

Environmental and Social Monitoring Report

January – June, 2017

Kiribati: South Tarawa Sanitation Improvement Sector Project

Prepared by Ministry of Public Works and Utilities, Government of Kiribati for the Asian Development Bank

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Government of Kiribati
Ministry of Public Works & Utilities



Safeguards Monitoring Report, 2017 (January – June)



Grant-0263 KIR: South Tarawa Sanitation Improvement Sector Project
THE SMEC International (July 2017)

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1 INTRODUCTION

This Semi-Annual Safeguard Monitoring Report covers the period from January through June 2017. The purpose of the report is to document the environmental management activities and resettlement and related land issues for:

- ICB 01 Rehabilitation of Sewerage and Saltwater Systems Betio, Bairiki and Bikenibeu;
- ICB 02 Upgrading of Ocean Outfalls at Betio, Bairiki and Bikenibeu

ICB01 Safeguard systems are in place. The BEIA and Contractor's EMP (CEMP) are approved and compliance thereof is generally good based on the Consultants monthly monitoring. Land issues at Bikenibeu PS5 are settled in the sense that new land has been allocated for the pump station relocation. However, the affected land owner has an ongoing dispute with the government that continues to hamper completion of works.

ICB02 was awarded to CCB/Maritime Constructions Joint Venture (JV). A "basic" status for the BEIA was approved earlier in 2015 and the resultant BEIA issued to MPWU for review and comment in August 2015. The BEIA was approved in November 2015 as was the relevant Environmental License. The Contractor's Environmental Management Plan (CEMP) was approved by the Engineer in December 2016 and then approved by MELAD/ECD in January.

ICB02 Construction began in earnest in January with the assembly of pipe strings at a staging area in Nanikai. Deep water pipe and diffuser installation was completed in April. Shallow reef works is hampered by the tides – excavation works can only be completed at extreme low tides and works are not expected to be completed until August. Despite the slow pace for completion, the project execution has been very smooth with no environmental compliance issues of significance.

The Resettlement and Environmental specialists have completed their work on the project and are no longer active. Mr. Iannang Teaioro continues to provide service related to resettlement and environment on an as-needed basis. ICB01/02 Environmental compliance is generally good.

2 ICB 01

2.1 Status

ICB 01 involves the rehabilitation of the existing sewerage system in Betio, Bairiki and Bikenibeu. The works include rehabilitation of: the salt water system, manholes, sewerage, saltwater and sewer building services, pump stations, electrical/controls equipment, saltwater towers, and saltwater intakes. Saltwater pipeline cleaning, and pump restoration in Betio and Bairiki is effectively complete – cleaning, inspection and repair of the sewer system is ongoing. Saltwater pipeline cleaning and restoration in Bikenibeu has been delayed and reduced in scope.

Works on the saltwater system in Bikenibeu were effectively suspended due the fact that most piping in the area is located under the newly constructed pavement – repair of the saltwater piping would require extensive pavement cutting and repair. Both GoK and ADB have indicated

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that they want works to proceed on a limited basis that includes a new intake PS, construction of the saltwater tower, and pipeline refurbishment in areas where it is located outside of the pavement.

Refurbishment of pipework under pavement remains aspirational. Hundreds of pavement cuts/repairs if conventional refurbishment is employed. CCB have presented a proposal for a new parallel HDPE pipeline that would parallel the existing alignment adjacent to the roadways – the would curtail pavement cutting dramatically and is the preferred option of the Engineer. However, the pipe alignment would be at the frontage of the lots of numerous land owners – the new pipe network can only proceed with a clear directive from GoK that the contractor has explicit permission to construct on private property. Construction of the alignment will also necessitate numerous tree removals.

The anaerobic digesters (AD) originally proposed were deemed to be infeasible and have been deleted from the works. A solids drying bed at Nanikai Landfill was proposed as an alternative to the AD for the purpose of sewer-solids removal and disposal. The drying bed concept was superseded by a proposal for a septage receival station which is generally deemed to be a more reliable system for solids removal. PUB have indicated that they prefer to locate the septage receival unit adjacent to PS1 in Betio - SMEC is preparing a site plan to integrate unit. Odour remains a concern but since the equipment housing is largely enclosed it may not be a valid issue.

2.2 Environmental Monitoring

The Engineer continues to conduct monthly audits of CCB – generally compliance is good with no findings of significance to report. These reports have been forwarded to the Environmental Officer at MELAD. the monthly audits are presented in Appendix A – Environmental Monitoring. The Consultant's monthly audits include a few minor issues but compliance with standards is generally good.

2.3 Resettlement Status

All but three pump stations within ICB01 are located in Government Lease Land. The three pump stations of interest that are all located in Bikenibeu, being Pump Station one, five and six. Pump Station six, is owned by three parties - division of compensation is not settled but at present there are no *legal* impediments to prevent construction. Access to the existing PS5 has become troublesome. Land issues at PS1 are not currently an impediment but are worth noting.

PS5 Bikenibeu

The new PS5 site is on Government Lease land and the prefabricated wetwell has been installed. An unexpected dispute has flared with the occupant of the existing PS5 site. The person in question is Mr. Tauroa Temeaa (apparent Land Owner of Ribono 663a/1) who resides adjacent to the existing PS5. Both the Engineer and CCB have previously discussed the demolition of the existing PS, relocation of a sewer line and manhole, and restoration of the site with Mr. Temeaa– it was understood that all parties were in agreement. Any such agreement however was not

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legally binding and the land owner is now claiming that he does not permit access to his land and that he is taking legal action against the government.

CCB have been advised to proceed on construction at the new PS5 site without intruding onto the disputed land pending further advice from Government. The Technical Advisor (TA) has furnished advice in the form of laws of Kiribati that indicate that PUB have an existing right to access and service their assets after having given notice to affected landowners. Kiribati Law also provides for Compulsory Acquisition should it be necessary.

Most recently (July 2017) the MPWU Secretary has advised that Cabinet has authorized forced entry onto the site (if necessary). The Secretary advises that, "...Cabinet tasked MPWU, PUB, OAG, KPS (Police) and CCB to ensure proper handling of the matter." The Engineer attended a coordination meeting on July 17th to assist in the process – representatives of MPWU and PUB were in attendance. The recommendation from that meeting is that PUB will issue a Notice of Intent to Enter to Mr Temea. Personnel safety is a concern, Mr. Temea previously brandished a weapon in a previous encounter although no physical violence occurred. The attendees feel that the best option is for the Police to deliver the letter which presumably would avert any physical hostility.

CCB have issued a methodology of major tasks to be completed once access is granted - site work may take up to 6 weeks. Major remaining works for the new PS5 include connecting the southern influent main and northern discharge header, installation of the control panel, and civil site works. Works at the existing (old) PS5, include demolition of the PS, relocation/connection of the eastern sewer to the elementary school, installation of a manhole on the disputed land, and jetting of the school's service line. CCB advise that the school may have no service for up to 2 weeks during construction.

In January a second potential landowner was identified, Mr. Arawatau Miito. Mr. Miito has approached CCB and the Engineer asserting that CCB were using his property for storage and that compensation was due. CCB had previously consulted with Lands who had informed them (verbally) that the area in question was actually Kiribati Housing Land. Research from PUB Counsel suggests that the question of ownership has never been legally resolved. Mr. Miito is also seeking compensation for tree removal at the new PS5 site and has made numerous visits to LMD, SMEC's office, and CCB's office to seek payment.

PUB tried unsuccessfully to engage Mr Temea in December 2016. Eventually they issued a Notice of Intent to Enter as is their prerogative. PUB and CCB were subsequently advised by GoK not to forcibly enter the land pending further discussions with the presumed land owner – this advice is still in force pending instruction from GoK.

Two negotiation meetings were held in January 2017 between PUB and Mr. Temea. The dispute remains unresolved. The Technical Advisor has also issued a Cabinet Paper and supporting documentation to escalate the matter. In general, this matter is one for GoK and the Kiribati Court System – there is little more that can be done as a resettlement issue within STSISP. SMEC

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continues to offer assistance as a facilitator and document the status of the dispute(s) and the ultimate resolution thereof.

The Engineer sought a legal description from MELAD/LMD (LMD) for the parcels in the vicinity of works to see if any ownership could be identified. Review of LMD records are inconclusive. There are no defined property boundaries in the vicinity of the existing PS5 site although the area in question is defined as private property (i.e. non government lease land). The Engineer researched the names of listed landowners in the vicinity of the disputed site – although inconclusive, neither Mr. Miito's nor Mr. Temeaa's names were listed as land holders.

Trees were removed from the new PS5 site prior to construction. Unfortunately, no survey was carried out prior to removal. Apparently both the Contractor and Engineer's representative were of the understanding that since the works were on Government land that no survey was needed. This is incorrect - the land is actually Government *Lease* land and the underlying owner is logically eligible for compensation. Mr Miito claims ownership of the land and is in possession of a letter from LMD that suggests compensation for tree removal totalling \$689 (See Appendix 2 for the Compensation letter and related correspondence from GoK). Neither the Engineer nor TA are disputing the enumeration of removed trees nor the claimed amount but getting compensation into the hands of the rightful owner has proved difficult.

The Engineer asked LMD to survey the new PS5 site retroactively. The intent was to rectify the omission of a pre-survey but also to see if lands could/would make a formal determination as to the identity of the rightful landowner. Lands apparently were unable offer any information on ownership and legally defined ownership remains unclear.

It would seem that even though there is a procedure in place to identify trees for removal, arrange for a tree survey, and propose compensation, there is no clearly defined means whereby landholders can apply for and receive their compensation. The TA has advised that the Project can absorb the cost of compensation and recommends that it should be LMD that actually makes payment. The TA has proposed the following procedure as a way forward:

- Trees to be identified by CCB and verified by SMEC
- SMEC to ask LMD to undertake a survey of the food bearing trees that are to be removed on behalf of the project.
- SMEC to request LMD to send us a list of trees including types and classifications and their assessment of the compensation amount for each tree - a plan with GPS co-ordinates is preferable.
- That information is passed on to the MPWU with any advice as to who should fund the compensation either the Employer or the Contractor.
- The MPWU writes to LMD to confirm that the trees are being removed and are to be paid by STSISP.
- Funds are then held in a separate account until as such time as the rightful claimant is identified of which LMD facilitates the payment.

The Engineer concurs with the TA's assertion that issues of ownership and compensation should be an LMD responsibility. Ownership issues aren't a logical fit within MPWU and SMEC assuredly

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cannot offer legal opinions. The procedure may be needed again within ICB01 for possible tree removal associated with BIK saltwater restoration and should also be in place for future infrastructure projects.

PS1 Bikenibeu

Although the landowner at the PS1 had previously indicated that she would not permit entry onto her land however more recently CCB have been allowed entry without complaint. The screen and pipework including ICB02 pipes are installed and works are winding down. Remaining works are principally civil site work including fencing. The fencing material was lost in Suva Harbour when a container ship sank in May – CCB have not advised of a date for completion.

A number of trees were removed on two land parcels at the PS1 site after identification by CCB/SMEC and completion of a survey by LMD. The records provided by LMD include a plan of the trees and property boundary but do not specify the type of trees – the plan employs different symbols for various types of trees but since the plan carries no legend it is not possible to determine what type of trees are represented. The landowners apparently were provided with a schedule of rates for compensation but no specific enumeration of trees removed or proposed compensation.

3 ICB02

3.1 Status

Pipe assembly commenced in January and was completed in March. HDPE pipe and diffusers were assembled in lengths up to 300 meters long using thermal welding at the Nanikai staging site. These strings were stored on the intertidal reef prior to towing operations to deliver them to the PS1 sites. Flanged couplings are used on site to connect the strings – this work is ongoing.

The Felenius dive crew issued pre and post construction route reports. Coral bleaching was noted at all 3 sites relative to a 2015 marine survey. The preconstruction surveys for Bikenibeu and Betio suggested modifications to the proposed routes noted in the tender docs – these modifications were approved by the Engineer. The route changes had the effect of routing the deep water sections through areas that avoided damage to healthy coral where possible and placed the pipe into areas sheltered by adjacent coral heads thus minimizing exposure to currents and wave energy. The diver's physical works also included removal of old pipe, debris, and dead corral and relocation of live coral to healthy adjacent areas.

Work platform boats are arrived in February of 2017 and were used for towing operations and deep water pipe installation. Deepwater installation of pipe/diffuser sections proceeded very quickly and was completed within a two-week window during April.

Temporary discharge piping was installed prior to inception on works on the shallow (intertidal) reef. Shallow water works includes (re)trenching of the existing alignment, removal of old pipe and debris, laying new pipe and anchors, backfilling and installation of a concrete cap. Generally, these works have been completed without straying from the alignment – i.e. the Contractor has been in compliance with the BEIA requirement to complete trenching works within a 15-meter corridor.

3.2 Environmental Safeguards

SMEC undertook routine monthly audits of the JV (See Appendix 1 for more information). There are no noteworthy deficiencies in the reporting period.

3.3 Social Safeguards

The ICB 02 Project works area is mostly off shore. The Contractor and SMEC paid courtesy visits to the nearby residents at BIK to advise of upcoming shore-side works – these meetings were amicable. The LDS church were advised of upcoming works in Bairiki. It is hoped that the Contractor can complete works at the church without damaging the sea wall and property wall near the adjacent PS1. SMEC has made a pre-construction survey at the church and will make an assessment as to whether any damage has occurred at the close of construction. Works at Betio are relatively remote from any residences.

APPENDIX 1 ICB01/02 EMP COMPLIANCE MONITORING AND AUDIT

ICB01 January Environment Monitoring and Auditing
Date of Inspection : 14 February 2017

Site : Records – checked at CCB compound, Betio
 Monitoring – work sites at Betio, Bairiki and Bikenibeu

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Wastes from Betio manholes still dumped at Betio dumping ground. 8 m ³ was dumped at the Betio dumping ground in January 2017. 2.5 m ³ was dumped in December 2016.	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Landowner in Betio complained that some people from either McDow or CCB uprooted his coconut tree	The landowner needs to precisely identified who is responsible

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor		
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	CCB vacuum truck is still down.	PUB vacuum truck is still be used
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 100 litres Petrol, 100 litres diesel, 200 litres lubrication oil, and 200 litres engine oil are the only forms of chemical kept in containers.	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		

ICB02 February Environment Monitoring and Auditing

Date of Inspection : 8 March 2017

Site : Records – checked at CCB compound, Betio
Monitoring – work sites at Betio and Bikenibeu

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	3 m ³ of waste (black sand) from Betio and Bairiki manholes was dumped at the Betio dumping ground. PUB vacuum truck was used.	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	CCB vacuum truck is still down.	Obtain McConnell Dowell vacuum/water jet truck at the end of February
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 100 litres Petrol, 100 litres diesel, 200 litres lubrication oil, and 200 litres engine oil are the only forms of chemical kept in containers.	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		

ICB01 March Environment Monitoring and Auditing

Date of Inspection : 7 April 2017

Site : Records – checked at CCB compound, Betio
Monitoring – work sites at Betio and Bikenibeu

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	5.5 m ³ of waste (black sand) from Betio manholes was dumped at the Betio dumping ground.	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	CCB vacuum truck is still down.	Use on a special arrangement McConnell Dowell vacuum/water jet truck
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 200 litres Petrol, 100 litres diesel, 200 litres lubrication oil, and 200 litres engine oil are the only forms of chemical kept in containers.	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		

ICB01 April Environment Monitoring and Auditing

Date of Inspection : 10 May 2017

Site : Records – checked at CCB compound, Betio
Monitoring – work sites at Betio and Bikenibeu

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	3 m ³ of waste (black sand) from Betio manholes was dumped at the Betio dumping ground.	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Complaint from Landlord of new PS5 sites at Bikenibeu regarding compensation of trees that were cut down to clear space on the site	The matter was referred to the MPWU
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	CCB vacuum truck is now working.	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 200 litres Petrol, 100 litres diesel, 200 litres lubrication oil, and 200 litres engine oil are the only forms of chemical kept in containers.	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		

ICB01 May Environment Monitoring and Auditing

Date of Inspection : 10 May 2017

Site : Records – checked at CCB compound, Betio
Monitoring – work sites at Bikenibeu

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Water Jetting truck is down.	Spare parts ordered
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 200 litres Petrol, 100 litres diesel, 200 litres lubrication oil, and 200 litres engine oil are the only forms of chemical kept in containers.	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		

ICB01 June Environment Monitoring and Auditing

Date of Inspection : 17 July 2017

Site : Records – Interview with Noel Biltris at the Bungalow
Monitoring – work sites at Bikenibeu & Bairiki

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Sand from the salt water main is disposed at the Bikenibeu dumpsite	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Work at PS5 still await Government approval to proceed	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Water jetter was down .	Spare parts ordered
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	No pollution. 100 litres Petrol, 100 litres diesel, less than 100 litres lubrication oil and engine oil are the only forms of chemical kept in containers. Refuel at fuel stations	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	nil	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports	.	

ICB02 January Environment Monitoring and Auditing

Date of Inspection : 14 & 23 February 2017

Sites : Nanikai

Records – CCB Office

Monitoring – Works sites at Nanikai

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Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	No removal of trees has taken place	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads will minimize further the minor impact of this work.	Experience marine ecologists are employed and are currently working on relocating of live corals off the path of the outfall pipe.	
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width),	Trenching has not started	

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Environmental Issue	Monitoring Detail	Issues	Actions taken
	ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied		
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser is yet to be connected	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	No toilet facility at the Nanikai fabrication area, however the BPA facility was used.	
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses	Plume monitoring at three diffuser sites to be implemented starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be	Will start when diffuser is connected and operational	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5	monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.		

ICB02 February Environment Monitoring and Auditing

Date of Inspection : 10 March 2017

Sites : Nanikai

Records – CCB Office

Monitoring – Works sites at Nanikai

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	No removal of trees has taken place	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads will minimize further the minor impact of this work.	Experience marine ecologists are employed and are currently working on relocating live corals off the path of the outfall pipe.	
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width),	Trenching has not started	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
	ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied		
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site. The coastal area on the ocean side between Nanikai and Bairiki is being used to lay the fabricated outfall pipes	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser has been assembled but not connected to the sewerage outfall pipe	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	No toilet facility at the Nanikai fabrication area, however the BPA facility was used.	
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses	Plume monitoring at three diffuser sites to be implemented starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be	Will start when diffuser is connected and operational	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5	monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.		

ICB02 March Environnement Monitoring and Auditing

Date of Inspection : 11 April 2017

Sites : Nanikai

Records – CCB Office

Monitoring – Works sites at Nanikai

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	No removal of trees has taken place	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads will minimize further the minor impact of this work.	Experience marine ecologists are employed and are currently working on relocating live corals off the path of the outfall pipe. 3 boats will be used for laying the pipe	
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width),	Trenching has not started	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
	ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied		
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site. The coastal area on the ocean side between Nanikai and Bairiki is being used to lay the fabricated outfall pipes. Concrete anchors are being fixed to pipes on the reef flat.	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser has been assembled but not connected to the sewerage outfall pipe	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	No toilet facility at the Nanikai fabrication area, however the BPA facility was used.	
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses	Plume monitoring at three diffuser sites to be implemented starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be	Will start when diffuser is connected and operational	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5	monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.		

ICB02 April Environment Monitoring and Auditing

Date of Inspection : 18 May 2017

Sites : Nanikai and Bikenibeu PS1

Records – CCB Office

Monitoring – Works sites at Nanikai and Bikenibeu PS1

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	No removal of trees has taken place	
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads will minimize further the minor impact of this work.	Experience marine ecologists are employed and are currently working on relocating live corals off the path of the outfall pipe. 3 boats will be used for laying the pipe	
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width),	A bypass line has been installed at Bikenibeu outfall	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
	ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied		
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site.	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser has been assembled deployed at the three outfall sites	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	Local staff are using private toilets facility at PS1 Bikenibeu.	
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses	Plume monitoring at three diffuser sites to be implements starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be	Will start when diffuser is connected and operational	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5	monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.		

ICB02 May Environment Monitoring and Auditing

Date of Inspection : 10 June 2017

Sites : Nanikai and Bikenibeu

Records – Interview Noel Biltris at the Bunkerlow

Monitoring – Main office at Betio and work sites at Nanikai and Bikenibeu PS1

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Nil	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil	
2.3 Accidental damage to utilities	2.3 As above.	Nil	
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	Trees were removed at PS1	SMEC and MPWU are working on it
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads will minimize further the minor impact of this work.	Laying of ocean pipe line has completed	
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width),	A bypass line has been installed at Bikenibeu outfall. Working on to lay the	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
	ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied	pipe. Working hours is restricted by the tide movement.	
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site.	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser has been assembled deployed at the three outfall sites	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	Local staff are using private toilets facility at PS1 Bikenibeu.	
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses	Plume monitoring at three diffuser sites to be implements starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be	Will start when diffuser is connected and operational	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5	monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.		

ICB02 June Environment Monitoring and Auditing

Date of Inspection : 18 July 2017

Sites : Nanikai and Bairiki

Records – Interview Noel Biltris at the Bungerelow

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
1.3 Occupational health and safety measures	1.3 Ensure all staff are wearing appropriate PPE. JSEAs for work tasks have been completed and signed.	Nil	
2.1 Generation of construction waste	2.1 Inspection to ensure that non-hazardous materials are collected and dispose of in the landfill, and hazardous materials are stored safely. Inspection to ensure that all hazardous waste are shipped out of the Kiribati at the completion of the project.	Old pipes dug from the reef flat are being reused by the locals	
2.2 Accidental damage to property	2.2 Visual inspection of project sites, and records of grievance made and actions taken	Nil. However the piping work involves going through the Mormon Church Compound	Previous arrangement with the Mormon Church has been undertaking
2.3 Accidental damage to utilities	2.3 As above.	Nil	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
2.4 Noise nuisance from construction activities.	2.4 As above and conduct a set of interviews with closest residents to establish impacts and actions taken by contractor	Nil	
2.5 Exhaust emissions and black smoke excessive	2.5 As above and check for maintenance records, age of equipment and operation within specifications and instruct contractor to correct problem within 2 days.	Nil	
2.6 Pollution from chemicals and fuels	2.6 Regular inspection of sites for pollution from storage of hazardous materials and likely leakages and exhaust emissions from the drilling rigs and vehicles	Nil	
2.7 Removed trees and vegetation along sewer line trenches not replanted	2.7 Confirm that revegetation has taken place or local consultation agreed to another approach to mitigate losses	Repositioning of an ornamental palm tree within the Mormon Church Compound	SMEC and MPWU are working on it
2.8 Failure to prepare and submit monitoring checklist reports	2.8 Have available full record of monthly monitoring checklist reports		
2.9 Damage to and /or loss of coral	The replacement of the old outfall pipes could impact live coral in the direct path of the pipeline trenches. To address this a detailed marine survey was completed and existence of all coral species mapped. Based on this survey a total of 5-7 m2 of coral could be impacted. The use of an experienced marine ecologist to help locate the outfall when near corals and to lead the relocation of coral heads	Pipes have been dug out of the reef flat at Bairiki during low tide and no coral damage	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
	will minimize further the minor impact of this work.		
3.0 Poor Trenching work area controls	Contractor will be required to mark work area corridors with anchored buoys (14m construction width), ensure that rubber tracked, light weight excavator is used; and optional approach to pipeline replacement be reviewed and the best approach applied	Nil	
3.1 Polluting anchor fabrication and batch plant operations	Runoff from any staging area fabrication sites will need to be diverted to a detention area to reduce the amount of sediment reaching the sea. If a local fabrication and batch plant is used, the contractor will need to provide an inspection certificate, signifying that operations are in compliance with all Kiribati regulations. The contractor will be responsible for assisting the local provider to become more environmentally compliant	No sign of pollution so far seen at the fabrication site.	
3.2 Diffuser unit not suited for site conditions, leading to potential effluent pollution 2	Prior to the diffuser being attached to each pipeline, it will be inspected and certified as being adequate for this specific application	Diffuser has been assembled and deployed at the three outfall sites. Work completed.	
3.3 Inadequate worker sanitation facilities provided	Contractor will be required to make arrangements for workers to use public/private toilet facilities or to provide portable toilets such as porta-potties	Local staff are using private toilets closed to PS1 at Bairiki	

South Tarawa Sanitation Improvement Sector Project

Environmental Issue	Monitoring Detail	Issues	Actions taken
3.5 Effluent plume reaching shore and causing GI and other microbial and viral sicknesses 3.5	Plume monitoring at three diffuser sites to be implemented starting on year one –as defined in the IEE Section 7.3.2. Monitoring should be conducted during normal and spring tide conditions, once every 3 months at the three diffuser sites. Parameters to be monitored should be current speed and direction at 3 depths and at the same time pH, TSS, turbidity, salinity, total phosphorus, Nitrate (NO ₃) and at four locations, i.e. two upstream (25m and 50m) and two downstream (25 and 50m) of the diffuser immediately over the diffuser, 20m downstream, and 50m downstream and 100m downstream. Prior to the start of sampling a tracer should be introduced into the wastewater stream to establish the general movement of the plume.	Will start when diffuser is connected and operational	

APPENDIX 2 CORRESPONDENCE



LAND MANAGEMENT DIVISION
Ministry of Environment, Lands and Agricultural Development
REPUBLIC OF KIRIBATI

Date: 12/04/2017

To: Permanent Secretary
Ministry of Public Works and Energy

CC: Permanent Secretary (MELAD)
Director of Lands (MELAD)

➤ CCB Project Manager

From: Senior Lands Surveyor (MEALD)

Subject: Compensation for chopped Fruit Plants by CCB Project

Mauri,

I am writing here to seek for your generous assistant accordingly to the above matters of compensation of chopped fruit plants by CCB Project.

To my understanding that this Project is under your care, and for so long one of our client claim for the compensation on such fruit plants where project chopped or either cleared by Heavy Plant for placing their Materials and their Machineries along his land at first time, locate at next to KTC or Labour Line House Clinic Bikenibeu.

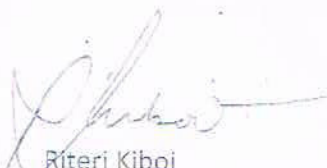
Therefore, the mistake here that CCB Project had made it, they should contact to lands office before excavate all plants that we might record all obstacle trees to their needed area. Last week our surveyors reported that they can't make any record for such mention plants while the site had cleared by the CCB Project.

Could you please to assist our client Mr. Arawatau to CCB Project if it can accepted to make compensate payment to the calculate amount of the said list of plants shown below:

Names of Plants	No: Plants	Rate	Cost
Bering Banana	26	\$16.00	\$416.00
Bering Coconut tree	1	\$80.00	\$80.00
Breadfruit (Mai Kora)	1	\$193.00	\$193.00
Total Cost			\$689.00

I am so appreciative for your kind in assistant the landlord to solve his compensate claim, I hope that you have copy of his letter where wrote by MP. Teburoro Tito makes clearer on his claim issue.

Ko bati n raraba.

A handwritten signature in dark ink, appearing to read 'Riteri Kiboi', with a long horizontal flourish extending to the right.

Riteri Kiboi
Senior Lands Surveyor

OFFICE OF A MEMBER OF PARLIAMENT FOR SOUTH TARAWA

House of Parliament
Ambo, Tarawa
Republic of Kiribati
7th April, 2017

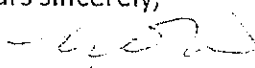
Director of Lands
Lands Division
Bairiki

Compensation for fruit bearing cut by CCB project : Mr. Arawatau Miito

I write for the above named person who is seeking compensation for the 26 banana trees, 1 coconut tree and 1 breadfruit that were cut and destroyed by the CCB company while maintaining the water and sewerage pipes and facilities in the area. This happened sometime late last year. He was not forewarned about this but he had found out about it about two weeks after the trees had been cut and cleared with a loader equipment. This made it difficult for the officers from the Lands to make a count. I understand that the company had also failed to notify the Lands Division before the trees were cut. The land on which the trees were cut is adjacent to land on which the Labour Line/KTC clinic is situated.


I would be grateful for your kind assistance in attending to this request for compensation. I am also requesting the Ministries responsible for the project and for finance for their kind co-operation.

Yours sincerely,


Teburoro Tito MP

cc. (1) Secretary, Ministry for Public Works and Utilities, Betio.

(2) Secretary, Ministry of Finance and Economic Development, Bairiki.



I am so appreciative for your kind in assistant the landlord to solve his compensate claim. I hope that you have copy of his letter where wrote by MP. Teburoro Tito makes clearer on his claim issue.

Ko bati n raraba.



Riteri Kiboi
Senior Lands Surveyor

OFFICE OF A MEMBER OF PARLIAMENT FOR SOUTH TARAWA

House of Parliament
Ambo, Tarawa
Republic of Kiribati
7th April, 2017

Director of Lands
Lands Division
Bairiki

Compensation for fruit bearing cut by CCB project : Mr. Arawatau Miito

I write for the above named person who is seeking compensation for the 26 banana trees, 1 coconut tree and 1 breadfruit that were cut and destroyed by the CCB company while maintaining the water and sewerage pipes and facilities in the area. This happened sometime late last year. He was not forewarned about this but he had found out about it about two weeks after the trees had been cut and cleared with a loader equipment. This made it difficult for the officers from the Lands to make a count. I understand that the company had also failed to notify the Lands Division before the trees were cut. The land on which the trees were cut is adjacent to land on which the Labour Line/KTC clinic is situated.

I would be grateful for your kind assistance in attending to this request for compensation. I am also requesting the Ministries responsible for the project and for finance for their kind co-operation.

Yours sincerely,



Teburoro Tito MP

- cc. (1) Secretary, Ministry for Public Works and Utilities, Betio.
(2) Secretary, Ministry of Finance and Economic Development, Bairiki.

To Riteri

Please assist on
this and respond
accordingly

to return.



12/4/17



LAND MANAGEMENT DIVISION
Ministry of Environment, Lands and Agricultural Development
REPUBLIC OF KIRIBATI

Date: 04/05/2017

To: Permanent Secretary
Ministry Works and Energy

CC: Remoun Ramzy (SMEC), Bairiki
OIC Lands Survey and Mapping

From: Senior Lands Surveyor (MEALD)

Subject: Cost for Trees Compensation

Mauri,


The main reason for writing you this letter is to seek your assistance according to the above matter of compensation cost for plants (coconut trees) which were chopped by SMEC sewerage pump upgrade project. This is second letter for finding out the right channel for payment of the fruit plants compensation.

I just wonder if in the memorandum of understanding or the Project agreement with the SMEC Project, there is any paragraph that mentions whether the Kiribati Government or SMEC Project will be responsible to meet the cost for compensation of any fruit plants.

I would appreciate if you give our office the understanding, whether the Project or Government of Kiribati will responsible for the compensation cost.

Would you please authorize your Ministry account or the SMEC account to make payment to right landlord of lands where claim for compensation of his/her chopped tress?

Ko rarabwa


Riteri Kiboi
Senior Lands Surveyor



GOVERNMENT OF KIRIBATI
MINISTRY OF PUBLIC WORKS & UTILITIES
BOTAKI IBUKIN MWAKURIAN KARIKIRAKE AO KORAKORA
P. O. Box 498, BETIO, TARAWA
Phone: (686) 26 143 / email: depsec@mpwu.gov.ki

File Ref: 19/49

Date: 12 May 2017

To: Director of Lands
Land Management Division
Ministry of Environment, Land & Agricultural Development

Attn: Riteri Kiboi
Senior Lands Surveyor (LMD-MELAD)

CC: Permanent Secretary (MELAD)

RE: STSISP – Compensation for Chopped Fruit Trees by CCB Project

I refer to your letter from the Senior Lands Surveyor Mr Riteri Kiboi dated 12 April 2017 regard the claim for compensation for fruit trees under the South Tarawa Sanitation Improvement Sector Project (STSISP).

We wish to confirm that CCB Envico is the contractor working under this project undertaking the contracts for ICB01 Sewer Rehabilitation and ICB02 Upgrading Ocean Outfalls and we confirm that it was CCB who cleared the area in question. This was for the purpose of the construction of a new pump station in the location as shown on the attached survey. It is also acknowledged that to facilitate construction it was necessary to clear an area greater than the pump station itself than what is required for the permanent structure. The work was done as part of the STSISP project.

Unfortunately, however whilst there was in contact with LMD as part of the Land survey it would seem that there was no survey requested to identify fruit trees. Hence, whilst it is the opinion of the project that the number trees claimed is not necessarily accurate, the Ministry has no evidence to refute the claim.

It is therefore confirmed the Project will pay the compensation for the amount of \$689.00 as is claimed.

Please note we do not have the details as to who is the rightful claimant and we understand that LMD undertakes that task on behalf of the Government as well as making the payment.

To facilitate this can you please advise how we arrange for transfer of Project Funds to LMD of which we will endeavour process the transfer as quickly as possible.

Should you have any queries in relation to this matter, please contact Mr Rodd O'Grady STSISP
Technical Adviser MPWU.

Yours sincerely,



Tiofi Taaitee

Deputy Secretary

For Secretary, Ministry of Public Works & Utilities