of Downer, ie includes all Downer subcontractor vehicles. The provisions of this TMP are also applicable to the other contract parties eg Employer &amp; Engineer while engaged on contract related activities.</p> <p>All Project workforce members travelling to and from the quarry are required to use the designated quarry access route (and not take "short cuts" via various side roads in Mulifanua) and follow all traffic restrictions and speed limits in line with this TMP.</p>
<b>3. Description of Works</b>	<p>Work will occur at a number of sites within and outside Faleolo Airport. Special security and aircraft safety provisions apply to work within the airport area where aircraft operate and are detailed in the Method of Works Plan (MOWP).</p> <p>The scope of work involving traffic management comprises:</p> <ul style="list-style-type: none"> <li>• Vehicle movements, in particular carting aggregate from Olo Quarry to Contractors Airport Compound (asphalt plant, stockpile &amp; office site) at Faleolo Airport via the following route:             <ul style="list-style-type: none"> <li>○ From Olo Quarry site via quarry access roads (a mix of private and public roads) on the STEC land to the Main Coast Road at west end of Faleolo Airport. East bound from intersection with quarry access road along Main Coast Road approximately 200m to access gate into Contractors Airport Compound (refer Quarry Access Route diagram in Section 21).</li> </ul> </li> </ul> <p>Returning empty trucks will use the same route; exiting the Contractors Airport Compound access road turning right onto Main Coast Road, then travel west bound for 200m and entering the Olo Quarry access road on the left. Up to 100 truck movements per day estimated.</p> <ul style="list-style-type: none"> <li>• Undertake upgrade work on above route prior to commencing aggregate cartage.</li> <li>• Undertake remedial works on above route during and after aggregate cartage.</li> <li>• Vehicles entering and leaving the Contractor's Airport Compound at Faleolo Airport onto the Main Coast Road via a widened two way gate. Up to 120 vehicles per day estimated.</li> <li>• Vehicles moving to and within the Contractors Compound at Faleolo airport.</li> </ul>

<b>3 Continued</b>	<ul style="list-style-type: none"> <li>The main airfield access point from the Contractors Airport</li> <li>Compound will be via a widened double gate adjacent to the Western Apron.</li> </ul> <p>This Traffic Management Plan (TMP) reflects all these activities.</p>
<b>4. Work Programme</b>	January 2018 to August 2019
<b>5. Hours of Work</b>	<p>Airfield working hours will generally be from 1900 hours to 0700 hours Monday to Saturday.</p> <p>Quarry and cartage route working hours will be between 0700 hours and 1800 hours Monday to Saturday. Should any urgent/emergency work require to be undertaken outside these hours or on Sundays this can only be via prior, formal approval from the Ministry of Natural Resources and Environment through an exemption from its Development Consent for the operation of Olo Quarry and agreement of the Employer.</p>
<b>6. Traffic Control Method</b>	<p>In accordance with the requirements of New Zealand Transport Agency (NZTA) Code of Practice for Temporary Traffic Management, effected by provision of signs warning of construction activities and limiting vehicle speeds.</p> <p>The sites will have warning signs and temporary traffic control devices to warn and guide pedestrians, vehicles and other road users as appropriate.</p> <p>The Samoa Land Transport Authority (LTA) shall also approve the signs and use of the roads under its jurisdiction.</p>
<b>7. TMP Audit</b>	Downer will carry out regular inspections of the sites to monitor TMP implementation and effectiveness, and take corrective action as required.
<b>8. Delays</b>	<p>Should non planned delays in excess of 10 minutes occur, work will be halted so that the traffic can be cleared.</p> <p>Each delay will be noted in the daily site diary and the site team advised to put systems in place to limit reoccurrences.</p> <p>It is noted that traffic delays in excess of 10 minutes may occur as a result of Employer approved work methods (eg road closure to permit planned construction activities).</p> <p>If the project construction activities require it, a further site specific layout will be prepared &amp; added to this TMP.</p>



<b>9. Equipment</b>	<p>Construction equipment is generally painted in high visibility colours. Before being used on the route aggregate haul trucks will be inspected to confirm they are in appropriate operational condition (current licensing and mechanical condition).</p> <p>Amber flashing lights are standard items on the majority of large equipment.</p> <p>Traffic Cones shall be a minimum of 450 mm in height.</p> <p>All road traffic and control signs will comply with New Zealand Transport Agency (NZTA) Specifications or as otherwise required by the Samoa Land Transport Authority.</p>
<b>10. Temporary Speed Restriction</b>	<p>A temporary speed limit on sections of the quarry access route will be imposed to ensure the safety of the work, workers, pedestrians and other road users.</p> <p>The temporary speeds limits shall be as specified in the attached diagrams.</p> <p>A 30 MPH speed limit will generally apply to the quarry access route with a lower limit where the route passes the STEC worker accommodation.</p>
<b>11. Specific Quarry Cartage Route Provisions</b>	<p>The following will apply to the quarry access route:</p> <ul style="list-style-type: none"> <li>• Corner widening along route within STEC land</li> <li>• Upgrade existing route to trafficable standard.</li> <li>• Warning &amp; advisory signs along the route.</li> <li>• Engine braking to be avoided.</li> <li>• Trucks loaded to avoid spillage.</li> <li>• Trucks loaded by loader fitted with “Loadrite”, or similar, weighting system to record exact load, with weight checked by weighbridge at Contractor’s Compound.</li> <li>• Load inspection area outside quarry gates.</li> <li>• Dust generating materials covered or dampened</li> <li>• Operations paused to avoid special events, farming activities etc in accordance with community and stakeholder consultation.</li> </ul>
<b>12. Positive Traffic Control</b>	<p>In addition to advisory &amp; warning signs, Downer, when required, will use the following methods of positive traffic control</p> <p>(a) Barriers or cones to delineate &amp; protect workers and work areas.</p> <p>(b) Cones or other directional indicators to guide traffic around work sites.</p> <p>(c) Traffic controllers with stop/go paddles.</p> <p>(d) One lane operation is not envisaged for the aggregate cartage operation. If such is required it will be in accordance with NZTA Code of Practice for Temporary Traffic Management or as otherwise required by the Samoa Land Transport Authority.</p>



<b>13. Contingency Plan</b>	<p>Downer will take all practicable steps rectify any unplanned event, including traffic accidents or other emergencies that cause delays to traffic greater than 10 minutes in duration.</p> <p>Delays will be managed through the following;</p> <ul style="list-style-type: none"> <li>(a) Plant and resources to move obstructions and rectify physical problems.</li> <li>(b) Emergency contacts and procedures posted on site.</li> <li>(c) Detour traffic.</li> </ul>
<b>14. Staff Training</b>	<p>Downer will run an in-house course for all Downer and subcontractor personnel (including drivers, supervisors &amp; traffic control staff) involved in this project.</p> <p>This training will be based on implementation of this plan.</p> <p>The experience and qualifications of all drivers will be ascertained and checked during the training.</p>
<b>15. Community &amp; Stakeholder Consultation</b>	<p>Prior to commencing work Downer consulted separately with the Mulifanua community &amp; the STEC farmworkers. These consultations were combined with consultation for the Olo Quarry operations.</p> <p>The consultation provided information on the proposed scope and timing of the route upgrade work and planned aggregate haulage operation. It also detailed the signs, speed limits &amp; other provisions intended to control traffic on the route.</p> <p>Feedback from the consultation was that people were generally happy with the proposal. No significant changes to the traffic management proposal were requested. A record of the consultation and feedback received has been included in the Olo QMP (Appendix K).</p> <p>Downer has also established a Community Contact ("Fitz") to foster ongoing two way communications and better alert Downer to any issues or concerns.</p> <p>The GRM was also explained to communities &amp; stakeholders, and its application to complaints about Project traffic management.</p>
<b>16. Public Notification</b>	<p>Information concerning the scope and timing of the intended work will be provided to the general public by way of newspapers and other media releases.</p> <p>Additional information to residents on the quarry cartage route will be provided by community consultation, leaflet drops and personal contact.</p> <p>Pedestrian safety and avoidance of unnecessary disruption to residents and road users are key focuses of this TMP.</p>
<b>17. Personnel Safety</b>	<p>All site personnel to wear protective clothing and equipment in accordance with the Safety Management Plan.</p>

<p><b>18. Daily Maintenance of Traffic Management Installation</b></p>	<p>Daily maintenance of the traffic management installation (ie access route pavement, drainage and traffic signs) will be undertaken by Downer's aggregate cartage subcontractor. The condition of the access route and traffic signs etc will also be subject to daily inspection by the Quarry Manager and periodic inspection by Downer's Health &amp; Safety Manager (HSM - aka Occupational Health &amp; Safety Officer - OHSO) through the Traffic Management section of the Site Compliance Assessment. The subcontractor will be directed to rectify any deficiencies found. Any issues not addressed by the subcontractor within two days of advice to do so will be remedied by Downer staff.</p>
<p><b>19. Monitoring the Effectiveness of the TMP – Roles &amp; Responsibilities</b></p>	<p>In addition to the inspection and maintenance of the physical condition of the traffic management installation noted in Sec 18 above, the operational effectiveness of the TMP will also be monitored, this will be undertaken by Downer's HSM with a view to consider the need for amendments to the TMP to improve its effectiveness, and include observing;</p> <ul style="list-style-type: none"> <li>• Vehicle travel speeds on the access route</li> <li>• Evidence of load spillage</li> <li>• Evidence of dust generation (whether from route surface or truck loads)</li> <li>• Weighbridge records for indications of truck overloading</li> <li>• Driver identity &amp; behaviour – check that drivers have attended the training noted in Sec 14 of the TMP (also seek explanation for any observed erratic behaviour – ensuring sobriety and capability to drive at all times)</li> <li>• Vehicle condition – check that trucks being used on the route continue to be in acceptable condition ref Sec 9 for initial inspection (NB tailgates are mandatory).</li> </ul> <p>Consideration of the effectiveness of the TMP will also consider information from the GRM or other comments/reports received regarding the quarry access route.</p> <p>Any proposed amendment of the TMP will be reviewed by the Safeguards Specialist and then forwarded to LTA &amp; LYON for consideration.</p> <p>Regular contact with the LTA to confirm adherence to local requirements and any amendments to arrangements for traffic management.</p>

<b>20. Traffic Control Diagrams</b>	<p>Diagrams showing how the TMP will be given effect for the various sites and situations are attached</p> <p>The diagrams are;</p> <ul style="list-style-type: none"> <li>• Sheet 1 Olo Quarry to Downer Site Compound – Quarry Access Route</li> <li>• Sheet 2 Olo Quarry to Downer Site Compound – Traffic Management Plan - Layout Details</li> </ul>
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Date:	May 2018 – Rev 4

## 21. Quarry Access Route





## 22. Traffic Layout Diagrams

