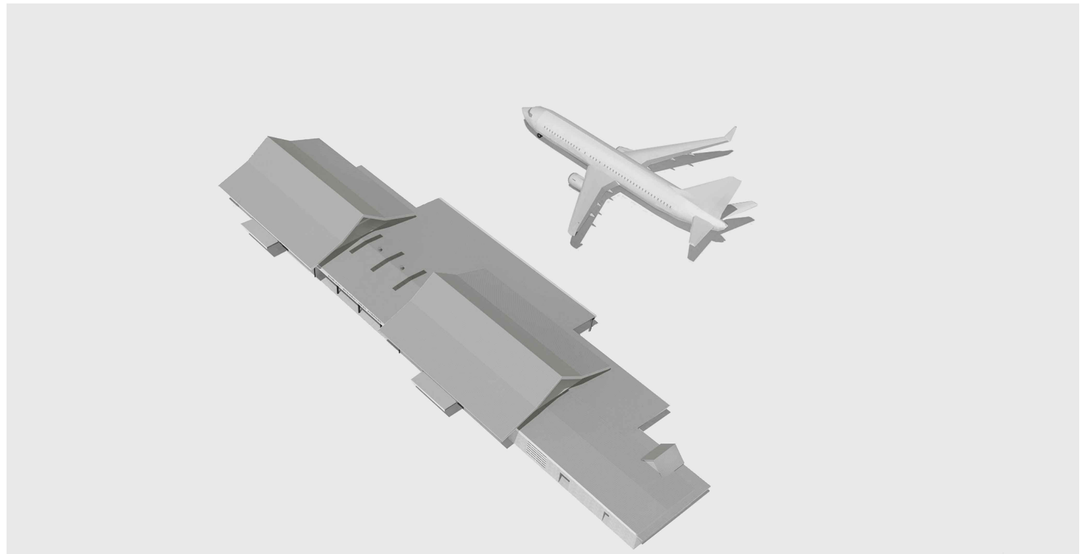

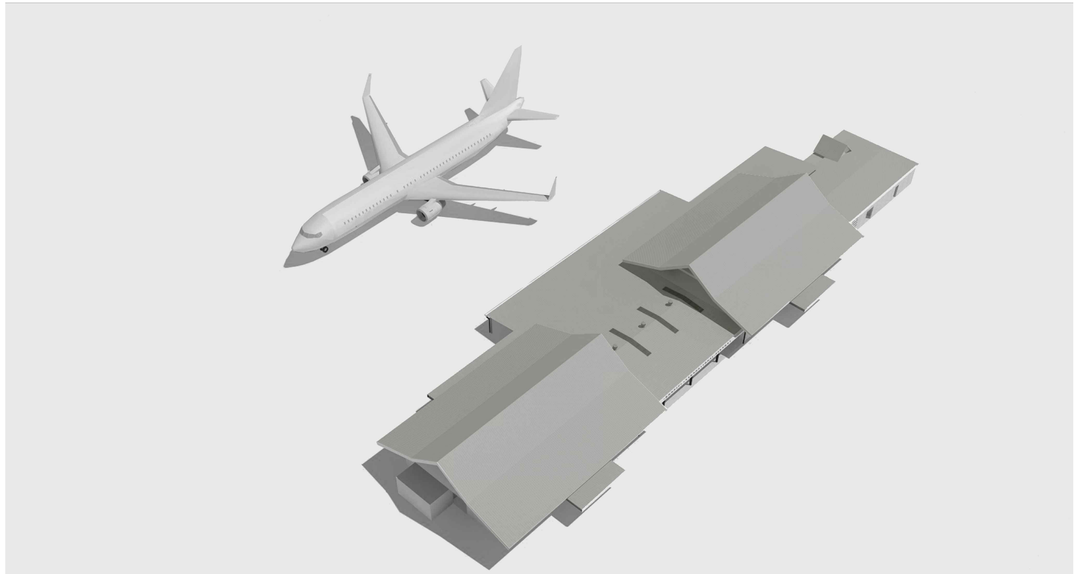

PROPOSED TERMINAL ROOF

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ARCHITECTS DRAWING T1 – TECHNICAL SPECIFICATION CODES – DRG. NO. AR–1301

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTS SPECIFICATION.

NOTE:
1. FINAL DETAIL DESIGN IS SUBJECT TO THE STRUCTURAL ENGINEERS DESIGN
2. FINAL DETAIL DESIGN IS SUBJECT TO THE ELECTRICAL/ FIRE/ MECHANICAL/ HYDRAULIC ENGINEERS DESIGN

FOR APPROVAL
NOT FOR CONSTRUCTION

REVISIONS

No.	BY	DATE	DESCRIPTION	APPD
01	TMA	09.08.13.	FOR APPROVAL	

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE AECOM QUALITY ASSURANCE SYSTEM TO ISO 9001:2000

DESIGNED	TMA	CHECKED	TM
DRAWN	TMA	CHECKED	TM
APPROVED		DATE	

SCALES: N.T.S.

AECOM
AECOM New Zealand Limited
tim mein architects

CLIENT: Government of the Republic of Kiribati

PACIFIC AVIATION INVESTMENT PROGRAM (PAIP)

BONRIKI INTERNATIONAL AIRPORT
TERMINAL
3D VIEW 3

A1 | STATUS: DETAIL DESIGN | DRAWING NO: 60277003–AR–1332 | REV: 01

Appendix B

Mitigation Measures

Appendix B Mitigation Measures

Environmental & Social Mitigation Plan – For All KAIP Components

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
DETAILED DESIGN/ PRE-CONSTRUCTION MOBILISATION STAGE					
Road traffic safety	Provide for Traffic Management Plan (TMP) to be developed by Contractor, to include signage, flag operators, personnel protective equipment (e.g. high visibility vest), and specific actions to be implemented around sensitive receptors (e.g. residential dwellings, schools, hospital). TMP to include vehicle and pedestrian traffic. Include transport of materials and equipment to construction camp (located at the airport) in the TMP e.g. covering of loads, maximum speed, designated travel times and notification of police and other required departments (e.g. hospital and schools).	From port to airport and To and from the construction camp	Minimal (requirement of bidding documents)	Design Consultant and Contractors	MCTTD
Aviation traffic safety	Each investment within an operational airport is to have a Methods of Works Plan (MOWP) which is to be included in all bid and contract documents. The Contractor is to develop a Safety Management Plan as an addendum to the MOWP. The MOWP will include details of site works scheduling around known flight timetables and procedures for emergency response for all workers.	Operational airports	Minimal (requirement of bidding documents and standard construction practices)	Design Consultant	MCTTD
Soil erosion	Minimize erosion and design erosion protection measures according to international good practice standards, including incorporation of effective drainage systems (soakage pits) and consideration of surface flow paths. Schedule earthworks and construction activities outside of wet season (Nov to Apr).	All locations	Minimal (part of standard design practices).	Design Consultant	MCTTD

[5] Costs are estimates only and will be calculated during the detailed engineering design.

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Dust/Air Pollution	Identify and locate waste disposal sites, stockpile sites and equipment (e.g. asphalt plant) to minimize impacts on the environment and nearby population. Ensure all equipment is serviced and issued with warrant of fitness (as required). Equipment over five years old shall only be used with written approval by MCTTD. Any machinery deemed to be polluting the air must be replaced (or fixed) on instruction by the MCTTD.	Construction camp	Minimal (part of standard design practices).	Design Consultant	MCTTD
Water and soil pollution	Minimise risk to groundwater and surrounding soil by developing a spill response plan and provide training to all contract workers on how to implement the spill response plan. Ensure bunded areas and hard stands are allocated at construction camp for the storage of fuel, lubricants and other potential substances required for the project. Water tight and sheltered bunds to be able to contain 110% of the largest tank/container or, 25% if total volume greater than 1,000L. Ensure wash down areas with respective collection and treatment systems are designated within the construction camp (e.g. settling pond or tank and concrete slurry treatment and oil water separator). Sanitation treatment system (e.g. compost or proprietary treatment system) is to be approved by the MPWU and MCTTD prior to implementation.	All components	Minimal (part of standard design and construction practices).	Design Consultant	MCTTD
Water supply	Include maximum rainwater reclamation and water conservation/ efficiency in design of terminal. The Contractors will also need to ensure adequate supply of water for construction and personnel which does not adversely affect the community's water supply (e.g. mobile desalination plant or organising a reservoir supply specifically for construction).	Airport terminals	Minimal (part of standard design practices).	Design Consultant and Contractors	MCTTD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Importation of aggregate material	Obtain import permit and Quarantine certification prior to export from country of origin. Certificate of fumigation and verification of source (or proof that material is free of contamination) to be submitted to MPWU and Quarantine Department.	All components	Minimal (part of standard design and construction practices).	Design Consultant	MCTTD
Solid waste generation	Allow for re-use of as much material as possible either within the KAIP, other projects, or for community use. The Teinainano Urban Council should be consulted to determine if materials or waste can be recycled within the community. The recycling of construction materials will be at the discretion of the MCTTD and MPWU. When planning the construction camp ensure temporary waste dump areas are allowed for and approved waste disposal sites / methodologies identified for removal of all solid waste. As early as possible in the pre-construction preparation phase suitable receiving waste facility(ies) should be identified and agreements put in place to transport (trans-boundary) remaining project waste from Kiribati.	All locations	Minimal (part of standard design and construction practices).	Design Consultant and Contractors	MCTTD
Hazardous substances	Where possible fuel shall be obtained from local commercially available sources. Prior arrangement regarding quantity and type will need to be organised (MCTTD to provide details of providers). Fuel shall not be stored in the construction Camp unless permission given by MCTTD. Confirm the presence of asbestos containing material on any buildings to be demolished and develop an asbestos management plan addressing the necessary EHS and customs arrangements to deal with demolition and transport. Ensure containment facilities are set up for the transport of hazardous waste substances that are to be disposed of at licensed waste facility (trans-boundary).	All locations	Minimal (part of mobilisation and construction planning).	Contractors	MCTTD
CONSTRUCTION STAGE					

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Traffic (vehicle and pedestrian) and construction safety	Implement the traffic management plan to ensure smooth traffic flow and safety for workers, passing vehicles and pedestrian traffic. Where appropriate, employ flag operators on the road to prevent traffic accidents. The workers shall have relevant safety equipment.	Length of road rehabilitation	Safety equipment included in construction cost.	Construction Contractors	MCTTD
Soil erosion	Minimise time and size of ground disturbing activities to workable size at any one time. Vegetation to be removed manually, strictly no use of herbicides/ pesticides. Keep construction vehicles on defined tracks. Revegetate disturbed areas that are not being paved as soon as practicable (loosen ground; apply topsoil; seed or plant as necessary).	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD
Waste disposal	Ensure all construction waste material (including packaging) is recycled or packed up for transport off island. The municipal landfills on South Tarawa are not suitable for disposal of construction waste generated from the KAIP. Ensure areas for waste collection, recycling and off-side disposal are clearly marked/sign posted. Segregate waste to avoid cross contamination, such as with contaminated material (hazardous substance). Install waste collection facilities at construction camp to allow for collection and packing of waste. Strictly no dumping of rubbish. Include awareness training in general environmental training. Workers must be provided with a sanitary system to prevent fouling of lagoon or surrounding soils.	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD
Water and soil pollution	Lubricants shall be collected and recycled, disposed of according to Kiribati regulations, or removed from island as hazardous waste. Spill response plan training completed for all construction workers.	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD & ECD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
	Zones for preliminary accumulation of wastes are designated in areas that will cause no damage to the vegetation cover or leach into groundwater or the marine environment (e.g. within construction camp on hard surface). Excavations are bunded to prevent ingress of water runoff. Sediment laden runoff from excavations or stockpiles must be directed to a settling area (not the sea or beach) or collected for dust suppression provided the runoff is not contaminated with any chemicals (e.g. fuel). Runoff from equipment maintenance and washing or fuel storage is to be treated through an oil water separator. Runoff from concrete production and washing of concrete equipment is be collected and treated for settlement and neutralisation. Concrete production and asphalt applications should only occur during dry weather to reduce the likelihood of contaminated runoff from fresh concrete or new pavement. The area around the fuel hydrant pipes on the apron has potential to be contaminated with hydrocarbons. Any material excavated which has a PID reading of 10 ppm shall be treated as contaminated fill and must be disposed of at an approved facility able to deal with contaminated fill (possibly off island). As required further investigation or development of a management plan may be required (refer IFC EHS Guidelines). Rehabilitation of the construction camp area shall include scarification to loosen compacted ground as a result of stockpiles and construction of hard stand areas (including bunded areas). Any soil found to be impacted by hydrocarbons shall be excavated, treated as hazardous waste and removed from island for disposal at an approved facility.				

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Generation of dust	Use closed/covered trucks for transportation of construction materials. Any vehicle which is overloaded (exceed designed load limit) or is not covered properly shall be refused entry to the construction camp or material shall be refused delivery (if not to the construction camp). Cover stockpiles containing fine material (e.g. sand and topsoil) when not actively being used. Keep work areas clean with regular sweeping. Due to freshwater supply constraints large scale water sprinkling should be kept to a minimum and only as required. Only small areas should be cleared of vegetation at any one time and revegetation should occur as soon as practicable. Dust masks and personnel protective equipment must be available for workers during dust generating activities (e.g. pavement milling). Reuse of pavement milling waste as backfill behind the western end sea wall is to have a paved surface to prevent asphalt dust being mobilised. The asphalt plant must be fitted with a dust scrubber and all complaints received investigated fully and response/action documented.	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Noise and vibration disturbances	Minimise nuisance from noise, especially closer to residential areas, through establishment and communication to affected parties of standard working hours (08:00 to 18:00, Monday to Friday) and avoid increase of noise and number of work equipment at peak hours. Any work outside prescribed hours of operation requires approval by the MCTTD, ECD, and notice to affected peoples provided at least 24 hours prior to out of schedule works starting. Regularly check and maintain machinery, equipment and vehicle conditions to ensure appropriate use of mufflers, etc. Workers in the vicinity of sources of high noise shall wear necessary protection gear rated for the situation they are being used. Signage to outline complaints procedure and contact details of recipient of complaints (e.g. phone number, physical address and email). The IFC EHS Guidelines[6] section 1.7 Noise Management shall be applied (if no local limits are prescribed). Noise impacts should not exceed the levels for industrial commercial activities for one hour LAeq of 70 dB at any point of the day or night. Alternatively noise impacts should not result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site (e.g. residential house).	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD

[6] International Finance Corporation, Environmental Health and Safety Guidelines, General Guidelines: Noise Management

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Accident risks/Impacts on traffic safety	Arrange necessary measures for pedestrian and passer-by safety and all means of transportation safety (e.g. establish protection zones, by-pass these areas during transportation of materials, etc.) Relevant safety elements such as guardrails, road signs and delineators, pavement markings, barricades and beams, warning lights shall be installed. In some cases a flagman or traffic control supervisor could be engaged around the specific work site.	All locations	Safety equipment included in construction cost. Minimal (part of standard construction practice).	Construction Contractors	MCTTD
Loss of archaeological artefacts or sites	Work to stop in specific location of unearthed artefacts or site and MCTTD notified immediately for instruction to proceed.	All locations	No marginal cost	Construction Contractors	MCTTD
Landscape degradation	Restoration of landscape after completion of rehabilitation works; restore the vegetation cover in accordance with the surrounding landscape and any required design (e.g. grass land or shrubs). Use plant species characteristic for the landscape in the course of restoration of the vegetation cover.	All locations	Minimal (part of standard construction practice).	Construction Contractors	MCTTD
Hazardous substances and safety and pollution	Store and handle hazardous substances in bunded, hard stand or designated areas only. Bunded areas should be covered to stop rain water entering or constructed to drain to an oil water separator which will need to be constructed or a mobile proprietary unit imported specifically for use on the KAIP. Bunds (secondary containment) to contain 110% of the largest container/tank required to be stored or, 25% of total volume if total volume is over 1,000L. Provide hazard specific personnel protective equipment to workers directly involved in handling hazardous substances (e.g. chemical or heat resistant clothing, gloves). Complete list, including MSDS for each chemical stored or used shall be accessible at all times. Signage to be posted in storage areas identifying all chemicals present. Spill kits and training of use to be provided to all workers during toolbox meetings. Spill kits to contain PPE gear for the spill clean-up (e.g. gloves and overalls), material to contain the spill and absorbent	All locations	Safety equipment included in construction cost. Minimal (part of standard construction practice).	Construction Contractors	MCTTD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
	pads, and a heavy duty rubbish bag to collect absorbent pads or material. Used oil to be collected and taken off island (for disposal or cleaning at approved facility) at completion of works if no on island disposal or recycling facility available. Asbestos containing material (ACM) to be removed from buildings in accordance with the Contractor's approved asbestos management plan (refer IFC EHS Guidelines). Only trained workers wearing full asbestos suitable PPE gear (overalls, respirators, booties, etc.) shall handle the ACM.				
Loss of biodiversity	If during course of construction work, particularly vegetation clearance and excavations any bird, reptile or mammal species is identified as being potentially impacted (e.g. nesting bird in area of proposed vegetation clearance) work is to stop in the specific location of the find and the ECD and MCTTD notified immediately for instruction to proceed.	All locations	No marginal cost	Contractors	MCTTD
Health and safety	Construction camp to be fenced to prevent access by unauthorised personnel. First aid training to be provided as required to site workers with basic first aid services to be provided by Contractor e.g. stretcher, vehicle transport to hospital. Only personnel trained in asbestos handling may be involved in any demolition works involving ACM. Details of required PPE and required training to be documented in the Contractor's approved asbestos management plan. ECD and MCTTD to be notified prior to specific ACM work commencing.	All locations	Security included in construction cost. Included in construction costs	Contractor	MCTTD
Damage to assets and infrastructure	As a result of KAIP construction activities any damage to assets or infrastructure must be reported to the MCTTD and rectified at the expense of the Contractors.	All locations	Dependent on asset/ infrastructure and level of damage	Contractors	MCTTD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
OPERATION STAGE					
Hazardous substance management	Strictly apply and enforce manufacturer's recommendations for handling and storage. These measures include sealing of drums, and avoiding extreme heat. Compliance with international good practice. Security of storage areas to facilitate transport, handling and placement to be maintained (e.g. fences and locks fixed immediately if broken or vandalised). Complete list, including MSDS for each chemical stored or used shall be accessible at all times. Signage to be posted in storage areas identifying all chemicals present. Staff to wear manufacturers recommended personnel protective equipment (e.g. gloves and overalls) when handling or mixing hazardous substances. Emergency vehicles are to be serviced and maintained at existing workshop areas.	All airport compounds	No marginal cost (standard operating procedure).	CAD (airports)	MCTTD
Water or soil pollution	Workshops or maintenance areas to be fitted with bunded areas for storage of oil and fuel drums (and any other hazardous substances). Used oil drums should be returned to the suppliers or, after being cleaned, sold in secondary local market if there is demand for this. Used oils may be used for emergency drills/preparedness exercises as appropriate by ARFF.	All locations	No marginal cost (standard operating procedure).	CAD (airports)	MCTTD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[5]	EXECUTING AGENCY	SUPERVISING AGENCY
Maintenance of drainage and soakage systems	Drainage systems shall be periodically cleared of sediment and organic matter build up to ensure appropriate flows and soakage. Material to be disposed at approved site (e.g. landfill or used as cleanfill) or composted if organic. Vegetation to be cleared from drainage channels and soakage pits and composted through the Teinainano Urban Council. The sludge and oil tanks of the fuel spill interceptors must be cleaned out as per the manufactures instructions and not allowed to overflow into stormwater discharge. As a minimum a monthly visual inspection of the collection chamber is required to determine volume of oil collected. A dip stick check on the depth of oil can assist in determining if removal is required. **NOTE:** the fuel spill interceptors are a confined space and are extremely dangerous to work in. The chambers should not be entered unless by a fully trained confined space entry worker with correct breathing apparatus and gas monitoring devices.	All locations	No marginal cost (standard operating procedure).	CAD (airports)	MCTTD
Wastewater management	Septic systems of the terminal to be cleaned regularly and sludge disposed or treated in accordance with requirements of MPWU and ECD.	Terminal	No marginal cost for current practice of disposal.	CAD (airports)	MCTTD

Note: "All locations" refers to all areas in Tarawa which will be impacted by KAIP activities, namely the airport (runway, terminal, control tower), the road corridor (transport of materials), the port (for delivery of equipment and material), and the construction camp.

Appendix C

Monitoring Plan

Appendix C Monitoring Plan

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	RESPONSIBILITY
DETAILED DESIGN/ PRE-CONSTRUCTION PHASE				
Traffic safety	Design documents	Ensure TMP has been submitted and approved.	Prior to sign off of final designs	Design Consultant
Aviation safety	Design documents	MOWP complete with details of flight schedules and emergency procedures.	Prior to sign off of final designs	Design Consultant
Soil erosion	Design documents	Construction scheduled for between May and December. Designs include erosion protection measures.	Prior to sign off of final designs	Design Consultant
Water supply	Design documents	Water reclamation systems included in designs (particularly terminal design).	Prior to sign off of final designs	Design Consultant
Importation of materials and equipment	Importation permits	Ensure inclusion in design and material specifications that material and equipment to be fumigated and free of contamination. Approval to import material and equipment is given prior to material and equipment leaving country of origin.	Contractor to organize prior to export from country of origin.	Contractors
CONSTRUCTION				
Agreement for waste disposal	Construction Contractor's records	Permits and/or agreements with local waste disposal providers (e.g. Teinainano Urban Council and recycling contractors). Inspection of disposal sites. Permit and /or agreements with international waste facilities are in place (documented evidence) and correct transport containment methods are available.	Documentation viewed prior to construction works starting Weekly as applicable to schedule of works.	MCTTD
Soil erosion	Areas of exposed soil and earth moving	Inspections at sites to ensure silt fences, diversion drains etc. are constructed as needed. Inspection to ensure replanting and restoration work completed.	Weekly inspection as applicable to schedule of works and after site restoration.	MCTTD

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	RESPONSIBILITY
Waste disposal	At construction sites	Inspection to ensure waste is not accumulating and evidence waste has been stockpiled for removal from island. At the end of the project ensure there is no remaining non-recyclable or reusable material remaining.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD
Water and soil pollution	At construction sites	Inspection of sites to ensure waste collection in defined area; spill response plan in place and workers trained. Complete spill kits available where hazardous substances sorted and handled. Results from water quality monitoring of the freshwater lens available.	Weekly inspection as applicable to schedule of works and on receipt of any complaints	MCTTD
Dust and air emissions	At construction sites and adjacent sensitive areas.	Site inspections. Regular visual inspections to ensure stockpiles are covered when not in use and trucks transporting material are covered. Visual inspection of asphalt plant to ensure dust scrubber operating and no visible emissions or odour is experienced at the boundary of the construction camp or 3 stack distances from the plant, check maintenance records for cleaning and or corrective actions.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD
Noise	At work sites and sensitive locations	Site inspections to ensure workers wearing protective equipment when required. Measurement of noise level with hand-held noise meter not to exceed 70dB. Public signage detailing complaints procedure and contact people/person on display.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD
Storage of fuel, oil, bitumen, etc.	At work sites and construction camp. Contractors training log.	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.	Weekly as applicable to schedule of works and on receipt of any complaints.	MCTTD
Vehicle and pedestrian safety	At and near work sites	Regular inspections to check that TMP is implemented correctly (e.g. flags and diversions in place) and workers wearing appropriate personnel protective gear.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	RESPONSIBILITY
Construction workers and staff safety (personal protective equipment)	At work sites	Inspections to ensure workers have access to and are wearing (when required) appropriate personnel protective equipment (e.g. for handling hazardous materials).	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD
Community safety	At work sites	Inspections to ensure signs and fences restricting access are in place and pedestrian diversion routes clearly marked (whether for access to a building or home or particular route).	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCTTD
OPERATION				
Accidents with hazardous materials or wastes	Airport sites	Accident report	Immediately after accident	ECD
Maintenance of drainage system	On site	Inspection to ensure no visible sheen (hydrocarbon contamination) in discharge and inspection of maintenance records to ensure clean out of fuel spill interceptors occurring as per manufacturer's guidance. Inspection to ensure no blockages in drainage system.	When needed, particularly after storm events and during rainy season	MPWU
Wastewater management	Terminal and control tower	Proper maintenance of septic system	Quarterly inspection (observation) at connection to septic system.	CAD
Solid waste collection and disposal (non-hazardous)	Terminal and control tower	Solid waste being collected and taken to approved disposal site (e.g. landfill)	To be arranged with Teinainano Urban Council as required	CAD

Appendix D

Inspection Checklist

Appendix D Inspection Checklist

EMP Monitoring Plan Checklist

Location:	
Auditor:	
Audit Date/Time (Start):	
Audit Date/Time (Finish):	

Environmental Issue:	Inspection areas:	Requirements met?
1.0 Construction Phase		
1.1 Soil Erosion	- Silt fences and diversion drains in place - Replanting and restoration work completed	Yes ☐ No ☐ If No, details:
1.2 Waste accumulation and Disposal Agreements	- Good housekeeping around the work sites - Waste stockpiled in defined areas with signage ready for removal - Waste/recycling permits/agreements in place	Yes ☐ No ☐ If No, details:
1.3 Soil and Water Pollution	- Waste collected in defined area on impermeable ground - Appropriate spill response plan/kit in place for waste area - Freshwater lens water quality results sighted	Yes ☐ No ☐ If No, details:
1.4 Dust	- Stockpiles covered or kept wet when not in use - Visual inspection of ambient dust conditions - Truck transports are covered	Yes ☐ No ☐ If No, details:
1.5 Noise	- Workers wearing ear protection as required - Noise level maximum of 70dB	Yes ☐ No ☐ If No, details:

Environmental Issue:	Inspection areas:	Requirements met?
1.0 Construction Phase		
1.6 Hazardous Substance Storage (fuel/oil/bitumen)	- Hazardous substances within bund on impermeable surface - Spill kit complete and accessible - Spill training completed	Yes ☐ No ☐ If No, details:
1.7 Traffic Management Plan Implementation	- Traffic Management Plan (TMP) implemented - PPE is being worn be workers	Yes ☐ No ☐ If No, details:
1.8 Personal Protective Equipment Use	- Workers have access to, and using appropriate, PPE for the task.	Yes ☐ No ☐ If No, details:
1.9 Community Safety	- Public signage of complaints procedure - Signs and fences restrict or direct pedestrians and public where appropriate	Yes ☐ No ☐ If No, details:
2.0 Operational Phase		
2.1 Drainage Maintenance	- Inspect to check for blockages and debris, particularly after storm events	Yes ☐ No ☐ If No, details:
2.2 Septic System Maintenance and Upkeep at Terminal/ Control tower	- *Quarterly inspection* of connections to system, for leaks	Yes ☐ No ☐ If No, details:
2.3 Solid Waste Collection/ Disposal from Terminal/ Control Tower	- Solid non-hazardous waste being removed to council approved disposal site	Yes ☐ No ☐ If No, details:

Actions Required:

Issue No.	Action Required? By Whom?	Date Action Required?

Signoff

Signature: ..... Date: .....

Appendix E

Contents of Basic Environmental Impact Assessment

Appendix E Contents of Basic Environmental Impact Assessment

In progress – not yet complete

Item	Detail	Reference/ Comment
	an executive summary of the impact assessment report, written in Kiribati	To be provided by the PAIP Kiribati Project Support Team
1	the objectives of the proposed activity	Section 1.0 Introduction
2	an analysis of the need for the proposed activity	Section 1.1 Background and Section 2.0 Upgrade Description of Works for specific upgrade works
3	a description of the proposed activity, including—	Section 2.0 Upgrade Description of Works
	a) if the activity includes construction work— i) designs, plans and maps; ii) the quantities of any materials and equipment needed; iii) the nature of any construction or works process; iv) construction working hours; v) ; proposed schedule for implementation and completion..	Section 2.0, Appendix A and Appendix B The exact schedule for implementation and completion of works will be determined once the contractor(s) have been confirmed for each component of work. However indicative time frames have been provided in Section 2.0.
	b) if the activity includes carrying on an environmentally-significant activity— i) the nature and extent of the activity; ii) materials needed; iii) sourcing of material, whether imported or locally sourced;	Section 2.0 Upgrade Description of Works
	c) if the activity includes taking, harvesting, growing or keeping of organisms, the type and number of organisms involved;	Not applicable – there will be no taking, harvesting, growing or keeping of organisms.
	d) if the activity includes the generation of any waste substances or energy— i) the nature and quantity of any waste products; ii) proposed methods for controlling and dealing with any waste products;	Sections 6.3.1 Solid Waste, Section 6.3.9 Wastewater, Section 7.0 Mitigation Measures (specifically 7.2, 7.4, 7.8, 7.9) and Appendix B
	e) if the activity includes harm to a coral reef, mangrove or sea grass bed, the nature and extent of the harm;	Not applicable – there will be no harm caused to a coral reef, mangrove or sea grass bed. Works within or discharges to the coastal and marine environment are prohibited.

Item	Detail	Reference/ Comment
	f) if the activity includes harm to a protected species or ecological community, the nature and extent of the harm;	Not applicable – there will be no harm caused to a protected species or ecological community.
	g) if the activity is in a protected area or World Heritage area, the nature and extent of any harm to the protected area or World Heritage area	Not applicable – the location of TRW is not within a World Heritage Area.
4	a description of the environment with the potential to be affected by the proposed activity.	Section 4.0 Environmental and Social Environment Proximity to foreshore discussed but details regarding beach material, shape, wind direction, currents and nature of the reef are not applicable. There are no ecologically important habitats at the airport.
5	the potential or actual impacts of the proposed activity on the environment.	Section 6.0 Environmental and Social Impacts There will be no direct impacts on health facilities, education facilities, current land use and resources (TRW is existing infrastructure), nor any sites of structures of historical or cultural significance.
6	A description of any intended investigations or studies of the possible impact of the proposed activity on the environment.	There are no intended investigations or studies of possible impacts related to the project however monitoring is a requirement of this EMP and prescribes the checks needed to ensure impacts are mitigated as described in the EMP.
7	A description of how climate change and climate variability may impact on the activity.	Section 4.4 Projected Climate Change and Impacts Greatest likely impact from climate change is rising sea level. Due to low lying, flat landscape any rise in sea level will inundate surrounding land before the runway.
8	the benefits of the proposed activity, including any economic, social and cultural factors	Section 2.2 Alternatives and the Social Safeguards Report

Item	Detail	Reference/ Comment
9	reasonable alternatives to the proposed activity, for example, design and sites, and including, at least, the alternative of not undertaking the activity (basic EIA)	Section 2.2 Alternatives
10	an outline of the reasons for the proposed activity as opposed to the alternatives	Section 2.2 Alternatives
11	a description of any other legal requirements relating to the proposed activity	Section 3.0 Policy, Legal and Administrative Framework
12	a summary of the results of consultations undertaken for the proposed activity	Section 5.0 Consultation and Stakeholder Engagement
13	a) a list of the persons and bodies who have been consulted	Section 5.0 Consultation and Stakeholder Engagement– to be updated as additional consultation is undertaken.
14	an environmental management and protection plan for the proposed activity, including— a) a description of environmental issues or the environment to be affected or impacted, b) a description and assessment of the controls, safeguards, standards or other environmental management or mitigation measures intended to be adopted or applied for the protection of the environment, or to minimize or prevent harm to the environment, including their estimated costs; c) a description of any intended environmental monitoring and reporting of the impact of the activity with estimated costs; d) a description of responsibilities and authorities for implementation of mitigation measures and monitoring requirements; e) a clear statement that the applicant is committed to the measures included in the environmental management and protection plan; and f) a clear statement by the applicant that, if unexpected adverse impacts occur, contact will be made immediately with the Principal Environment Officer to seek advice.	Sections 6.0 Environmental and Social Impacts, 7.0 Mitigation Measures, 9.0 Compliance and Monitoring Plan , Appendix B Mitigation Measures, and Appendix C Monitoring Plan
15	the summary of the environmental management and protection plan in a matrix form. The summary of the environmental and protection plan must include – a) environmental issues or the environment to be affected or impacted. b) proposed mitigation, control or safeguard measures, c) name of institutions responsible for implementing mitigation, control or safeguard measures, .	Appendix B Mitigation Measures
16	a list of contributors to the report and their contact details	Identified in the text.

Appendix F

Minutes of Consultation Meetings