

Government of the Republic of Kiribati
Ministry of Finance and Economic Development
Ministry of Public Works and Utilities



The World Bank



Asian Development Bank

Kiribati Road Rehabilitation Project

Consulting Services: Preparation of Design
and Construction Supervision of Road
Rehabilitation Works

Construction Phase Quarterly Progress Report

June 2014



PROJECT NAME:	CONSULTING SERVICES: PREPARATION OF DESIGN AND CONSTRUCTION SUPERVISION OF ROAD REHABILITATION WORKS
REPORT TITLE:	CONSTRUCTION PHASE QUARTERLY REPORT
DATE:	JUNE 2014

Notice

This report was produced by Roughton International Limited for the Government of the Republic of Kiribati, Ministry of Finance and Economic Development and Ministry of Public Works and Utilities for the specific purpose of meeting the requirements of AusAid, The World Bank and Asian Development Bank for a Construction Phase Quarterly Progress Report.

This report may not be used by any person other than with the the Government of the Republic of Kiribati, Ministry of Finance and Economic Development or Ministry of Public Works and Utilities express permission. In any event Roughton International Limited accepts no liability for any costs, liabilities or losses arising as a result of the use of, or reliance upon, the contents of this report by any person other than the client.

Document History

JOB NUMBER:			DOCUMENT REF:			
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

CONSULTING SERVICES: PREPARATION OF DESIGN AND CONSTRUCTION SUPERVISION OF ROAD REHABILITATION WORKS

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1-1
1. INTRODUCTION	1-1
1.1 Project Background	1-1
1.2 Consulting Services	1-2
1.3 Report Details	1-2
2. CONTRACT PARTICULARS.....	2-3
2.1 Key Data	2-3
2.2 Pre-Works Obligations	2-4
2.2.1 Contract Agreement	2-4
2.2.2 Performance Bond	2-4
2.2.3 Insurances	2-4
2.2.4 Employers Financial Arrangements	2-4
2.2.5 Possession of Site.....	2-4
2.2.6 Advance Payment.....	2-4
2.2.7 Commencement Date	2-4
2.2.8 Contract Documents	2-4
2.2.9 Dispute Board.....	2-4
2.2.10 Environmental Licences.....	2-4
2.2.11 Unexploded Ordnance	2-5
2.2.12 Manuals and Plans	2-5
2.2.13 HIV/AIDS prevention.....	2-6
3. EMPLOYERS' ORGANISATION.....	3-1
3.1 Project Management	3-1
4. ENGINEERS' ORGANISATION AND ESTABLISHMENT	4-1
4.1 Engineer Details	4-1
4.2 Staffing	4-1
4.2.1 International	4-1
4.2.2 National	4-1
4.2.3 Counterpart.....	4-1
4.3 Engineers' Facilities	4-2
4.3.1 Office & Laboratory	4-2
4.3.2 Transport	4-2
4.4 Construction Supervision Plan.....	4-2
4.5 Ceiling Amount.....	4-2

5.	CONTRACTORS' ORGANISATION AND ESTABLISHMENT	5-1
5.1	Mobilisation.....	5-1
5.2	Subcontracts	5-1
5.3	Staffing	5-1
5.4	Equipment.....	5-2
5.5	Materials and Material Suppliers	5-3
	<i>5.5.1 Materials on Site</i>	<i>5-3</i>
	<i>5.5.2 Material Suppliers</i>	<i>5-3</i>
5.6	Workshops, Depots and Storage Areas.....	5-3
5.7	Micro-enterprise Groups.....	5-3
6.	PROGRAMME & CASHFLOW	6-1
6.1	Programme	6-1
	<i>6.1.1 Programme rev.0 (July 2013).....</i>	<i>6-1</i>
	<i>6.1.2 Programme rev.1 (November 2013).....</i>	<i>6-1</i>
	<i>6.1.3 Programme rev.2 (February/March 2014)</i>	<i>6-1</i>
	<i>6.1.4 Programme rev.3 (April 2014)</i>	<i>6-1</i>
	<i>6.1.5 Cashflow</i>	<i>6-2</i>
7.	CONTRACT ADMINISTRATION	7-1
7.1	Communications.....	7-1
7.2	Meetings	7-1
7.3	Notices & Instructions	7-1
7.4	Site Records	7-1
7.5	Inspection and Testing.....	7-1
7.6	Measurement and Payment.....	7-1
8.	COMMUNITY LIAISON.....	8-1
	ISSUES IMPACTING ON THE WORKS.....	8-1
9.	WORK SCOPE.....	9-1
9.1	General	9-1
9.2	Betio Causeway & Temaiku Road	9-1
	<i>9.2.1 Betio Causeway</i>	<i>9-1</i>
	<i>9.2.2 Temaiku Road</i>	<i>9-1</i>
9.3	Coastal Protection	9-1
	<i>9.3.1 Coastal Sites 1 & 5 (precast concrete blocks).....</i>	<i>9-2</i>
	<i>9.3.2 Coastal Sites 10 & 11 (rock boulders?)</i>	<i>9-2</i>
	<i>9.3.3 Coastal Sites 15 (rock boulders).....</i>	<i>9-2</i>
9.4	Valve Chambers (KAP Water Supply)	9-2
9.5	Valve Chambers (STSISP Sanitation upgrade)	9-3
9.6	Ambo causeway	9-3
9.7	Betio and Bairiki Roads	9-3

10. MATERIAL SUPPLY	10-1
10.1 Environmentally Safe Aggregates for Tarawa (ESAT).....	10-1
10.2 Supply of Material from MPWU/PVU.....	10-1
10.3 Contract Arrangements (for local aggregate use)	10-1
11. WEATHER	11-1
11.1 Automatic Extension of Time for Wet Weather	11-1
12. RESETTLEMENT.....	12-1
13. POSSESSION OF SITE	13-1
14. PROJECT COORDINATION	14-1
14.1 Service & Utility Providers	14-1
<i>14.1.1Public Utilities Board (PUB) and Telecom Services Kiribati Ltd (TSKL)</i>	<i>14-1</i>
<i>14.1.2Public Utilities Board (PUB)</i>	<i>14-2</i>
<i>14.1.3Telecom Services Kiribati Ltd (TSKL)</i>	<i>14-2</i>
14.2 Kiribati Adaptation Project	14-2
<i>14.2.1Coastal Protection</i>	<i>14-2</i>
<i>14.2.2Water Supply (KAP)</i>	<i>14-2</i>
14.3 Kiribati Aviation Investment Project	14-3
14.4 South Tarawa Sanitation Improvement Sector Project.....	14-3
PROGRESS ON PHYSICAL WORKS	14-1
15. BETIO-TEMAIKU ROAD.....	15-1
15.1 General	15-1
<i>15.1.1Possession of Site.....</i>	<i>15-1</i>
<i>15.1.2Existing Services</i>	<i>15-1</i>
<i>15.1.3Entry upon Land.....</i>	<i>15-1</i>
<i>15.1.4Clearing and Grubbing</i>	<i>15-1</i>
<i>15.1.5Road Maintenance</i>	<i>15-1</i>
15.2 Drainage	15-2
<i>15.2.1Ducting</i>	<i>15-2</i>
<i>15.2.2Stormwater</i>	<i>15-2</i>
<i>15.2.3Kerbing and Edge strips</i>	<i>15-2</i>
15.3 Earthworks.....	15-2
<i>15.3.1Bulk Earthworks</i>	<i>15-2</i>
15.4 Pavement	15-2
<i>15.4.1Sub-base</i>	<i>15-2</i>
<i>15.4.2Basecourse</i>	<i>15-2</i>
15.5 Surfacing.....	15-2
15.6 Ancillary Works	15-3

16. TEMAIKU ROAD	16-1
16.1 General	16-1
16.1.1 Possession of Site.....	16-1
16.1.2 Existing Services	16-1
16.1.3 Entry upon Land.....	16-1
16.1.4 Clearing and Grubbing	16-1
16.1.5 Road Maintenance	16-1
16.2 Drainage	16-1
16.2.1 Ducting	16-1
16.2.2 Stormwater	16-1
16.2.3 Kerbing and Edge strips	16-1
16.3 Earthworks.....	16-1
16.3.1 Bulk Earthworks	16-1
16.4 Pavement	16-1
16.4.1 Sub-base	16-1
16.4.2 Basecourse	16-1
16.5 Surfacing.....	16-2
16.6 Ancillary Works	16-2
17. AIRPORT ROAD.....	17-1
17.1 General	17-1
17.1.1 Possession of Site.....	17-1
17.1.2 Existing Services	17-1
17.1.3 Entry upon Land.....	17-1
17.1.4 Clearing and Grubbing	17-1
17.1.5 Road Maintenance	17-1
17.2 Drainage	17-1
17.2.1 Ducting	17-1
17.2.2 Stormwater	17-1
17.2.3 Kerbing and Edge strips	17-1
17.3 Earthworks.....	17-1
17.3.1 Bulk Earthworks	17-1
17.4 Pavement	17-1
17.4.1 Sub-base	17-1
17.4.2 Basecourse	17-1
17.5 Surfacing.....	17-2
17.6 Ancillary Works	17-2

18. BUOTA ROAD	18-1
18.1 General	18-1
18.2 Drainage	18-1
18.3 Earthworks.....	18-1
18.4 Pavement	18-1
18.5 Surfacing.....	18-1
18.6 Ancillary Works	18-1
19. BETIO FEEDER ROADS	19-1
19.1 General	19-1
19.2 Drainage	19-1
19.3 Earthworks.....	19-1
19.4 Pavement	19-1
19.5 Surfacing.....	19-1
19.6 Ancillary Works	19-1
20. BAIRIKI FEEDER ROADS	20-1
20.1 General	20-1
20.2 Drainage	20-1
20.3 Earthworks.....	20-1
20.4 Pavement	20-1
20.5 Surfacing.....	20-1
20.6 Ancillary Works	20-1
21. BIKENIBEU FEEDER ROADS.....	21-1
21.1 General	21-1
<i>21.1.1 Possession of Site.....</i>	<i>21-1</i>
21.2 Drainage	21-1
21.3 Earthworks.....	21-1
21.4 Pavement	21-1
21.5 Surfacing.....	21-1
21.6 Ancillary Works	21-1
22. BETIO REPAIRS.....	22-1
22.1 General	22-1
22.2 Repair Area 1	22-1
22.3 Repair Area 2	22-1
22.4 Repair Area 3	22-1
22.5 Repair Area 4	22-1
22.6 Repair Area 5	22-1
22.7 Repair Area 6	22-1
22.8 Repair Area 7	22-1
23. BETIO CAUSEWAY BRIDGE	23-1
23.1 General	23-1
23.2 Sub-structure	23-1
23.3 Super-structure.....	23-1

24. COASTAL PROTECTION WORKS	24-1
24.1 General	24-1
24.2 Betio-Temaiku Road	24-1
24.3 Temaiku Road	24-1
24.4 Airport Road	24-1
25. WATER SUPPLY	25-1
25.1 General	25-1
25.2 Pipeline	25-1
25.3 Chambers and Valves	25-1
25.4 Testing and Commissioning	25-1
ISSUES RESULTING FROM THE WORKS	25-1
26. HEALTH & SAFETY	26-1
26.1 General Works	26-1
26.2 HIV/AIDS Campaign	26-1
26.3 Unexploded Ordnance	26-1
27. ENVIRONMENT	27-1
27.1 Environmental Management Plans	27-1
27.2 Imported Materials	27-1
27.3 Incidents	27-1
28. QUALITY CONTROL	28-1
28.1 General	28-1
28.2 Testing Approach	28-1
28.3 Physical Works	28-1
28.3.1 Trench Backfill	28-1
28.3.2 Kerb Backfill	28-2
28.3.3 Coralline Sub-base	28-2
28.3.4 Coralline Basecourse	28-2
28.3.5 Crushed Stone Basecourse	28-2
28.3.6 Prime Coat	28-2
28.3.7 Asphalt Pavement Laying Trials	28-3
28.3.8 Asphalt Surfacing Construction	28-4
29. TRAFFIC MANAGEMENT	29-1
30. VARIATIONS	30-1
30.1 Variation No.1 - Work Scope (1) Changes	30-1
30.2 Variation No.2 – ESAT/TACL Materials for pavement	30-1
30.3 Variation No.3 - Betio Causeway Repairs	30-1
30.4 Variation No. 4 - Coastal Protection Works	30-1
30.5 Variation No 5 - Water Valve Fittings	30-2
30.6 Variation No. 6 - Solar Street Lighting - LED lighting	30-2
30.7 Variation No. 7 - Valve Chambers (KAP)	30-2
30.8 Variation No. 8 - Valve Chambers (STSISP)	30-2
30.9 Variation No. 9 – Basecourse Specification	30-2

30.10	Variation No. 10 – Deferral of Betio Causeway Pavement.....	30-2
30.11	Variation No. 11 – Prime and Tack Coat Requirements.....	30-2
31.	CLAIMS.....	31-1
31.1	Potential	31-1
31.2	Notices	31-1
	<i>31.2.1 Claim No.01; Work Scope (1)</i>	<i>31-1</i>
	<i>31.2.2 Claim No.02; Betio Causeway Remedial Works</i>	<i>31-1</i>
	<i>31.2.3 Claim No.03; Damage to Betio Causeway</i>	<i>31-1</i>
	<i>31.2.4 Claim No.04; Deferral of Pavement Works across Betio Causeway</i>	<i>31-2</i>
	<i>31.2.5 Claim No.05; Introduction of VAT</i>	<i>31-2</i>
	<i>31.2.6 Claim No.06; Prime Coat</i>	<i>31-2</i>
	<i>31.2.7 Claim No.07; Underground service obstructions.....</i>	<i>31-2</i>
	<i>31.2.8 Claim No.08; Survey controls and Setting out.....</i>	<i>31-3</i>
	<i>31.2.9 Claim No.09; Services, no power disconnection.....</i>	<i>31-3</i>
	<i>31.2.10 Claim No.10; Supply of local materials</i>	<i>31-3</i>
	<i>31.2.11 Claim No.11; Services, Impact on clearing & u-drain works.....</i>	<i>31-3</i>
	<i>31.2.12 Claim No.12; Ducts provided through sea walls.....</i>	<i>31-3</i>
31.3	Under Consideration.....	31-3
	<i>31.3.1 Claim No.04; Deferral of Pavement Works across Betio Causeway</i>	<i>31-3</i>
	<i>31.3.2 Claim No.09; Services, no power disconnection.....</i>	<i>31-4</i>
31.4	Approved.....	31-4
32.	DISPUTE BOARD	31-1
33.	PAYMENTS	31-1
33.1	General	31-1
33.2	Interim Payment Certificates	31-1
33.3	Cost Fluctuation	31-1
34.	OVERALL STATUS.....	31-1
34.1	General	31-1
34.2	Physical Works.....	31-1
34.3	Financial Position	31-1
34.4	Completion Date.....	31-1
34.5	Completion of Physical Works vs Elapsed Time	31-2
	<i>34.5.1 Physical Works</i>	<i>31-2</i>
	<i>34.5.2 Elapsed Time</i>	<i>31-2</i>
	<i>34.5.3 Cumulative Record.....</i>	<i>31-3</i>
35.	PROJECTED COST TO COMPLETION	31-1

FIGURES AND TABLES

Table 2-1: Basic Data Sheet	2-3
Table 4-1: Estimate of Costs for Consulting Services	4-2
Table 5-1: Details of Contractor Management Staff	5-1
Table 5-2: Details of Contractor Labour force.....	5-2
Table 5-3: Details of Contractor Equipment	5-2
Table 6-1: KRRP Cash-flow Expectations.....	6-2
Table 13-1: Details of 'Possession of Site' Requests	13-1
Table 34-1: Status of Physical Works	31-2
Table 34-2: Elapsed Time	31-2
Table 34-3: Overview of Project Status.....	31-3
Table 35-1: Projected Costs to Completion	31-1

APPENDICES

Appendix A: Environment Licences

Appendix B: Key Materials & Material Suppliers

Appendix C: Programme (rev 3, April 2014)

Appendix D: Progress Graphs

Appendix E: Cash Flow

Appendix F: Weather

Appendix G: Progress Diagrams

Appendix H: Import Permits & Fumigation Certificates

Appendix I Contract Variations

Appendix J: Contract Claims

Appendix K: Payments

EXECUTIVE SUMMARY

This report covers the period from 1st April 2014 to 30th June 2014. Key Contract information relating to the financial and programme status is summarised hereunder:

Item	Status	Comment
Contract Award		
Letter of Acceptance (LoA)	Issued 12 th February 2013	Donor 'No Objection Letter', to award Contract, provided 8 th February 2013
Contract Agreement	Issued 12 th February 2013	Signed & issued by the Employer with the LoA
	Returned 11 th March 2013	Signed & returned by the Contractor
Financial Status		
Accepted Contract Amount	AUD 48,197,957.20	Following adjustment from Contract Award negotiations
Approved Variations	AUD -1,350,776.38	Details provided at Appendix I
Approved Claims	AUD 0.00	Details provided at Appendix J
Contract Price Adjustment	AUD 0.00	The Contract makes provision for price adjustment under clause 13.8 of the GCC. The Contractor has not yet submitted required indices for approval.
Current Estimated Cost at Completion	AUD 52,820,000	Dependent on finally adopted work scope. Issues as reported herein, cost to complete summary provided at section 35.
Certified Payments to Date	AUD 13,336,225	Details provided at Appendix K
Balance of Amount to Completion	AUD 39,483,775	
Programme Status		
Commencement Date	1 st July 2013	
Time for Completion	690 calendar days	
Date for 'Practical Completion'	22 nd May 2015	
Extensions of Time (EoT)	0 calendar days	An EoT of 50 calendar days is under review for issues related to the deferral of works across the Betio causeway
Revised Contractual Date for Practical Completion	22 nd May 2015	
Engineer assessment of actual Date for Practical Completion	mid-July 2015	It is increasingly likely that the original date of 22 nd May 2015 will be exceeded given current circumstances (as described in this report). An EoT of at least 6-8 weeks seems likely although uncertainty remains in a number of areas.
Performance Indicators		
Assessment of Physical Works status		Main impediments to progress have been problems with base course supply and the asphalt plant. Continued poor weather conditions have also hampered works during this report period.
Excluding 'Materials on Site'	5.2%	
Including 'Materials on Site'	7.8%	
Elapsed Time		
No adjustment for mobilisation	53%	
Adjustment for mobilisation	40%	
Actual vs Anticipated Cash Flow		An updated cash flow has just been provided by the Contractor and this will be monitored for future reporting.

By way of a 'Letter of Acceptance' from the Employer dated 12th February 2013, following a 'No Objection Letter' from the World Bank on 8th February 2013, the Contract for services associated with construction activities on the Kiribati Road Rehabilitation Project (KRRP) was awarded to McConnell Dowell (Aust) Pty Ltd for the 'Accepted Contract Amount' of Australian Forty-Eight Million One Hundred and Ninety-Seven Thousand Nine Hundred and Fifty-Seven Dollars and Twenty Cents (AUD 48,197,957.20).

After fulfilment of certain Contractual obligations (by the Employer and Contractor) a 'Commencement Date' of 1st July 2013 has been established for the Contract. With a Contract duration of six hundred and ninety (690) calendar days the currently scheduled date for Practical Completion (issue of the Taking Over Certificate) will be 22nd May 2015 after which there will be a 'Defects Notification Period' of seven hundred and thirty (730) calendar days and the date of Contract Completion (issue of the Performance Certificate) will be 21st May 2017.

Although some clarity has been provided in respect of work scope and material supply issues there remains some uncertainty until such time as matters are finalised. As previously reported the longer it takes to finalise matters the greater the risk of claims for disruption (with potential associated time and cost implications). It is understood that a briefing paper is being prepared, summarising work scope options and costs, for GoK Cabinet to make an informed decision. Key components and issues, in this area, are itemised below:

Betio causeway; selected works across the causeway have been deferred however it now seems increasingly unlikely that works, to provide a long-term solution to the deterioration condition of the embankment protection revetment, will be carried out ahead of the rescheduled timeframe. A decision, from the Employer, is therefore needed on what works are to take place (if any) across the causeway.

Coastal protection; following donor advice that 'additional' funding is not available the Employer has advised that a more 'minimalistic' approach is to be taken towards coastal protection works. Sites along the main Betio-Temaiku road (lagoon side) will now be sufficient to allow the roadworks to be constructed and whilst this will offer some short-term protection the Works will be at risk if follow-up more robust works do not follow. For 2 sites along the Temaiku road, where more 'high energy' waves are prevalent, the Employer would like to retain the more robust (rock boulder) protection offered by recent designs. This is however subject to funding being available. A site at the ocean end of the airport runway, that had been earmarked for inclusion under the KRRP (as transfer from KAIP), may not now proceed as the KAIP budget provision is understood to be insufficient. The merits of undertaking works at this site, primarily where a rock boulder option is preferred, has to be considered if similar works on the Temaiku road do not proceed. Clarification of work scope requirements still has to be provided for the majority of the sites under consideration.

Valve chambers; following a review by the Donors, on KAP related works, the extent of the work scope has greatly reduced with chamber numbers reducing from 256 to 2. Design requirements still have to be finalised. The Employer and Engineer have expressed reservations over the changed approach which, whilst targeting the facilitating of leak detection, does not address issues related to dealing with leaks if/when detected. The Employer continued to have dialogue with the STSISP on requirements associated with their project and an instruction on required works was provided to the Engineer towards the end of June 2014.

Local coralline material supply; the Contractor is understood to be close to finalising separate contract arrangements for the supply of material from TACL and PVU. Supply from PVU is seen as an interim measure (possibly for ~2 months) whilst the Contractor mobilises equipment needed to extract material

from the TACL source. Once agreements are finalised there will be a need for a variation as supply cost will be more than was allowed for in the Contractors bid. Having material available will however mitigate additional costs (as the need for imported aggregates would be reduced).

Betio & Bairiki roads; poor weather conditions have continued since the beginning of the year and the existing road conditions within Betio and Bairiki (and which are not scheduled for improvement under the KRRP) are becoming noticeably worse and can be expected to deteriorate further during the lifetime of the KRRP. Indicative costs for road improvements have previously been provided for consideration. The 2 main feeder/loop roads in Bairiki (included in the KRRP), and the access road to the Bairiki wharf, could still be completed at a similar cost to current budget allowance if surfacing is changed from asphalt to a 2-coat surface treatment (and the wharf formed with a geo-cell pavement).

As far as physical works are concerned it was previously reported that these commenced, albeit rather slowly, on 10th October 2013 with the Contractor being somewhat restricted in his activities due to their asphalt sub-contractor entering receivership and separate technical problems being experienced with the supply of imported aggregates for pavement works. Following mobilisation and commissioning of an asphalt plant, and arrival of imported basecourse aggregates, the Contractor is now in a better position to make better progress on physical works. It is however unfortunate that poor weather conditions continue to be experienced and this does affect the Contractors ability to progress the works, particularly preparing basecourse and laying the asphalt surfacing.

Recent difficulties have been experienced with conflict between the new road works and existing underground services and this, depending on the extent of the problem, could continue for some time. The Employer/Engineer/Contractor are liaising with PUB/TSKL in regards to necessary relocation works but it is recognised that the service providers have limited resources available. The Contractor has been particularly vigorous in providing claim notices (for delay and associated costs) associated with areas of conflict and the need for PUB/TSKL to assist as much as possible has been emphasised to their senior management.

A brief summary of areas of physical road works, and tasks undertaken to date, follows below:

Betio-Temaiku road; the Contractor does now have greater presence along this road with focus of attention being:

- Completion of asphalt surfacing, Ch 0+000 to 0+400 (toll booth area),
- Drainage and pavement preparation works, Ch 4+700 to 7+200 (Bairiki to Teaoraereke)
- Coastal works, installation of 'enabling' works Ch 5+200 area (Bairiki causeway)
- Drainage works, Ch 23+300 to 23+900 (Naiverevere)

Airport road (Ananau causeway); the main focus of activity remains along a section of the road that approaches the Bonriki airport complex (Ch 0+000 to 2+000) where works to date includes:

- Coastal works, installation of embankment protection now complete (Ch 0+050 to 1+400),
- Services, installation of ducting for future fibre optic services (Ch 0+050 to 1+850),
- Drainage, installation of stormwater culverts (1 no. at Ch 2+000), and
- Kerbing, installation of concrete edge strips (Ch 0+050 to 1+400 LHS and 1+900 RHS)

Temaiku road; there has been little further activity along this road apart from completing basecourse and asphalt surfacing trials on a section from Ch 5+400 to 5+700.

Associated with the physical works are various 'safeguards' issues that the Employer and Contractor have to address and the key components are highlighted below together with any pertinent issues that have developed during the report period:

Resettlement Plan; the Employer, through MELAD/LMD, has completed making payments of compensation entitlements to the vast majority of affected parties (AP). Payments to a few remaining AP's cannot be finalised until such time as on-going court actions (related to ownership or boundary disputes) have been settled. As works progress there will still be a need for further compensation assessment/payment as, prior to clearing activities, there may be some additional trees/crops identified that need to be considered (arising costs are not expected to be significant).

Health & Safety; the Contractor is implementing and rigidly enforcing a comprehensive Health & Safety Plan that has been prepared for the KRRP site activities. To ensure there is a safe working environment all employees, and visitors, have to pass through a site 'safety induction'. There are also a variety of separate meetings, primarily aimed at the Contractors workforce, where specific concerns and/hazards are highlighted and discussed. Selected members of the workforce are also attending first aid programmes being run by the Red Cross.

Separate to the needs of physical site activity the Contractor is also responsible for initiating HIV/AIDS IEC campaigns with the assistance of a local NGO. The Kiribati Family Health Association (KFHA) are the only organisation listed, in the Contract documents, as an authorised service provider. Although the KFHA have been running the required presentations they have so far failed to provide satisfactory supporting reports that provide information being requested by the Donors. Notwithstanding assurances previously offered there remains serious reservations over the capacity and capability of the KFHA to provide the information that is required.

Environment; the Contractor is working within an approved Contractor Environmental Management Plan (CEMP) although it has been acknowledged that this is a 'living' document that will, from time to time, need to be updated to ensure certain site specific activities are properly covered. Observation around the site does show that the Contractor continues to take his responsibilities, on environmental matters, seriously and is intent on 'doing the right thing'.

The Employer is tasked with obtaining Environmental Licences (EL) for the works and those required for the majority of the KRRP works have been issued by MELAD/ECD with some, for various coastal work sites, understood to be imminent (but are not crucial for current activities).

Quality Assurance; the Contractor has now engaged a person, on a 'full time' basis, for management of their quality control materials laboratory. There has been noticeable improvement in the approach to quality control requirements with more site testing being undertaken and test results being delivered to the Engineer. The laboratory manager has been tasked with preparation of a 'Laboratory Management Plan' (LMP) that sets out the procedures that need to be followed for the specific requirements of the KRRP. This LMP has not yet been provided but is understood to have been prepared, in draft, for internal review prior to it being adopted and shared with the Engineer.

Total payments certified to the Contractor to date amount to AUD 13,336,225.62 (for works to end-May 2014). Physical works have been assessed as being ~7% complete with ~40-50% of time elapsed (depending on how any mobilisation period might be considered). The poor progress achieved to date remains a concern and discussions with the Contractor are on-going to see how the situation might be improved. Although the Contractor is now in a better position to make better progress the weather conditions

generally experienced, throughout much of the report period, have been poor and not conducive to roadworks activity (particularly pavement and surfacing works).

Whilst there is room for improved performance it is noted that the Contractor has become more contractually litigious with a significant increase in the number of claim notices being submitted towards the end of the report period.

The Accepted Contract Amount for the KRRP was ~AUD 48.1 million however there is potential for costs to increase to ~AUD 52.8 million (an additional AUD 4.7 million) depending on decisions yet to be finalised in respect of work scope requirements. This figure is lower than that previously reported as some clarity has been provided, or progress made, on some of the issues where uncertainty previously existed but excludes any costs associated with prolongation of the contract (time extension) that might arise as a result of instructed variations. The need to finalise works scope issues at the earliest opportunity cannot be emphasised enough as, until this is done, consequential impacts and costs, both direct (physical works) and indirect (time extension), cannot be determined with any degree of confidence.

It is therefore very important that the Employer appreciates that there are likely to be increases in the contract price that, unless alternative arrangements are made, will require financing by the Government of Kiriabti (GoK).

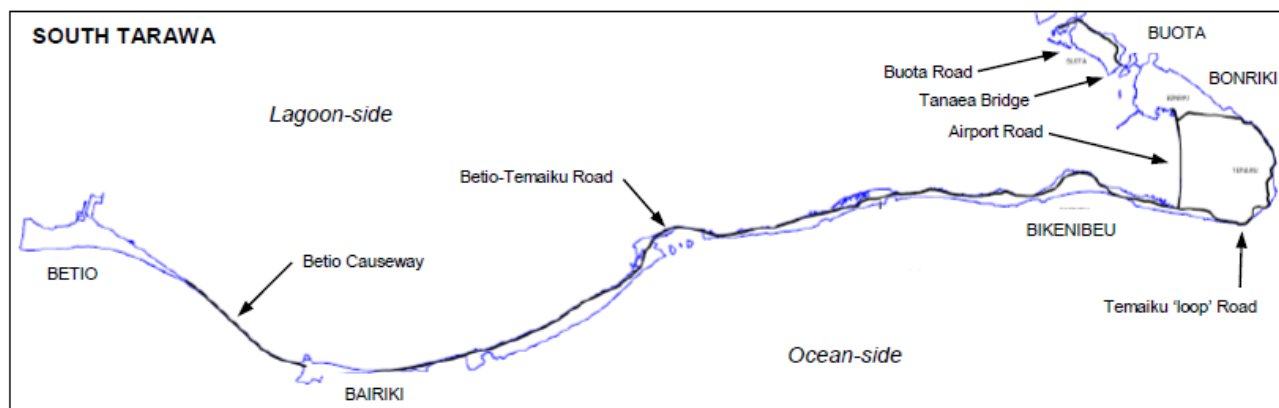
GENERAL

1. INTRODUCTION

1.1 Project Background

The Kiribati Road Rehabilitation Project (KRRP) involves the 'Improvement of the Main Betio-Buota Road, Temaiku Road and Feeder Roads in Betio, Bairiki and Bikenibeu' on the atoll of Tarawa, Kiribati. The principal roads are shown in Figure 1-1.

Figure 1-1: Location of main road components



The KRRP is jointly funded by the Government of Kiribati, World Bank, Asian Development Bank and Australian Aid (under the overall administration of the World Bank) with the Ministry of Finance and Economic Development (MFED) identified as the Executing Agency (EA) and the Ministry of Public Works and Utilities (MPWU) identified as the Implementing Agency (IA). The overall Work Scope, at the time of Bid, involved the following components:

South Tarawa

- Main road, Betio-Temaiku 24.0 km
- Temaiku road, 6.1 km
- Airport road, 2.2 km
- Betio feeder roads, 3.7 km
- Bikenibeu feeder roads, 3.1 km
- Betio main road repairs
- Bairiki feeder/loop road repairs

North Tarawa

- Buota 'main' road (ocean side), 2.0 km
- Buota feeder road (lagoon side), 1.0 km

Associated works involve:

South Tarawa

- Repairs and improvements to the Betio causeway bridge
- Upgrade of water supply transmission main from Teaoraereke to Betio (~11km)

The Works are anticipated to involve the following main construction activities:

- Scarify, regulate, reshape and compact existing pavement,
- Construction of new pavement layers,
- Installation of concrete edge strips/kerbs,
- Provision of footpaths
- Bituminous asphalt surfacing,
- Drainage improvements,
- Provisions for existing and future services,
- Installation of road safety features,
- Bridge repair and widening,
- Coastal protection works, and
- Installation of water supply pipeline and associated valves

The Contract was Bid under the World Bank Guidelines for International Competitive Bidding (ICB) procedures and on 8th February 2013, following the Bid and Bid review process (including pre-Contract Award Negotiations), the World Bank provided their '*No Objection*' to award the Contract to McConnell Dowell (Aust) Pty Ltd for the '*Accepted Contract Amount*' of Australian Forty-Eight Million One Hundred and Ninety-Seven Thousand Nine Hundred and Fifty-Seven Dollars and Twenty Cents (AUD 48,197,957.20). Accordingly the Employer issued a '*Letter of Acceptance*', to the Contractor, on 12th February 2013.

1.2 Consulting Services

Roughton International Ltd, in association with Fraser Thomas Ltd, were engaged to provide Consultant Services for Design and Supervision services by way of an agreement with the Ministry of Public Works and Utilities that was signed on 2nd December 2010 and which became effective on 8th February 2011. The Authorised Representative of the Consultant, for matters regarding this Contract, is Mr. Robert D'Cruz as the Roughton International Regional Manager for the Pacific.

1.3 Report Details

The Consultants' Contract requires, during supervision of the physical works, preparation of reports on a 'Quarterly' basis. This report has been prepared to cover the period from the 1st April 2014 to 30th June 2014.

2. CONTRACT PARTICULARS

2.1 Key Data

A summary of relevant key data is provided in a Basic Data Sheet provided as Table 2-1 below.

Table 2-1: Basic Data Sheet

BASIC DATA SHEET		Reference ¹	Details
1	Project Title	ITB 2.1	KIRIBATI ROAD REHABILITATION PROJECT (KRRP)
2	Contract Details		
	Name	ITB 1.1	Improvement of the Main Betio-Buota Road, Temaiku Road and Feeder Roads in Betio, Bairiki and Bikenibeu
	Number	ITB 1.1	KIR-12/01
3	Funding Arrangements		
	Financing Institutions (the 'Bank')	CC 1.1.2.11	World Bank (Grant H645)
			Asian Development Bank (Loan No.2718-KIR)
			Australian Agency for International Development
	Borrower	ITB 2.1	Government of KIRIBATI (GoK)
	Executing Agency		Ministry of Finance and Economic Development (MFED)
	Implementing Agency (and 'Employer')		Ministry of Public Works and Utilities (MPWU)
4	Design and Supervision Arrangements		
	Consultant Services (and 'Engineer')	CC 1.1.2.4	Roughton International Ltd <i>in association with</i> Fraser Thomas Ltd
5	Procurement Details		
	Mode of Procurement		International Competitive Bidding (ICB) with Post-Qualification
	Deadline for Bids	ITB 22.1	Friday, 31 st August 2012
6	Contract Award		
	No Objection Letter to Award Contract		Friday, 8 th February 2013
	Letter of Acceptance	ITB 39.1	Tuesday, 12 th February 2013
	Contractor		McConnell Dowell (Aust) Pty Ltd
	Accepted Contract Amount	ITB 39.1	Australian Forty-Eight Million One Hundred and Ninety-Seven Thousand Nine Hundred and Fifty-Seven Dollars and Twenty Cents (AUD 48,197,957.20)
7	Programme Details		
	Commencement Date	CC 8.1	1 st July 2013
	Contract Duration	CC 1.1.3.3	Six hundred and ninety (690) calendar days
	Date of Practical Completion		22 nd May 2015
	Defects Liability Period	CC 1.1.3.7	Seven hundred and thirty (730) calendar days
	Date of Contract Completion		21 st May 2017

¹ ITB = Instructions to Bidders (inc particulars in the Bid Data Sheet)

CC = Conditions of Contract (General and Particular Conditions)

2.2 Pre-Works Obligations

2.2.1 Contract Agreement

The Employer attached a signed Contract Agreement to the '*Letter of Acceptance*' of 12th February 2013 for counter-signature and return by the Contractor. The Contractor returned a signed Contract Agreement, to the Employer, on 11th March 2013.

2.2.2 Performance Bond

The Contractor delivered a Performance Bond to the Employer on 4th April 2013 together with the associated Power of Attorney. The Bond was approved by the Employer on 18th April 2013.

2.2.3 Insurances

In accordance with clause 18 of the Conditions of Contract the Contractor has taken out the various insurances required and provided evidence/policies of these.

2.2.4 Employers Financial Arrangements

In accordance with clause 2.4 of the Conditions of Contract the Employer provided the Contractor with details of proposed financing arrangements on 10th April 2013.

2.2.5 Possession of Site

In accordance with clause 2.1 of the General Conditions of Contract the Employer is required to provide the Contractor with 'Right of Access to the Site' within the time stipulated in the Contract.

It is to be noted that clause 2.1 of the Particular Conditions of Contract requires the Contractor to apply for 'Possession of Site' at least 14 days in advance of the actual date needed (as per requirements dictated by the Works programme submitted pursuant to clause 8.3 of the Conditions of Contract).

The Employer has generally been in a position to grant 'Possession of Site', to the Contractor, at the required time or soon thereafter (in a staged manner as set out by the 'current' Works programme).

2.2.6 Advance Payment

The Contractor did receive an Advance Payment – this will start to be recovered in the certificate following the one in which the total of all payments, including the advance payment, has reached 30% of the Accepted Contract Amount.

2.2.7 Commencement Date

Following completion of contractual obligations, on the part of the Employer and the Contractor, the Engineer delivered an instruction to 'Commence the Works', to the Contractor, on 1st July 2013.

2.2.8 Contract Documents

The Employer and the Contractor have been provided with copies of the Contract Documents. Each party have a set of documents signed and countersigned by the other and these have been put aside for safe keeping.

2.2.9 Dispute Board

In accordance with clause 20.2 of the Conditions of Contract the Dispute Board shall comprise one (1) sole member, who shall be agreed by the Parties, and shall be appointed within twenty-eight (28) days after the '*Commencement Date*'.

Following liaison and communication the Employer and Contractor have signed a contract with Mr Derek Firth on 4th September 2013.

2.2.10 Environmental Licences

The Employer is responsible for obtaining Environmental Licences (EL) required for the Works.

EL's are provided for under Government Acts/Regulations and applications have to be made to the 'Environment Control Division' (ECD) of the Ministry of Environment, Lands, Agriculture and Development (MELAD). In addition to obtaining an EL for the road works, the Employer is required to obtain separate licenses for each site where coastal protection works will be constructed.

The status at the end of June 2014 was as follows:

- Main road works was re-issued on 18th July 2013, (some conditions were revised to align with the conditions of the construction contract)
- Betio causeway (covering repairs to existing structure) was issued on 9th August 2013,
- Ananau Causeway (covering coastal works on Airport Road) was issued on 3rd October 2013
- Bairiki Causeway (covering coastal site 1 at ch 5+260 and 5+450) issued on 9th October 2013, amendment issued to MPWU by ECD in late June 2014 and subsequently provided to the Engineer
- Ambo Causeway (covering coastal site 5 at ch 12+700) was issued on 9th October 2013, amendment issued to MPWU by ECD in late June 2014.
- Temaiku road (covering coastal sites 10 & 11) has been provided to the Employer but awaits issue pending confirmation of work scope.
- Bonriki Airport runway (covering coastal sites 15) has been finalised by ECD but awaits issue pending confirmation of work scope.

The Contractor is close to finalising separate contract arrangements with Te Atinimarawa Co. Ltd (TACL) to excavate the Takoronga channel (channel A1, lagoon access) identified under the Environmentally Safe Aggregates for Tarawa (ESAT) project for 'dredging barge access'. Activities will be undertaken under a separate EL that has been issued to TACL but which has been amended during Contractor negotiations with TACL and discussions with ECD. Material excavated from the channel will be supplied to the Contractor under a separate 'supply' agreement, if such agreement is entered into the Contractor will be required to produce relevant documentation to demonstrate that proper environmental controls are being actioned.

Pending availability of material from TACL (2-3 months lead time) the Contractor has made arrangements to source local material from the Plant and Vehicle Unit (PVU) which is a branch of MPWU. The PVU has been sourcing such materials, for some time, from already disturbed areas (existing channels in Betio close to the high court and Bikenibeu close to the Otintaai hotel) albeit at limited levels of production. Extraction of such materials has been carried out under EL's issued to the MPWU and these have recently been renewed.

A copy of the EL's for PVU extraction areas, together with the EL amendment issued for coastal works site #1, is provided at Appendix A.

2.2.11 Unexploded Ordnance

Section 1900 of the Specification sets out requirements for dealing with Unexploded Ordnance and which targets the Betio area (scene of a major battle during World War II). The Contractor has had on-going negotiations with Milsearch and History Flight and an agreement is close to being finalised with Milsearch (surveys being targeted to commence in July 2014).

The Employer has advised that any UXO that is found shall be stored at a 'bunker' within the Kiribati Police Service (KPS) station in Betio. The bunker is currently used to store UXO (discovered during other activities) and disposal is undertaken, as arranged through the Ministry of Foreign Affairs & Immigration, by visiting military services (United States, Australia, New Zealand) often on what is understood to be an annual basis. Additional security measures have been established (fencing, gates, locks etc), around the bunker, prior to its use for any KRRP storage and any UXO found will be stored within a sandbag bunker (open at the top) that has been formed within the main enclosed concrete bunker. Arrangements have been carried out in liaison with the KPS and meet with their approval.

2.2.12 Manuals and Plans

Specification clause 1801 requires that the Contractor prepare a '*Contractors' Environmental (Management) Plan*' (CEMP) and stipulates that '*no physical works shall be carried out*' until such CEMP has

been approved by the Engineer. The Contractor is also required to prepare other manuals and/or plans in respect of Health & Safety (H&S), Quality Assurance (QA), Traffic Management (TM) and General Construction Methodology (Construction Execution Plan – CEP).

The Contractor's CEMP was approved on 9th October 2013 to allow the Contractor to proceed with planned works, but the approval noted that some amendments would be required to provide additional details in regard to UXO removal and storage, Nanikai and Ambo Causeway coastal protection works, and repairs to Betio Causeway Bridge. The CEMP is seen as a 'living' document that will be amended and updated to cater for specific site activities ahead of their commencement. A number of revisions have been made to the CEMP with version J being recently approved.

Other plans have been provided by the Contractor. The H&S plan is very comprehensive (and continues to be strictly actioned by the H&S officer) and the TM plan is working well as activities now expand with greater physical activities occurring in more sections along the main project roads.

The Engineers' QA engineer continues to liaise with the Contractor to ensure all facets of the testing regime required under the Contract are properly addressed. The Contractor now has greater appreciation of his responsibilities and obligations and has been general improvement in the Contractors' approach towards 'quality' issues. A need to update the QA plan, to include improved provisions for both quality control and quality compliance testing, has been identified.

2.2.13 HIV/AIDS prevention

The contract contains a requirement for the Contractor to provide an HIV-AIDs Information, Education and Consultation Communication (IEC) campaign. This is set out at clause 6.7 of the Particular Conditions of Contract, Part A; Contract Data. The clause originates from the World Bank standard forms for bidding documents that were specified for use on the project. Under this clause the Employer is obliged to provide a list of approved service providers and the Contractor is obliged to select a service provider from this list to undertake the IEC campaign.

The Employer (MPWU) provided the list of approved service providers in the contract documents at clause 6.7 Particular Conditions of Contract Part B; Specific Provisions. The list consisted of just one organisation, namely Kiribati Family Health Association (KFHA). Under clause 6.7 the approved service provider shall prepare the IEC campaign which shall be submitted to the Employer for approval. The Engineer advised the Contractor on 24th June 2013 that the IEC campaign should be based upon the World Bank's 'The Road to Good Health' toolkit (www.theroadtogoodhealth.org), because the toolkit is specifically designed to ensure that proper IEC campaigns are executed for road projects.

The Contractor subsequently engaged the KFHA, who had acknowledged familiarity with the 'toolkit', to undertake the requisite IEC campaigns.

3. EMPLOYERS' ORGANISATION

3.1 Project Management

The KRRP is administered by the Ministry of Finance and Economic Development (MFED) as the Executing Agency (EA), supported by the Kiribati Fiduciary Support Unit (KFSU), and the Ministry of Public Works and Utilities (MPWU) as the Implementing Agency (IA).

The Employer for the KRRP is the MPWU as set out in the Conditions of Contract at clause 1.1.2.2. The Employers' Representative is Mr. Ioataake Timeon, the current Secretary for MPWU (the former Secretary, Mr Elliot Ali, has transferred to the MFED). The Secretary is supported by:

- Mr Toani Toatu, Director of Engineering Services (DES), and
- Mr Patrick Mannix, Technical Auditor and Advisor (TAA)

The Employer has advised that communications for the KRRP (formal and informal) should be addressed to the Secretary, annotated for the attention of the DES and copied to the TAA.

4. ENGINEERS' ORGANISATION AND ESTABLISHMENT

4.1 Engineer Details

The Engineer for the KRRP is Roughton International (RI), as set out in the Conditions of Contract at clause 1.1.2.4, and Mr John McFarlane, based in Fiji, is the Engineers' Representative (ER). The Engineer has been engaged by the MPWU, as the Design and Supervision Consultant (DSC), under separate contract arrangements for the design and supervision of the Works.

The Engineer has delegated responsibility for day-to-day administration of the KRRP construction contract to Mr. Ian Archer as the Resident Engineer (RE). Mr Archer will be resident in Tarawa during the execution of the works, except for designated periods of leave (during which cover will be provided by 'the ER').

4.2 Staffing

4.2.1 International

The Engineers' resident international staff comprises:

- Resident Engineer, Mr Ian Archer
- Quality Assurance Engineer, Mr Peter Padmore
- Works Inspector, Mr Llewellyn (Lew) Morgan
- Assistant Resident Engineer, Mr Rajendra Mouny

Mr Mouny has joined the Engineers' team (on 8th June 2014) as assistant RE, currently on a short-term basis (3 to 6 months), following approval of a variation to the DSC contract. This additional support was deemed necessary given the inputs still required into project management issues related to confirming work scope requirements and coordinating the KRRP works with those of other significant donor funded projects.

As part of the same contract variation the DSC can now call on the services of their environmental specialist (Mr Stephen Eagle) to assist the national environmental inspector in monitoring the Contractors various activities (both physical and non-physical) around the site. Mr Eagle visited Kiribati from 19th to 26th May 2014 to assist with the establishment of monitoring procedures and reporting templates.

4.2.2 National

National staff engaged directly by the Engineer comprises:

- Environmental Inspector, Ms Bweneata Kaoti,
- Community Liaison Officer, Mr Moanataake Beiabure
- Office Administrator, Ms Regina Fay
- Laboratory Technician, Mr Savaliga Malau

Inputs of the Environmental Inspector, engaged on a part time basis, have been increased following approval of variation 3 to the DSC contract.

4.2.3 Counterpart

The Consultants' contract provides for the Employer to assign full time counterpart staff, to the KRRP, for the duration of the physical works. Identified staffing positions, and assigned candidates, comprise:

- Technician Engineer, Michael Reiher (replaced by Laurence Neemia)
- Technician Engineer, Mikeere Neemia

- Community Liaison Officer, Unassigned

Mr Reiher quickly became an established and valued member of the Engineers' team but personal issues has resulted in him accepting a position in Fiji and he resigned from his position (which became effective on 13th June 2014). The MPWU have assigned a replacement and Mr Laurence Neemia started with the team on 26th June 2014.

The Engineer continues to encourage the Employer to assign other Engineers within their organisation to the KRRP, on a rotating short-term basis, so they might benefit from the experience gained.

4.3 Engineers' Facilities

4.3.1 Office & Laboratory

The main office and laboratory facilities have been established in part of the Employers' 'Civil Yard' compound in Betio (areas have been made available, within such facilities, for use by the Contractor). The facilities were available in Oct/Nov 2014 and, on completion of the Works, the main buildings will be handed over to the Employer.

4.3.2 Transport

Vehicles for the Engineer are being provided through the construction contract. Four vehicles have been provided and these vehicles will become the property of the Employer when the contract is completed. In addition the Engineer has provided an additional vehicle from its own resources.

4.4 Construction Supervision Plan

The Engineer submitted a draft 'Construction Supervision Plan' (CSP) to the Employer on 26th February 2014. Feedback from the Employer has been received and the issues raised are being assessed prior to finalising the CSP.

4.5 Ceiling Amount

The contract is time based and payments are made on the basis of the actual inputs made by the various individual inputs. The quantities stipulated in the contract, as amended by variations, are estimates.

The following table gives an estimate of the final costs:

Table 4-1: Estimate of Costs for Consulting Services

Currency	Current Ceilings (inclusive VO3)	Anticipated cost to complete	Difference
GBP	445,368	492,746	47,378
USD	1,733,444	1,823,892	90,448
AUD	933,054	872,056	(60,998)

The above costs have been updated, to reflect the provisions of variation No.3 to the DSC contract and adjusted to take account of issues previously reported. It is to be noted that, at this stage, no adjustment has been made to take into account any prolongation of the Works contract and the consequential need to align the DSC contract to suit (costs can be expected to be of the order of AUD 100k/month, split into the various currencies of payment). A better estimate of final cost will be available once the final work scope is finalised and programming needs of the Contractor taken into consideration.

5. CONTRACTORS' ORGANISATION AND ESTABLISHMENT

5.1 Mobilisation

Following establishment of the asphalt facility, towards the end of the last report period, the Contractor is now considered to be substantially mobilised.

5.2 Subcontracts

Clause 4.4 of the Conditions of Contract set out the provisions for subcontracting arrangements and it is to be noted that the Contractor is not permitted to subcontract the whole of the Works. Unless any subcontractor is named in the Contract (or Bid) the prior consent of the Engineer is required for proposed subcontracting arrangements.

To date the Contractor has entered into few sub-contract arrangements with the following being the current status:

- Blacktop Construction; major sub-contract for asphaltting (and some pavement) activities subsequently fell through when company entered receivership in early September 2013
- Milsearch; minor sub-contract for UXO surveys close to agreement.

5.3 Staffing

The Contractors' staffing and workforce levels fluctuate during the reporting period but, at the end of March 2014 the number of persons engaged (including TSS) was:

- International, 28 (25 male, 3 female)
- National, 161 (133 male, 28 female)

The Contractors' international staff comprises the following numbers and positions:

Table 5-1: Details of Contractor Management Staff

Discipline	Numbers
Project Manager	1
Commercial Manager	1
Accounts/Administration	2
Project Engineers	2
Laboratory Manager	1
Site Engineers/surveyors	2
Graduate Engineer/Technicians	2
Health, Safety & Environ Supervisor	1
Works Superintendents	1
Works Supervisors	7
Workshop	2
Plant controllers/operators	6
Total	28

In June 2014 the Contractor advised a change to their Regional Construction Manager (RCM). Mr Rory Bishop has been replaced by Mr Mike Buckland.

The RCM had been making occasional visits to the site but, following the recent change, there has been an increased presence (together with other senior 'commercial' personnel) and this probably reflects concerns over progress that has been achieved on physical works to date.

The Contractor has been coordinating local labour requirements with the Ministry of Labour under an 'Employment Agreement' that meets with their approval. A breakdown of the labour force into the various disciplines follows:

Table 5-2: Details of Contractor Labour force

Organisation	Discipline	Numbers
MacDow	Carpenters	21
	Drivers	30
	Operators	32
	Labour (skilled)	13
	Labour (unskilled)	65
	Total direct employees	161
	Male	133
TSS	Female	28
	Resignation and/or dismissal	21
	Security	12
	Traffic Control	14

TSS are a 'local' company offering security services. The Contractor has reported no industrial relations issues to date.

5.4 Equipment

The Contractor has mobilised a total number of just over 170 items of plant and equipment as of the end of March 2014. This includes major items of construction equipment together with miscellaneous items such as pumps and generators. A summary of the various items is provided hereunder:

Table 5-3: Details of Contractor Equipment

Description	Number
Construction plant	30
Trucks (general, crane, concrete, tanker)	32
Utility vehicles	18
Pumps, compressors & generators	~30
Plate compactors & power tools	12
Containerised facilities	5
Miscellaneous	~40
Facilities: Screen plant	1
Concrete batcher	1
Asphalt plant	1

All vehicles have been registered and insured in Kiribati. The Contractor has an established plant workshop in Betio and servicing schedules have been prepared.

5.5 Materials and Material Suppliers

5.5.1 Materials on Site

Clause 14.5 of the Conditions of Contract does make provision for the payment of ‘*Materials on Site*’ for certain materials:

- Precast concrete items,
- Imported processed aggregates, and
- Bitumen
- PVC pipes/ducts

The Contractor has made further requests, to the Employer, for additional materials to be included in the above list. Following Employer/Engineer discussion the Employer has approved the inclusion of ‘street light’ materials.

Consignments of materials are now arriving at Tarawa on a routine basis. Due to supply demand (and barging constraints) the Contractor is now importing some processed aggregates in containers using commercial shipping lines.

5.5.2 Material Suppliers

The Contractor is making arrangements, with many suppliers, to provide certain items and materials required for the Works. A current listing of material and/or suppliers, and their status, is provided at Appendix B.

5.6 Workshops, Depots and Storage Areas

Apart from the main office-laboratory compound the Contractor requires many other ‘areas’ to use for workshops (mechanical, carpentry etc), depots (concrete batching, asphalt plant etc) and general storage (imported aggregates, precast concrete units etc). The following main areas are currently being utilised:

- Storage area, Betio (adjacent to meteorological station)
- Storage area, Betio (ESAT/TACL compound, Takoronga)
- Storage area, Bairiki (north loop road)
- Storage area, Bairiki causeway (km5)
- Storage & screening plant, Betio-Temaiku road (km11, opposite parliament)
- Storage & concrete plant, Betio-Temaiku road (km22.5, McKenzie Point), and
- Asphalt plant, Temaiku (old PVU car dump site)

5.7 Micro-enterprise Groups

The Contract makes the following provisions for training of routine road maintenance micro-enterprise groups by the Contractor.

“Six micro-enterprise routine road maintenance groups (4 persons in each) are to be established, and trained, by the Contractor during project implementation and will be employed by him for routine maintenance of the completed works during the defects notification period. It is expected that one group will be established in each of the following areas: Betio, Bairiki, Ambo, Bikenibeu, Bonriki and Buota. The final locations shall be subject to the approval of the Engineer.

Teams, established in consultation with the Engineer, shall be trained in routine maintenance activities such as clearing the roadway area of sand (and other debris/rubbish), cleaning out drains and side ditches, opening up drainage paths, cutting grass and bushes and small pot-hole repairs.”

Following an initial visit in March 2014 the micro-enterprise specialist (Mr Serge Cartier van Dissel), engaged to assist the GoK with the long-term establishment of such groups, returned in June 2014. A

workshop was held, attended by the Employer/Engineer/Contractor, at which time the draft 'design' report (prepared by Mr van Dissel) was presented and discussed.

Following feedback during the workshop Mr van Dissel will now finalise his 'design' report. In the meantime the Contractor has now engaged groups of women (20 in all split into 3 groups of 6/7) and commenced a training exercise for routine road maintenance. Tasks are currently being focused towards cleaning the road and drains, together with cutting back vegetation (for say 1m behind kerb lines), within the Betio and Bairiki town areas (2 groups in Betio, 1 group in Bairiki).



Sand and vegetation along channel pre-clearing



Channel and 'footpath' area post-clearing

Betio road maintenance

6. PROGRAMME & CASHFLOW

6.1 Programme

As set out under clause 8.3 of the Conditions of Contract the Contractor has to submit a Works Programme within twenty-eight (28) days of the receipt of an instruction to 'Commence the Works' and subsequently update the programme if at any time the Engineer notifies the Contractor that the programme is not consistent with the actual rate of progress.

The Contractor is currently working to revision 3 of his programme a summary of which is provided at Appendix C and which provides a comparison of actual vs scheduled work activities for various sections of the Works. Graphical representations of progress on key activities, for the various road components, are provided separately as Appendix D. An overview of each programme is briefly described below.

6.1.1 Programme rev.0 (July 2013)

A programme (rev 0) was issued within 28 days of Commencement but it initially lacked the additional supporting information required by the specification. The general philosophy of the Contractors programme remained as per the programme provided with their Bid ie one team working along the main Betio-Temaiku road (starting at the western 'Toll Booth' end and working progressively eastwards) and one team working in parallel in the Temaiku area (working, in turn, on the Temaiku, Airport and Buota roads).

6.1.2 Programme rev.1 (November 2013)

A revised programme (rev 1) was provided on 25th November 2013 which still did not provide all the supporting information provided by the terms of the contract. Completion of works was still being targeted for 21st May 2015 in line with Contract requirements.

By the end of the December 2013 the programme had already become out of date, certain works were behind programme and being executed out of sequence, and further revision was requested, by the Engineer, in late-January 2014.

6.1.3 Programme rev.2 (February/March 2014)

A revised programme (rev 2) was submitted on 26th February 2014 with a supporting 'report' provided on 4th March 2014.

On the basis of the deficiencies that were identified programme (rev.2) was not accepted the Contractor was asked to resubmit accordingly.

Due to the deteriorating condition of the Betio causeway protection revetment, and following discussions during the Donor mission in March 2014, the Contractor was notified, on 21st March 2014, to defer much of the pavement works, across the Betio causeway until as late as possible in a revised programme.

6.1.4 Programme rev.3 (April 2014)

The Contractor submitted an updated programme (rev 3), together with supporting information, on 15th April 2014.

Following Employer/Engineer/Contractor discussion the Contractor has reprogrammed the works giving due consideration to the need to defer selected works across the Betio causeway and the current unavailability of firm direction in respect of coastal protection works in the Nanikaai and Ambo areas. To mitigate prolongation impacts the Contractor has rescheduled main activities to the Temaiku area with works on the main Betio-Temaiku road 'commencing' at Ch 23+900 (intersection with the Airport and Temaiku roads) and working westwards towards Betio.

The overall impact has resulted in the Contractor seeking an extension of time of the Contract period to 10th July 2015 ie an additional 50 calendar days (the Contractor has separately submitted a formal claim for the additional time involved).

6.1.5 Cashflow

The Contractor has recently provided details of his cash flow expectations and this is tabulated below:

Table 6-1: KRRP Cash-flow Expectations

Year	Month	Amount (monthly)		Cumulative
		Actuals	Predicted	
2013	April	4,819,796		4,819,796
	May	1,112,066		5,931,862
	June	839,800		6,771,662
	July	771,880		7,543,542
	August	448,582		7,992,124
	September	361,831		8,353,955
	October	353,545		8,707,500
	November	446,960		9,154,460
	December	385,386		9,539,846
2014	January	754,090		10,293,936
	February	374,850		10,668,786
	March	718,254		11,387,040
	April	920,284		12,307,324
	May	1,028,904		13,336,228
	June		609,000	13,945,228
	July		2,400,000	16,345,228
	August		3,047,000	19,392,228
	September		2,270,000	21,662,228
	October		2,292,000	23,954,228
	November		2,373,000	26,327,228
	December		2,452,000	28,779,228
2015	January		2,686,000	31,465,228
	February		2,609,000	34,074,228
	March		2,478,000	36,552,228
	April		2,653,000	39,205,228
	May		4,088,000	43,293,228
			2,913,000	46,206,228
			702,000	46,908,228
Repayment of Retention			2,407,897.86	49,316,126

Figures to May 2014 are based on certified amounts. There remains some discrepancy in the Contractors final 'cost to complete' (ie after repayment of retention) and clarification has been sought.

A graphical representation is of cashflow (expected) against earnings (actual) provided at Appendix E.

7. CONTRACT ADMINISTRATION

7.1 Communications

To avoid confusion it is important that proper lines of communication are available between the Employer, Engineer and Contractor. Required procedures have been established and, apart from odd occasions, are functioning satisfactorily.

7.2 Meetings

Site meetings, with the Contractor (and Employer), are being held on a routine basis. Additional meetings will be called if and when circumstances dictate this is required. Three site meetings were held during the period under review, on 16th April, 21st May and 13th June 2014.

7.3 Notices & Instructions

During the course of the Works there will be times when the Engineer has to give instruction to the Contractor and when the Contractor needs to seek clarification from the Engineer. Systems have been established whereby this can take place.

7.4 Site Records

The importance of having good site records available is recognised and, wherever practicable, such records should be agreed by personnel from the respective Engineer/Contractor organisations. Of particular note is the need to agree measurements of completed works that is due for payment (particularly if it is to be 'covered up'). Systems are being established to ensure such records are maintained.

7.5 Inspection and Testing

As set out at section 1205 of the Specification the Contractor maintains responsibility for overall Quality Control of the Works. The Engineer will however institute routine inspection and testing through an 'Audit' Laboratory that is being established for the Engineers' use. Systems have been established whereby the Contractor provides the Engineer with due notice of on-going works that are ready for testing and the Contractors' records will be reviewed and checked. Additional 'audit' checks may be carried out as and when required and various standard forms, established and used on past projects, will be adapted for use in monitoring the KRRP day-to-day activities, conducting various inspections and undertaking, and reporting on, the various laboratory testing that is required.

7.6 Measurement and Payment

Clauses 12 and 14 of the Conditions of Contract respectively set out the various formal requirements for Measurement and Payment. Some procedures for routine agreement (Engineer/Contractor) of measured works and/or activities have already been established and, if necessary, others will be prepared ahead of permanent work activities. Agreed quantities of works will be used to prepare Interim Payment Certificates and summaries will be provided in the attached supporting documentation.

8. COMMUNITY LIAISON

It is recognised that it will be important for local communities to be kept apprised, in advance, of the Contractors' scheduled activities. There will also be a need for close dialogue with the communities, during actual physical works, to make sure they are informed about the potential hazards and dangers involved, as well as general liaison in respect of permanent/temporary access arrangements and issues with existing services & utilities. In particular work on feeder roads is constrained by lack of working space and this will need careful planning

Both the Engineers' and Contractors' staffing arrangements provide for a 'local' Community Liaison Officer (CLO) who will deal with issues raised by the various stakeholders and communities as the works proceed. Following communications with the Employer/Donors, and discussions with the Contractor, the CLO's will also coordinate any comments and complaints (and any subsequent responses) received either by telephone call to the Contractors' office or by SMS (text messaging) to the web-based system established by the Donors. Telephone numbers have been included on the project noticeboards for the public to use for advice and/or complaints. Proposed arrangements have been incorporated into the Contractors CEMP.

Complaints received to date have been few, generally of a relatively minor nature and have been dealt with through consultation and action as might be appropriate. A combined record of complaints (those received by Engineer and Contractor) is being maintained and a summary of complaints received, together with any resolution action, will be prepared for future reports.

ISSUES IMPACTING ON THE WORKS

9. WORK SCOPE

9.1 General

The main road components of the KRRP, as described at section 1.1, are shown on a plan of South Tarawa included as Figure 1-1.

Since the award of the construction contract, the Donors have made suggestions to the Government on various proposed work scope changes. During recent meetings and communications it is now understood that additional funding (from donors) is problematic and the Government of Kiribati will be expected to make up any shortfall between the 'final' cost to complete and the funding that has already been pledged.

The Government of Kiribati is therefore reviewing work scope requirements and options will be put to cabinet in a briefing paper that is being prepared.

9.2 Betio Causeway & Temaiku Road

9.2.1 Betio Causeway

The GoK is pursuing options for funding necessary remedial actions to the deteriorating condition of the Betio causeway protection revetment. It does however seem unlikely that any potential project will be in place in time for any new works to be in place ahead of any 'deferred' pavement works under the KRRP.

The Employer is therefore looking at options available and, following deferral of selected works in March 2014, consideration is now being given to amending the work scope to provide for:

- preparation of a new coral basecourse (regulating the existing pavement)
- provision of a bituminous 2-coat seal, and
- completion of the proposed bridge repairs

Alternatively the works across the causeway may be deleted. The Engineer has cautioned that deletion of works may (depending on their extent) incur a claim from the Contractor in respect of 'loss of profit' and/or review of unit rates as a result of quantity changes.

9.2.2 Temaiku Road

Depending on available financing the GoK may consider modifying the work scope to provide a bituminous 2-coat seal, rather than asphalt, to the Temaiku road. Any instruction to this effect awaits cabinet directive.

9.3 Coastal Protection

The Employer has now advised that works, as designed by Tonkin & Taylor (T&T), will now no longer proceed (unless additional financing can be arranged) and a more minimalistic approach may be necessary.

The more major sites where works under the KRRP works are still required (to allow works to be constructed and/or to protect the investment being made in the new infrastructure) remain as:

- Site 1; Betio-Temaiku road ~Ch 5+350 (flank protection each end of existing wall)
- Site 5; Betio-Temaiku road ~Ch 12+600 (Ambo causeway)
- Site 10; Temaiku road ~Ch 2+400
- Site 11; Temaiku road ~Ch 1+500, and
- Site 15; Airport runway, ocean end, 2 locations (transfer from KAIP)

Following coastal erosion during the king tides in early 2014 additional coastal protection measure are required in a number of localised areas, along the Betio-Temaiku road, being:

- Ch 4+950
- Ch 6+850, and
- Ch 9+360

The Employer had been considering deleting works at Ch's 9+800 area and locally at Ch 14+280. Deletion of works in the Ch 9+800 area has been confirmed (as alternate arrangements will be undertaken under KAP-III) however, given the potential for erosion in future king tides, the works at Ch 14+280 will be retained within the KRRP work scope.

An overview of the current situation with respect to works now proposed, or under consideration, is described separately for each of the proposed areas.

9.3.1 Coastal Sites 1 & 5 (precast concrete blocks)

The Employer has advised that the p/c concrete block option will no longer be pursued at this time and has instructed the Engineer to proceed with a sand-cement bag option, similar to that provided for under the original designs, which has been labelled as 'enabling works'. Appropriate instruction has been given to the Contractor and this includes modifying the profile of the wall so that it can be incorporated into future coastal works (as has been designed by T&T).

In considering the options available the Employer has acknowledged that, to ensure adequate protection is provided in the mid- to long- term, construction of the T&T designed walls should follow at the earliest opportunity.

9.3.2 Coastal Sites 10 & 11 (rock boulders?)

Given the 'high energy' wave action at these sites the Employer has indicated a desire to retain the preferred T&T designs for these sites but is cognisant that financing arrangements might force a more minimalistic approach.

The Employer has informed the Engineer/Contractor that previous advice, in respect of pursuing a priced proposal, is now to be held in abeyance pending confirmation of actual requirements (the Employer has therefore not provided the T&T final design information to the Engineer).

Alternative arrangements have been discussed, as a fall back, with the Employer reverting to some form of sand-cement bag wall(s) at site 10 (details to be provided by the Employer), where the extent of works has increased since designs were undertaken, and to something very close to the originally designed works at site 11.

The Engineer awaits advice from the Employer before instructing the Contractor on work scope requirements.

9.3.3 Coastal Sites 15 (rock boulders)

Works were not required (or scheduled) for the KRRP and were deemed to be necessary to protect the airport runway upgrade works being actioned under KAIP. Although the nature of the works may be similar to that which might be adopted at sites 10 & 11 (Temaiku road, where a rock boulder approach is the preferred option) it transpires that the KAIP budget provision was insufficient for such works and hence, whilst coastal protection is needed (to protect a vital part of the national infrastructure), the Employer may no longer pursue works at this location (for inclusion under the KRRP). The merits of undertaking works at this site may also be dependent on whether or not similar works proceed at coastal sites 10 & 11.

9.4 Valve Chambers (KAP Water Supply)

The background to the need for chambers has been reported previously. The need for a total of 256 chambers had been identified and, following confirmation of a proposed work scope details were provided to the Contractor with a request for a priced proposal prior to formalising any variation.

During the donor mission visit in June 2014 it was confirmed that, following review, the number of chambers required for leak detection works would be reduced from 256 to 2 (this following

reassessment of the overall approach to leak detection needs). In the various discussions that took place the Employer and Engineer both expressed reservations about the new approach as this seemed to be targeting the leak detection methodology and made no provision for follow up actions needed to deal with leaking valves (which had previously been noted as being the major source of leakage). Under such an approach there is increased risk that the new road will be 'dug up' to effect any future repair works. There was some discussion on improving the PUB capacity for carrying out proper backfill and repair and this will need to be pursued further under KAP.

Following communications it seems likely that the 2 chambers, details of which are to be confirmed, will be located along the Betio-Temaiku road at ~km 5 and ~km 13-16 area. Location in the km 5 area (new 200mm main being installed under the KRRP) followed consideration of implications to the KRRP works programme and advice in respect of location in the km 13-16 area (existing 225mm main) is awaited from KAP/PUB.

9.5 Valve Chambers (STSIISP Sanitation upgrade)

A key part of the South Tarawa Sanitation Improvement Sector Project (STSIISP) is the rehabilitation of the salt water mains in the town areas of Betio, Bairiki and Bikenibeu.

Presently, the actual location of the existing saltwater mains is uncertain, but they are expected to lie within, or adjacent to, the road corridors which are being rehabilitated as part of the KRRP. Part of the STSIISP work scope will be to rehabilitate the existing saltwater infrastructure, including pressure testing and repairs, with the aim of minimising leakage in the system. It is anticipated that the majority of leakage problems will be at existing hydrant/valve locations (whose condition is uncertain).

The Employer continues to liaise with the STSIISP and it is understood that a work scope is close to being finalised.

9.6 Ambo causeway

Notwithstanding any change in the type of coastal protection to be adopted the Employer has confirmed the need to relocate services, behind such protection, where they are currently exposed.

9.7 Betio and Bairiki Roads

Poor weather continues to impact on the existing roads around Betio and Bairiki with road conditions continuing to deteriorate. Given current advice with respect to available financing it would seem prudent for the GoK to start exploring options available for improving these roads (possibly under a separate project).

Works are scheduled for the two main feeder 'loop' roads around Bairiki (one north and one south of the main through road) and the condition of these roads is such that it is likely that their full length will require reworking. An assessment of costs has been undertaken and full rework with a bituminous 2-coat seal can be carried out, rather than partial reseal (with 1-coat seal) and partial rework (with asphalt surfacing), would result in nominal additional cost of ~AUD 20,000 (this assumes concrete edge strips would not be required).

If funding remains problematic then consideration could be given to packaging works on these roads together with other works that might be needed around Betio and Bairiki for consideration as a separate package of Works (if not a variation to the current project then possibly incorporate into a future project).

10. MATERIAL SUPPLY

10.1 Environmentally Safe Aggregates for Tarawa (ESAT)

The Environmentally Safe Aggregates for Tarawa (ESAT) project is being undertaken by the Government of Kiribati with assistance from the South Pacific Applied Geoscience Commission (SOPAC) under funding from the European Union (EU). The main purpose of the project is to deliver construction aggregates to the people of Tarawa in a sustainable and environmentally sensitive manner and to discourage the current practice of uncontrolled 'beach mining' and hence inhibit the on-going coastal erosion that is taking place. Under the auspices of the ESAT project a 'local' company, Te Atinimarawa Co. Ltd. (TACL), has been established to carry out implementation of the arising commercial activities.

The background to the availability of 'local' materials, for use on the KRRP, has been reported on previously. The Contractor has further progressed negotiations with TACL and, in briefings during the Jun-14 donor mission visit, advised that separate contract arrangements were close to being finalised and to ensure materials were available as soon as possible measures to procure required equipment had already been actioned (which should see equipment arrive mid to late August 2014 and material available early- to mid- September 2014).

10.2 Supply of Material from MPWU/PVU

As an interim measure, pending availability of material from TACL, the MPWU had indicated that they may be able to provide some 'local' material. The MPWU subsequently advised they were not in a position to do so although the prospect of obtaining material from the Plant and Vehicle Unit (PVU) was worth pursuing.

The Contractor was advised accordingly and, following various discussions and communications, it is understood that a separate short term supply agreement is close to being finalised. This would allow the Contractor to have access to about 4,000 m³ of material although this is dependent on PVU capacity to supply materials in sufficient quantity to meet required levels of production.

The PVU have access to 2 sites, at Betio and Bikenibeu, and small stockpiles of material have been built up at both locations. The Contractor has recently tested the material and reported that whilst the Betio material meets basecourse requirements that at Bikenibeu is too fine (but suited for other uses).

10.3 Contract Arrangements (for local aggregate use)

Prior to entering into any formal supply contract the Contractor does need to obtain the approval of the Employer if costs exceed \$10/m³. The Contractor will be entitled to reimbursement of any additional costs incurred if the supply cost exceeds \$10/m³ (as provided for during contract award negotiations). As costs do exceed \$10/m³ such approval has been sought from, and granted by, the Employer for sources operated by TACL and PVU.

10.4 Imported Crushed Stone Basecourse

Following Contractor request for a change to the basecourse specification (for reasons previously reported) the Engineer recommended to the Employer that the proposed specification be adopted (on the understanding that there would be no additional cost implications as a direct result of the change) and this was accepted by the Employer. The Contractor was subsequently instructed on the required contract variation on 29th March 2014. The Variation effectively replaces section 3500; *Crushed Stone Base* of the Specification with the following documents:

- Transit New Zealand (TNZ) 'M/4':2006 (for basecourse aggregate),
- accompanying 'notes' to Transit New Zealand (TNZ) 'M/4':2006, and
- associated TNZ B/2:2005 (for construction of unbound granular pavement layers)

The Variation did stipulate that certain aspects of the 'original' specification be retained and aspects of the 'new' specification needed addressing. The Contractor has 'accepted' the various items that had been highlighted prior to the variation becoming effective.

To date the Contractor has imported ~3000t of material and the next shipment (~2000t) is scheduled to arrive in early-July 2014.

11. WEATHER

11.1 Automatic Extension of Time for Wet Weather

Specification clause 1215 provides a formula for calculating the 'Extension of Time' (EoT) associated with weather conditions that differ from the average conditions (based on available historical records). The EoT is an automatic entitlement that can go up and down during the course of the Contract but the Contract period cannot be reduced if the overall EoT becomes negative. A detailed listing of monthly weather conditions, and EoT entitlements (in calendar days), is presented at Appendix F.

During the design of the works rainfall data was collected from the Metrological Office, Betio and used to determine the 'fixed' elements in a formula established to calculate any extension of time (EoT) entitlement for weather conditions that differ from the historical 'norm'. The Contract does not permit the overall Contract duration to be reduced but negative figures can be used to off-set against those times when conditions are wetter than average and additional time does become due to the Contractor.

Data is being collected from the same station to determine the quantum of any associated EoT. For the report period weather conditions have been wetter than average and, to date, the current EoT due to rainfall stands at 'plus twenty three' (+23) calendar days.

12. RESETTLEMENT

The Government have been initiating the various requirements of the RP and payment of compensation to Affected Parties has been on-going since late-May 2013. The Engineer has met with the various parties involved in the implementation of the RP and has and continues to liaise with, and assist, the Employer in their dealings with the Lands Management Division (LMD).

During the Donor mission in June 2014 LMD gave a presentation of the current status with respect to compensation payments. At that stage the whole process was deemed to be ~95% complete. The LMD have generally been dealing with issues in a manner that reflects the Contractors programmed needs and sections of the works are available should the Contractor request them.

There are a few areas where LMD are unable to effect payments and these primarily relate to locations where there are on-going ownership or boundary disputes (which are subject to court proceedings).

The Contract does make provision for the extent of the physical works to be set-out two weeks ahead of any construction activity so that LMD have opportunity to ensure, through site inspection, that all affected property has been properly compensated for. During this process it has become evident that additional trees/crops have had to be included (those leaning into the roadway, newly planted, small and not surveyed, or missed) and this is being managed so that entitlements are compensated.

From the Engineers' discussions with Lands Department it is evident that some of those people who had previously 'agreed' to 'stopping' areas have now had a change of mind. The Engineer continues to work with officers from Lands Department in regards to identifying alternative positions. In some instances this is possible, in others the 'stopping' area will just have to be deleted. The general outcome will be that some of the 'stopping' areas may not necessarily be as convenient (for 'travellers') as they might otherwise have been. This may result in vehicles stopping on-road (causing blockage to traffic) or in poorly controlled areas off-road (impacting adjacent properties). All required changes to stopping places will be confirmed with Lands Department, at the time Possession of Site is granted (section by section basis), and appropriate instruction provided to the Contractor.

13. POSSESSION OF SITE

The Contractor has requested, and the Employer has granted, Possession of Site for the following locations.

Table 13-1: Details of 'Possession of Site' Requests

Component	Location / Chainage	Date		Comments
		Requested	Granted	
Office and laboratory facilities within the MPWU civil works yard in Betio.	MPWU yard in Betio	8 May 2013	3 June 2013	The Contractor accepted this as fulfilment of the Employers' obligations prior to the Engineer issuing the Contractor with an instruction to 'Commence the Works'.
Betio-Temaiku road	Ch 0+000 to 3+250	10 October 2013	10 October 2013	Contractor application dated 27 September 2013
	Ch 4+700 to 10+000	10 February 2014		Contractor withdrew his request 5 February 2014
	Ch 4+700 to 10+000	27 February 2014	14 March 2014	Contractor application dated 29 January 2014
	Ch 19+000 to 23+900	22 April 2014	22 April 2014	Contractor application dated 27 February 2014. Date was changed from 17th April 2014 (due to Easter holiday)
Airport Road	Ch 0+000 to 2+230	10 October 2013	10 October 2013	Contractor application dated 27 September 2013
Temaiku Road	Ch 5+000 to 6+100	10 October 2013	10 October 2013	Contractor application dated 27 September 2013
	Ch 0+000 to 5+000 (exc Ch 2+200-2+450)	11 November 2013	11 November 2013	Contractor application dated 4 November 2013. Ch 2+200 to 2+450 was excluded as a possible realignment of the road was under consideration
	Ch 2+200 to 2+450	11 November 2013	4 December 2013	Contractor application dated 4 November 2013.
Bikenibeu Feeder roads	Link 04 Link 05 Link 07	20 January 2014	27 January 2014	Contractor application dated 20 January 2014

It is to be noted that clause 2.1 of the Conditions of Contract requires the Contractor to apply for 'Possession of Site' at least 14 days in advance of the actual date needed.

14. PROJECT COORDINATION

14.1 Service & Utility Providers

The Contract does set out the approach to be taken in regards to existing services, notably specification clause 1202 which states amongst other things that:

“The Contractor shall check and determine on the site the positions of any services shown on the Drawings. This shall be done by visual inspections, using detecting apparatus, and by making excavations to expose the position of the service at critical points. This shall also be done where no services are shown on the drawings but where such services are nevertheless believed to be present”, and

“Whenever services are encountered which interfere with the execution of the Works and which require to be moved and relocated, the Contractor shall advise the Engineer, who will determine the extent of the work, if any, to be undertaken by the Contractor in moving, relocating and reinstating or protecting such services.”

Specification clause 1202 goes on to describe that:

“The Contractor shall work in close co-operation with private Owners or public authorities controlling services which have to be protected, moved or relocated.”

14.1.1 Public Utilities Board (PUB) and Telecom Services Kiribati Ltd (TSKL)

The KRRP continues to experience difficulties associated with service conflicts and associated relocation works and the Employer/Engineer met with PUB and TSKL in late-June 2014 to discuss how matters might be improved.

The main purpose of the meeting was to gather together the more senior management personnel, of each of the main service providers, to highlight the issues that are arising, the impact on the KRRP and the potential for considerable additional costs if prompt action is not taken to address areas where conflict occurs. It was acknowledged that each of the service providers have limited capacity and resources however, as owners of respective services, some involvement must be provided in order to address those areas where conflict does arise (service owners do need to be satisfied with, and accept, the solution that is finally adopted).

The following sets out a chronology of procedural requirements, when conflict arises, and summarises key items that were discussed:

- 1 – Contractor notifies the Engineer of conflict with an existing service (power, water or telecom)
- 2 – Engineer contacts the respective service provider to coordinate required solution (a technical person from the service provider needs to be available)
- 3 – Service provider confirms desired solution to the Engineer and, where possible, undertakes required works in co-ordination with the KRRP contractor (this would be the normal course of action which would mitigate potential additional costs)
- 4 – Where the service provider requires assistance (equipment, labour or materials) this is to be identified with the ‘technical’ solution and advice provided to the Engineer (the KRRP has procured a range of materials for use on any repair/relocation needs and these are expected to arrive in the next few weeks)
- 5 – Engineer will instruct the Contractor, when necessary, on the works to be undertaken and any assistance to be provided
- 6 – Contractor will coordinate with the service provider on physical works that are needed (inc any need to shut down any particular service so that works can proceed)

In the event that the KRRP contractor damages any existing service (possibly necessitating ‘emergency’ repair) the contractor should contact the service provider directly.

Assistance offered by service providers to date has been sporadic at best and, given the current situation, a need for some general improvement has been identified. It was explained to the service providers that there is a potentially serious situation developing and that, whilst the physical works need to be addressed, the greater cost impact will arise from contractor claims for additional time which would attract costs of at least \$10,000/day. Time and availability of personnel is particularly important as, wherever practical, instructions need to be provided to the contractor in a matter of 1-2 days not weeks. This aspect was emphasised to senior management who were asked to ensure the correct messages filtered down to those who would be involved in the implementation of any coordinating or physical works. Contact personnel (and back-up) need to be identified, within respective organisations, and this has been done.

The PUB confirmed, at a meeting with the Contractor on 16th June 2014 and in an email to the Engineer dated 17th June 2014, that they have no responsibility for domestic connections from properties to the meter boxes alongside the road. They advise that these connections are the responsibility of the individual property owners. PUB will not involve themselves in relocation of these power connections apart from disconnecting power to the meter boxes to allow safer working and to carry out any physical connections or disconnections associated with rewiring. The Contractor will therefore be required to carry out this work and liaise with the individual private owners where such connections conflict with the works. The Contractor has expressed a view that this represents a variation but has not submitted a notice of claim in this regard to date.

Although guidelines issued by PUB require such domestic connections to be in ducts (unless rated as underground cables) and buried 600mm below the ground level there is no inspection and checking. Some connections cross the road. The Contractor has expressed the opinion there are a very large number of cross road connections at shallow depth which will impede pavement works involving excavation of the carriageway for crushed stone basecourse or scarification for regulated areas. The Engineer believes that the Contractor is misinterpreting the available data and that the actual number will be much smaller than the 2,000 crossings quoted by the Contractor but nevertheless this is an issue that will need to be addressed.

14.1.2 Public Utilities Board (PUB)

Fibre optic services; the PUB have recently advised that, for monitoring purposes, fibre optic cabling is to be installed between their main generating facility at Bikenibeu and the water reserve in Bonriki.

The Employer has informed PUB that fibre optic ducting is being installed from Bonriki village towards Betio and has asked for details of proposed route so it can be reviewed and potential difficulties avoided (some consideration may be needed for the road realignment that is being prepared, to allow security fencing to be installed, at the western end of the airport runway).

14.1.3 Telecom Services Kiribati Ltd (TSKL)

Existing chambers across the Betio causeway; during meetings with the Employer and TSKL it has been agreed that existing covers/lids, which now have lids fused together by rust, will be replaced. The Contractor has been instructed to procure the necessary lids (for incorporation into the covers) and these are now with the Contractors' supplier of precast concrete products (in Fiji) pending confirmation of cover details. Following instruction from the Employer the Engineer is preparing required designs.

14.2 Kiribati Adaptation Project

14.2.1 Coastal Protection

Issues related to coastal protection works are currently limited to confirmation of Work Scope requirements and these have been reported on at section 9.3.

14.2.2 Water Supply (KAP)

Issues related to water supply works, as reported on at section 9.4 herein, are being coordinated through the Employer with assistance from PUB and KAP-III as appropriate.

14.3 Kiribati Aviation Investment Project

A number of issues have been raised with respect to works that are being proposed under the Bonriki airport upgrade project, notably:

- Fencing (along the south side of runway)
- Stormwater provisions (primarily around the terminal/apron areas)
- Road realignment (western end of runway)
- Coastal works (eastern end of runway – 2 sites)

The Engineer and Employer have liaised with personnel from KAIP on the above matters and mutually acceptable arrangements have been accommodated.

The Engineer has received instruction for road realignment works (at the western end of the runway) and final designs are being prepared. Design of coastal works (at the eastern end of the runway) are understood to have been finalised by T&T although the inclusion of such works under the KRRP is now uncertain.

14.4 South Tarawa Sanitation Improvement Sector Project

On-going developments on the South Tarawa Sanitation Improvement Sector Project (STSISP) have raised issues relating to the proposed replacement of existing valves (and other fittings) and sections of existing pipeline (where leaks are detected). These have been reported on at section 9.5.

PROGRESS ON PHYSICAL WORKS

A brief narrative is provided, in following sections, on the status of various work activities for each of the various road components within the KRRP. A schematic representation of key activities is provided as Appendix G together with a selection of site photographs.

15. BETIO-TEMAIKU ROAD

15.1 General

15.1.1 Possession of Site

The Contractor currently has 'possession of site' for the following sections of road:

- Ch 0+000 to 3+300,
- Ch 4+700 to 10+000, and
- Ch 19+000 to 23+920

15.1.2 Existing Services

Investigations to assess existing underground services have been completed in the following areas:

- Ch 0+000 to 3+300 (necessary instructions provided to Contractor), and
- Ch 4+700 to 6+100 (information currently under review)

15.1.3 Entry upon Land

A separate exercise is undertaken to inspect 'general' requirements along the existing road (ie primarily resettlement issues but also other aspects which might impact on the works) prior to commencing clearing activities and this has been completed in the following areas:

- Ch 0+000 to 3+300,
- Ch 4+700 to 7+200, and
- Ch 23+000 to 23+920

There are a number of issues that have been identified for consideration, and instruction (primarily issues related to existing services), but none of these impact on clearing activities.

15.1.4 Clearing and Grubbing

Clearing and grubbing has been completed in the following areas:

- Ch 0+000 to 3+300,
- Ch 4+700 to 5+300
- Ch 5+700 to 7+000, and
- Ch 23+000 to 23+920

15.1.5 Road Maintenance

Road maintenance, in the areas where 'possession of site' has been granted, is being carried out on a routine basis. A grader is being utilised where the road no longer has any bituminous surfacing (for whatever reason) and a gang of manual labour is available to fill in potholes, within surfaced sections, when conditions require.

The condition of the existing road has deteriorated during the period of poor weather that has been experienced since the start of 2014. It has to be recognised that the reason for the new road is the deteriorating condition of the existing road and the extent of 'repair' needed is beyond normal recurrent maintenance expectations. Repairs that undertaken are not 'long lasting' and are merely undertaken to bring the road up to a 'reasonably trafficable condition'. Although problematic, due to prevailing poor weather conditions, the Contractor does endeavour to attend to maintenance requirements as far as it is practicable to do so.

15.2 Drainage

15.2.1 Ducting

Fibre optic ducting has been installed in the following areas:

- Ch 0+000 to 3+300,
- Ch 4+700 to 5+400
- Ch 6+100 to 7+000, and
- Ch 23+320 to 23+900

The Contractor is now paying more attention to trench backfill and, although there is a backlog of testing still required, the more recent works have been tested with satisfactory results being achieved.

15.2.2 Stormwater

Stormwater u-drains have been installed, or are underway, in the following areas:

- Ch 6+300 to 6+540 LHS (including outfall)
- Ch 7+100 to 7+210 LHS (ongoing),
- Ch 23+320 to 23+440 LHS (ongoing), and
- Ch 23+870 to 23+900 LHS & RHS (ongoing)

Progress on some sections of u-drain has been hampered by the presence of existing underground services and the Contractor has advised that production levels being achieved are far less than what had been planned for in their bid/programme.

15.2.3 Kerbing and Edge strips

The following kerbing activities have been undertaken to date:

- Ch 0+000 to 0+080 LHS (flush edge strip)
- Ch 6+300 to 6+600 RHS (excavation for flush edge strip), and
- Ch 23+400 to 23+440 LHS (excavation for raised kerbing)

The edge strip being formed along the section at Ch 6+350 RHS also incorporates an insitu concrete 'widening' as the existing seawall meanders along the edge of the new road (varies from ~6m to ~7m).

15.3 Earthworks

15.3.1 Bulk Earthworks

No works to date.

15.4 Pavement

15.4.1 Sub-base

Sub-base has been prepared in the following areas:

- 0+000 to 0+400
- Ch 6+300 to 6+600 (in progress)

15.4.2 Basecourse

Basecourse (nominal 150mm) has been completed in the following areas:

- 0+000 to 0+400 (imported material)

15.5 Surfacing

Surfacing (30mm asphalt) has been carried out in the following areas:

- 0+000 to 0+400

15.6 Ancillary Works

No further works (after Betio causeway revetment repairs previously reported).

16. TEMAIKU ROAD

16.1 General

16.1.1 Possession of Site

The Contractor currently has 'possession of site' for the following sections of road:

- Ch 0+000 to Ch 6+100

16.1.2 Existing Services

Investigations to assess existing underground services have been completed in the following areas:

- Ch 0+000 to Ch 6+100 (necessary instructions provided to Contractor)

16.1.3 Entry upon Land

A separate exercise is undertaken, to inspect 'general' requirements along the existing road (ie primarily resettlement issues but also other aspects which might impact on the works), prior to commencing clearing activities and this has been completed in the following areas:

- Ch 1+300 to Ch 6+100 (necessary instructions provided to Contractor)

16.1.4 Clearing and Grubbing

Clearing and grubbing has been completed in the following areas:

- Ch 3+200 to 6+100 but has yet to commence in other areas.

Clearing has been undertaken some time ago and it is likely that re-clearing will be necessary in some areas.

16.1.5 Road Maintenance

Road maintenance, in the areas where 'possession of site' has been granted, is being carried out on a routine basis. A grader is being utilised where the road has no bituminous surfacing and a gang of manual labour is available to fill in potholes, within surfaced sections, when conditions require.

16.2 Drainage

16.2.1 Ducting

Ducts for future fibre optic cable (including jointing chambers), and cross-road ducts, have been installed from Ch 5+000 to 6+100 (RHS).

16.2.2 Stormwater

Stormwater culverts have been installed within the section from Ch 5+000 to 6+000. Inlet/outlet structures are still required.

16.2.3 Kerbing and Edge strips

Concrete edge strips (flush with the road surface) have been installed from Ch 5+400 to 5+600 (LHS & RHS)

16.3 Earthworks

16.3.1 Bulk Earthworks

Excavation of unsuitable material, and backfill with approved fill, has been completed from Ch. 5+950 and 6+040 where it was necessary to widen the existing road in an area of soft/swampy ground conditions.

16.4 Pavement

16.4.1 Sub-base

The Contractor has prepared sub-base from Ch 5+400 to 5+600 and, following satisfactory inspection and testing, the section has been approved to 'cover up' with basecourse.

16.4.2 Basecourse

Basecourse (nominal 150mm) has been completed in the following areas:

- Ch 5+400 to 5+600 (imported material)

Works to date have been restricted to 'trialling' of different material types (AP20/AP40) prior to confirmation of supply needs.

16.5 Surfacing

Surfacing (30mm asphalt following prime coat) has been carried out in the following areas:

- Ch 5+400 to 5+500 (asphalt)
- Ch 5+500 to 5+600 (prime)

Works to date have been restricted to 'trialling' of different prime treatments, and proposed asphalt design mix, prior to confirmation of requirements.

The Contractor was advised:

- to proceed with further works on the basis of a 'conventional' prime coat (with blinding as appropriate), and
- they can proceed to carry out asphalt surfacing on the 'permanent works' (the 'mix' complying with specification requirements although there was room for improvement in the 'practical' aspects of the work.

16.6 Ancillary Works

No works to date.

17. AIRPORT ROAD

17.1 General

17.1.1 Possession of Site

The Contractor currently has 'possession of site' for the following sections of road:

- Ch 0+000 to Ch 2+300

17.1.2 Existing Services

Investigations to assess existing underground services have been completed in the following areas:

- Ch 0+000 to Ch 2+300 (necessary instructions provided to Contractor)

17.1.3 Entry upon Land

A separate exercise is undertaken; to inspect 'general' requirements along the existing road (ie primarily resettlement issues but also other aspects which might impact on the works), prior to commencing clearing activities and this has been completed in the following areas:

- Ch 0+000 to Ch 2+300 (necessary instructions provided to Contractor)

17.1.4 Clearing and Grubbing

Clearing and grubbing has been completed from Ch 0+000 to Ch 2+300.

17.1.5 Road Maintenance

Road maintenance, in the areas where 'possession of site' has been granted, is being carried out on a routine basis. A gang of manual labour is available to fill in potholes, within surfaced sections, when conditions require.

17.2 Drainage

17.2.1 Ducting

Ducts for future fibre optic cable (including jointing chambers), and cross-road ducts, have been installed from Ch 0+000 to 1+850 (LHS).

17.2.2 Stormwater

Stormwater culverts have been installed at Ch 2+000. Inlet/outlet structures are still required.

17.2.3 Kerbing and Edge strips

Concrete edge strips (flush with the road surface) have been installed from:

- Ch 0+050 to 1+420 (LHS), and
- Ch 0+050 to 1+900 (RHS)

17.3 Earthworks

17.3.1 Bulk Earthworks

No works to date.

17.4 Pavement

17.4.1 Sub-base

No works to date.

17.4.2 Basecourse

No works to date.

17.5 Surfacing

No works to date.

17.6 Ancillary Works

No works to date.

18. BUOTA ROAD

18.1 General

No works to date.

18.2 Drainage

No works to date.

18.3 Earthworks

No works to date.

18.4 Pavement

No works to date.

18.5 Surfacing

No works to date.

18.6 Ancillary Works

No works to date.

19. BETIO FEEDER ROADS

19.1 General

No works to date.

19.2 Drainage

No works to date.

19.3 Earthworks

No works to date.

19.4 Pavement

No works to date.

19.5 Surfacing

No works to date.

19.6 Ancillary Works

No works to date.

20. BAIRIKI FEEDER ROADS

20.1 General

No works to date.

20.2 Drainage

No works to date.

20.3 Earthworks

No works to date.

20.4 Pavement

No works to date.

20.5 Surfacing

No works to date.

20.6 Ancillary Works

No works to date.

21. BIKENIBEU FEEDER ROADS

21.1 General

21.1.1 Possession of Site

The Contractor currently has 'possession of site' for the following road links:

- Link (04),
- Link (05), and
- Link (07)

Following initial setting out there was some discrepancy with the new road centreline over the first 400m of link 04 (total length ~1,200m). The issue has been resolved and the Contractor has been provided with revised setting out information.

21.2 Drainage

No works to date.

21.3 Earthworks

No works to date.

21.4 Pavement

No works to date.

21.5 Surfacing

No works to date.

21.6 Ancillary Works

No works to date.

22. BETIO REPAIRS

22.1 General

No works to date.

22.2 Repair Area 1

No works to date.

22.3 Repair Area 2

No works to date.

22.4 Repair Area 3

No works to date.

22.5 Repair Area 4

No works to date.

22.6 Repair Area 5

No works to date.

22.7 Repair Area 6

No works to date.

22.8 Repair Area 7

No works to date.

23. BETIO CAUSEWAY BRIDGE

23.1 General

No works to date.

23.2 Sub-structure

No works to date.

23.3 Super-structure

No works to date.

24. COASTAL PROTECTION WORKS

24.1 General

24.2 Betio-Temaiku Road

Coastal protection works, consisting of sand cement bags, has commenced in the following areas:

- Ch 5+200 to 5+300 LHS (ongoing)

Works are being undertaken as 'enabling works' to allow the road and associated services to be constructed (and to mitigate contractual issues). The profile has been selected so that the works can be incorporated into follow up coastal protection works (based on T&T designs) that will be required for more robust protection that is needed.

24.3 Temaiku Road

No works to date.

24.4 Airport Road

Coastal protection works consisting of sand cement bags has been completed from:

- Ch 0+400 to 0+435 (LHS), and
- Ch 0+800 to 2+000 (LHS)

These works are now essentially complete.

25. WATER SUPPLY

25.1 General

25.2 Pipeline

The new 200mm water main has been installed in the following areas of the main Betio-Temaiku road:

- Ch 0-120 to 3+200
- Ch 4+700 to 5+400, and
- Ch 6+100 to 7+000

25.3 Chambers and Valves

Chambers installed, and status of 'fittings' works, follows below:

- Ch 0+260 (chamber only)
- Ch 3+200 (chamber only)
- Ch 6+550 (valves installed)
- Ch 7+000 (valves being installed)

25.4 Testing and Commissioning

Testing of the water main has been completed from Ch 0-120 (ie ~120m to the Betio side of Ch 0+000) to Ch 0+560 with satisfactory results.

ISSUES RESULTING FROM THE WORKS

26. HEALTH & SAFETY

26.1 General Works

The Contractor has provided a formal document outlining the procedures that will be put in place to provide for the health and safety of its' employees and other visitors to areas where work activities are on-going. Issues related to safety are dealt with in a number of ways, notably through:

- Site safety inductions (330 to date),
- Pre-start meetings (1492 held to date),
- Toolbox meetings (351 to date), and
- Safety inspections (58 to date)
- Job Safety & Environmental Hazard Analysis (16 to date)

The Contractor has advised that many of the documents used in the safety inductions have been into the local language. A 'Safety Committee' has been established by the Contractor, from within his own workforce, and the committee has met on 4 occasions to date. The Contractors procedures are subject to 'internal' audit of which there have been 3 to date. The Contractor has provided audit reports, to the Engineer, for the first 2 audits. The reports appear to be very thorough and the Contractor has advised that action is being taken where deficiencies were identified (predominantly procedural issues).

There have been a number of minor incidents/accidents to date although none have resulted in serious injury. The Contractor has arranged, with the Kiribati Red Cross, to conduct 'work place' First Aid training courses for selected members of the senior workforce (the Engineer has been invited to send selected members of his staff) and this is an on-going process.

26.2 HIV/AIDS Campaign

Required IEC campaigns have been conducted, by the Kiribati Family Health Association (KFHA), during the report period (being run bi-monthly) with the programmes being well attended and received. To date there has been a total of 7 campaigns undertaken (separate campaigns are now being run for new employees and those who have previously attended earlier campaigns).

The KFHA have struggled to provide the 'baseline survey' report that had been requested by the donors. Earlier reports had been considered inadequate and, following various meetings and discussions with the KFHA, this has not improved significantly. More recent updated reports are under review by the Contractor before being passed to the Engineer.

26.3 Unexploded Ordnance

Following a breakdown in negotiations with 'History Flight' the contractor has now reverted to 'Milsearch' (who the contractor was initially liaising with) for carrying out UXO survey activities. Negotiations are on-going with an intention of finalising matters so that works can commence in late-July 2014.

The Engineer has reminded the Contractor that some aspects of the CEMP need to be updated for UXO survey activities. The Contractor has attended to measures needed for storage (refer section 2.2.11) and other procedural matters ie survey methods, transport etc will be addressed in a methodology to be incorporated into the CEMP.

27. ENVIRONMENT

27.1 Environmental Management Plans

The latest Environmental Management Plan (EMP rev 4), prepared by the 'Design & Supervision Consultant' (DSC), was approved by the Donors and Employer in December 2013 and remains current. The Engineer has subsequently prepared an updated EMP (rev 5), primarily to address some issues relating to the use of 'local' aggregates, and this was provided to the MPWU towards the end of June 2014.

The Contractor has provided their Contractors' Environmental Management Plan (CEMP), as reported at section 2.2.12. It has previously been recognised that the CEMP is a 'living' document that will be updated, to address specific needs, ahead of when certain specific activities are scheduled to commence. To that end the CEMP (version 'H' of which was approved for the purposes of commencing works) has been updated with version 'I' being approved ahead of asphalt plant operation and version 'J' prepared to address a range of issues relating to coastal works, UXO surveys, bridge works and water use/management. CEMP (version J) is current at the end of this report period.

As previously reported the CEMP is supported by other documentation, notably:

- Job Safety & Environmental Hazard Analysis (JSEA), and
- Environmental Protection Instructions (EPI)

27.2 Imported Materials

The Contractor continues to import 'processed aggregates' to Tarawa (barged and containerised shipments), notably:

- sands & aggregates for concrete works, and
- aggregates for basecourse and surfacing works

Biosecurity arrangements, as previously reported, continue to be carried out on a routine basis and fumigation certificates are provided for each consignment (and for the different material types where necessary). On arrival in Kiribati the importer is required to provide the Customs and Port officials with the necessary certification prior to being allowed to offload any materials.

Copies of certificates, for the current report period, are included at Appendix H together with a renewed import permit issued by MELAD.

27.3 Incidents

Few 'environmental' incidents have been reported by the Contractor to date. Apart from some minor events (including hydraulic oil spillage and bitumen/prime run-off) there have been no major issues of concern, arising from the Contractors' activities, which have had negative impact of the local environment. Where spillage of 'hazardous' materials have occurred they have been dealt with in accordance with the Contractors CEMP provisions (contaminated material is collected and stored for disposal off-island).

The Contractors activities are monitored, from an environmental perspective, by the Engineers' Environmental Inspector with separate dedicated reports being provided on a monthly basis.

28. QUALITY CONTROL

28.1 General

The Contractor has provided a Quality Control Plan (QCP) but, as reported at section 2.2.12, the Engineer considers that some update will need to be carried out to align the document with particular requirements of the Contract. The Engineer's QA Engineer continues to liaise with the Contractor on this matter.

The Contractor has now engaged a 'laboratory manager (March 2014) and has advised that he will be preparing a 'Laboratory Management Plan' (LMP) that will be specific to the requirements of the KRRP. The LMP has not yet been submitted.

The Contractor is proceeding with some permanent works activities but it has been made clear to him that works cannot be 'covered up' until such time as proper quality control has been exercised and the works are considered acceptable. The Engineer has emphasised to the Contractor, on a number of occasions, the need to provide:

- Laboratory/field test result data sheets on a routine basis, and
- Certificates for materials delivered to the site

There has been some improvement in the submission of quality control documentation from the Contractor however there is still room for further improvement and the Engineer continues to discuss the issue with the Contractor.

With the recent increase in pavement and surfacing works the provision of test results for key components of the physical works have, as a consequence, started to become available. To date results achieved have generally been satisfactory and in accordance with specification requirements. Insufficient results are currently available for statistical analysis however, as soon as sufficient results do become available summary tables/charts will be prepared for inclusion in subsequent reports.

28.2 Testing Approach

Materials quality control is being undertaken in three ways:

- testing by the Consultant's Audit Laboratory independently, or
- in conjunction with the tests being carried out by the Contractor's laboratory, or
- direct supervision of the Contractor's technicians

In addition calculation audits of the Contractor's test sheets is undertaken on a random basis.

28.3 Physical Works

Although limited test results are available at present the works carried out by the Contractor to date are briefly described in the following sections together with comment on pertinent issues and results achieved.

28.3.1 Trench Backfill

The Contractor has now established a routine of testing layers in trench backfill for U-drains, fibre optic cable and water main installation using the nuclear densometer in back-scatter mode. This follows an initial period of carrying out backfill to trenches, particularly along Betio Causeway, without undertaking in-situ density testing of any kind despite this being raised on numerous occasions by the Engineer.

To overcome this paucity of testing it was suggested by the Engineer that a section of water main trench be opened up along Betio Causeway and the same backfilled and compacted in layers of 150mm compacted thickness with in-situ density tests being carried out on each layer using both the sand replacement method and the nuclear densometer in both direct and back-scatter mode; this would enable full correlation by each method of test to determine actual degree of compaction and whether a correction to either back-scatter or direct nuclear readings are necessary in accordance with AASHTO T238. These related tests would also demonstrate which nuclear densometer mode provides the more accurate results in the type of backfill material (generally sand) and within a trench. Following completion of satisfactory backfilling and testing by conventional means several DCP tests would be undertaken along this trial section of trench to provide a

known parameter that can be compared along other sections of trench where in-situ density testing was omitted. The foregoing has yet to be undertaken despite this being discussed with the Contractor in May 2014.

28.3.2 Kerb Backfill

Initially no testing of backfill to slip form or cast-in-place kerbing was undertaken by the Contractor along Airport Road, however, similar to the trench backfill, in-situ density testing commenced during this period using the nuclear densometer in back-scatter mode. The method described above for trench backfill, where testing had been omitted, was undertaken toward the latter part of the reporting period with a reasonable correlation between DCP values and in-situ density results at about Ch 1+665 RHS along Airport Road and this was carried through to other sections along Airport Road at Ch 0+045 to 1+280 (LHS & RHS), where testing had not been undertaken. The results of the DCP tests indicated that the backfill to kerbs satisfied the Specified requirements.

28.3.3 Coralline Sub-base

The only section of Coralline sub-base prepared by the Contractor was on Betio Causeway between Ch 0+000 and Ch 0+400 and this conformed to the Specification with relative compaction being on average 101.4% and a range over some 30 tests of 97.6% to 105.2%. The sub-base was a mixture of reworked in-situ material and some imported from trench excavations.

Laboratory CBR value was determined as 75.2% with an MDD of 1.75 Mg/m³ and an OMC of 18%.

28.3.4 Coralline Basecourse

Although the Contractor re-worked the existing in-situ material together with some additional material from Ch 0+070 to Ch 0+840 Airport Road only a section from Ch 0+070 to Ch 0+520 was approved in this period as the remainder did not comply with the required in-situ relative density. The average relative density of the approved area was 101% with a range of 98% to 106.4%. The Contractor appeared to have some difficulty in maintaining a consistent degree of compaction and therefore a plateau test was conducted at Ch 0+180 RHS over two close positions with the result being 93% and 100.2% relative compaction suggesting possible rapid change in the material being compacted either in substance or in moisture condition. The Specification provides for plateau testing but requires the higher of either this or MDD to be used as the target 100% relative density. No effort has been undertaken by the Contractor to check the moisture condition of the soil being compacted to determine where it lies in relationship to OMC for the soil.

In-situ density testing was carried out using the sand replacement method except, in the case of the plateau testing, where a nuclear densometer in back-scatter mode was used. It has also been noted that the laboratory compaction curves for this material tend to be very flat or concave rather than convex and this will be investigated further in coordination with the Contractors laboratory.

Longitudinal and transverse straight edge readings were undertaken every 20m along both the left and right sides of the carriageway with readings being within specified tolerance.

28.3.5 Crushed Stone Basecourse

This type of base course has only been constructed on Betio Causeway between Ch 0+000 and Ch 0+400 (LHS & RHS) from crushed stone sourced from Lodoni in Fiji. The stone is crushed in Fiji and shipped by barge to Kiribati where it is off-loaded and stockpiled and, following satisfactory testing, the material can then be applied to the road as basecourse.

In-situ density testing using the nuclear densometer was determined after compaction and found to be in conformance with the Specification with an average relative density of 101.1% and a range of 98.5% to 103.7%. The MDD of the material was 2.49 Mg/m³. The laboratory CBR exceeded 100%.

Surface tolerance was measured longitudinally and transversely every 20m along each side of the single carriageway using a 3 metre straight edge with all results conforming to the Specification.

28.3.6 Prime Coat

This was undertaken using a calibrated and certified bitumen distributor following preparation to satisfactory condition of level, surface regulatory and density of the basecourse, including brushing to remove loose dust

from the surface. Due to the time gap between basecourse preparation, coupled with inclement weather, some minor damage to the base course surface did occur together with some over-brushing near the kerbs causing loss to the base course. The Contractor effected remedial works ahead of placing the final surfacing.

As a check on the certificate of compliance, pads of known weight and size were placed such that they received spray from the distributor spray bar and by this means the rate of spraying could be determined and compared to the certified dip stick on the first area to be sprayed. The measured spray rate of 0.46 L/m² has been satisfactory in providing suitable sealing and penetration of the basecourse surface together with providing a suitable layer for adhesion by the subsequent surfacing layer to the basecourse.

The Contractor had previously proposed an alternative method of construction by the application of a primer seal over which the asphalt pavement would be constructed rather than using a prime coat as described above. This is reported on further in section 28.3.7 'Laying Trials'.

28.3.7 Asphalt Pavement Laying Trials

An asphalt paving mix design was formulated by Opus International Consultants Ltd, New Zealand, on behalf of the Contractor, using the materials to be used at site for construction of the pavement. This design was examined by the Engineer and approved in January 2014.

It was agreed between the parties to carry out a laying trial on the Temauku Road between Ch 5+500 and Ch 5+700. As the Contractor wanted to demonstrate his suggested method of employing a primer seal rather than a prime coat it was agreed to carry out two adjacent trials: one having a prime coat applied before the trial laying and the other having a primer seal.

Trial 1:

The first trial was carried out between Ch 5+500 to Ch 5+600 to full width where the asphalt surfacing was laid to a prime coated base course blinded with coarse sand four hours after spraying which was then brushed to remove any loose sand before applying asphalt surfacing following a period of about 3 days to allow the prime to cure. The trial was somewhat chaotic with many of the operatives not seeming to know their job and the delivery truck drivers not being conversant with how to approach the paver without either stopping too early or jarring the paver by reversing too far. Also the paver stopped and started every few metres without any particular reason; usually the action of stopping and starting a paver causes a small ripple in the pavement due to the screed being held on a pivot. It was also noted that the sonic level sensors were not working, with the contractor relying on the screed box moving along the concrete edging to provide level (it was already known that the edging had not been placed very well in respect of level).

Samples of the mix were taken from the paver and the mix plant to check on binder content and aggregate grading and to prepare Marshall plugs for load testing. The binder content was found to be 7.2%, the upper limit of the range determined from the mix design, and the aggregate grading was found to be just within the design envelope. The measured air voids indicated effectively zero % air voids probably due to the high level of binder combined with the gradation curves shape.

Ten cores were taken in the mat and these showed a range of depth varying from 32mm to 44mm with an average depth of 39.3mm, where the Specification calls for 30mm with D_{min} and D_{ave} being applied. The in-situ relative density obtained from the cores ranged from 97.1% to 99.2% of the target density taken from the Marshall plugs with an average of 98.1%; the requirement being 98% minimum. The cores exhibited very good adhesion to the prime seal coat with about 3 or 4mm of penetration into the base course.

The regulatory of the pavement was checked using a 3 metre straight edge both transversely every 20m and longitudinally continuously and found to conform to the Specification requirements.

Sand circle tests were undertaken and these indicated the surface texture to have a depth of no more than 0.6mm

Trial 2:

This trial was undertaken between Ch 5+600 and Ch 5+650 where the asphalt surfacing was applied to a primer sealed base course. The primer seal consisted of applying a very lightly cut-back bitumen to the surface of the base course at a base bitumen rate of almost three times that of prime coat and the application of nominally 7mm chippings to provide a more than 90% coverage of the area. Immediately prior

to the application of the asphalt surfacing a tack coat was applied by hand lance rather poorly to half the width (this being part of a primer seal normal methodology) and the other half being left as finished with the chipping surface.

The trial was much less chaotic than the first trial and it was noticeable that the crew was smaller in size; it was probable that too many people were involved in the first trial. Despite assurances from the Contractor that the level sensors had been repaired they were again found not to be working. Little improvement was noted in respect of the delivery truck drivers with some of the same problems as noted in the first trial. The paver continued to stop and start over short distances for no apparent reason.

Samples of the mix were taken from the paver and the mix plant to check on binder content and aggregate grading and to prepare Marshall plugs for load testing. The binder content was found to be 6.8%, which is the mid-point of the mix design range. The aggregate grading was found to be within the design envelope but tending toward the coarse side. The measured air voids were satisfactory whereas the Flow was around 5.5mm (the Specification calls for a maximum of 4mm).

Ten cores were taken in the mat and these showed a range of depth varying from 23mm to 42mm with an average depth of 27.8mm, where the Specification calls for 30mm with D_{min} and D_{ave} being applied. The in-situ relative density obtained from the cores ranged from 96.8% to 100% of the target density taken from the Marshall plugs with an average of 98.23%; the requirement being 98% minimum. The cores exhibited very good adhesion to the primer seal coat and underlying base course but no penetration of the primer seal bitumen into the base course was noted.

The regulatory of the pavement was checked using a 3 metre straight edge both transversely every 20m and longitudinally continuously and found to conform to the Specification requirements.

Sand circle tests were undertaken and these indicated the surface texture to have a depth of no more than 2.0mm

Overview of Trials:

The proposal from the Contractor to use primer seal rather than prime coat was based upon the expectation that no delays would take place due to prevailing weather conditions and that asphalt paving could be applied immediately. The primer seal was also purported to be more environmentally friendly. Since less kerosene is used to provide the primer seal bituminous material than that used for prime coat it would be expected that more fumes would come from the prime coat as would be expected along with the prime coat being prone to being washed off the road if it has not cured when rain occurs. The Specification does stipulate that prime coat should not be sprayed when rain is imminent.

Despite the Contractor's contention in respect of timing using a primer seal the Austroads Technical Report AP-T179/11, 'Review of Primes and Primerseal Design', clearly indicates that primer seal should not be covered for between 3 to 12 months after completing to allow the primer seal to properly cure, whereas a prime requires usually between 24 and 36 hours to cure in suitable conditions. There was clear evidence of the primer seal having not cured from examination of the cores taken.

Adhesion was subjectively about 40% better between the asphalt pavement and the primer seal than that with the prime coat, although the adhesion with the prime coat was very good.

The practicality in terms of time and additional cost does not lend to undertaking the use of primer seal rather than the Specified prime coat.

28.3.8 Asphalt Surfacing Construction

Following a thorough review and discussion of the results of the two trials it was decided to allow the Contractor to proceed to construction to enable him to have a reasonable production run to iron out the generally minor mix problems and the like.

The first and only construction laying during the report period was undertaken on the main Betio-Temaiku road from Ch 0+000 to Ch 0+400. Samples taken from the paver and at the plant indicated a binder content of 6.9% with Marshall plugs indicating that the specimens complied with the Specification apart from flow which was recorded on average to be 5.2mm (the specified maximum being 4mm). It is not considered that this will adversely affect the performance of the pavement.

The 32 cores taken provide an average relative density compared to the target density set by the Marshall plugs to be in the range of 95.7% to 101.8% with an average of 98.6%. The depth of asphalt surfacing measured from the cores gave an average of 35.7mm and a range of 29 to 54mm.

The regulatory of the pavement was checked using a 3 metre straight edge both transversely every 20m and longitudinally continuously and found to conform to the Specification requirements

Sand circle tests were undertaken and these indicated the surface texture to have a depth of no more than 0.6mm

29. TRAFFIC MANAGEMENT

The Contractors' 'Traffic Management Plan' (TMP) continues to work effectively although the Contractor has called upon the assistance of the police to try and control 'speeding traffic' through some sections of the Works. With a gradual build-up of activities along the main Betio-Temaiku road the Engineer has reminded the Contractor that adequate TMP measures do need to be in place outside of 'actual' working hours (particularly during hours of darkness).

The Contractor is utilising the services of a local 'security' firm for traffic safety personnel and, to date, they have generally demonstrated a good command of requirements and satisfactory performance levels.

30. VARIATIONS

A summary of all Contract variations (and their status) is provided at Appendix I, together with formal communications relating to instructed variations during the report period. Each has been assigned a 'variation' number for future reference, including expected variations that are under discussion but have not yet been finalised and authorised.

30.1 Variation No.1 - Work Scope (1) Changes

The variation order was issued on 9th September 2013 and covers various work scope changes as previously reported.

The financial impact of this variation is estimated to be a reduction of AUD 1.35 million.

30.2 Variation No.2 – ESAT/TACL Materials for pavement

A potential contract variation to cover issues discussed at section 10.1.

Once there is clarity on the ESAT/TACL situation the Engineer will reassess the situation and prepare necessary documentation (together with an assessment of cost implications), for consideration and approval by the Employer, before issuing the same to the Contractor.

In the event that the current situation with ESAT/TACL changes (now or in the future) further instruction can be given to the Contractor. The Contractor can be expected to raise a number of contractual issues associated with any subsequent changes and these will be dealt with, in accordance with the Contract, as and when received.

The financial impact of this variation cannot be determined until such time as clarity can be provided on whether material is available or not (potential implications are however reported on separately at section 10.1).

30.3 Variation No.3 - Betio Causeway Repairs

The variation order was issued on 9th September 2013 and covers remedial works needed to the existing concrete revetment protection across the Betio Causeway as previously reported.

Estimated financial impact is to increase the contract price by AUD 80,000.

Given the on-going deterioration of the causeway revetment protection consideration does now need to be given towards a longer term solution in order to ensure continuing stability of the causeway (as reported at section 9.2). The Donors have indicated that any such work will not be carried out under KRRP.

30.4 Variation No. 4 - Coastal Protection Works

Issues are as reported at section 9.3 and, due to timing issues, the proposed changes will now be issued under more than one variation (as sub-components). It is likely that separate variations will be needed for:

- Amended works at coastal protection sites 1 & 5,
- Amended works at coastal protection sites 10 & 11,
- Extra works at sites coastal protection sites 15 east & 15 north, and
- Deletion of works at some sites where works are no longer required (under KRRP)

Variation 4a, Amended works at coastal protection sites 1 & 5; issues are as reported at section 9.3.1 and, given current advice from the Employer, a variation will no longer be required. Necessary works will be issued under an instruction, as works are similar in nature to that originally scheduled, and final costs will be determined under the 'add measure' contract provisions.

Variation 4b, Deletion of Works - Betio-Temaiku Road Ch 5+100 (lagoon side); issues are as reported at section 9.3 and covers the deletion of works that are no longer required (the beach has replenished at this location).

There is no significant financial impact from this variation (directly there will be a resultant small reduction in cost however it is likely that this will be outweighed by the increased work scope in other areas and/or other works that are being considered for other coastal work components under this variation).

Variation 4c, Deletion of Works - Betio-Temaiku Road Ch 9+800 (lagoon side); issues are as reported at section 9.3 and covers the deletion of works that are no longer required (the Employer is arranging alternate protection measures).

There is no significant financial impact from this variation (directly there will be a resultant small reduction in cost however it is likely that this will be outweighed by the increased work scope in other areas and/or other works that are being considered for other coastal work components under this variation).

30.5 Variation No 5 - Water Valve Fittings

The variation order was issued on 9th September 2013. Its purpose is to standardise valves that will be installed under KRRP water supply items with those being planned for installation under KAP-III.

The financial impact will be an increase of AUD 11,575.

30.6 Variation No. 6 - Solar Street Lighting - LED lighting

The variation order was issued on 4th December 2013 and covers the change in type of street lighting from 'sodium' based to 'LED' based technology, as previously reported.

There is no financial impact from this variation.

30.7 Variation No. 7 - Valve Chambers (KAP)

Issues are as reported at section 9.4 and advice from the Employer is required before appropriate action can be taken by the Engineer. The scope of work now being put forward for execution under this variation is now significantly reduced from previous expectations.

30.8 Variation No. 8 - Valve Chambers (STSISP)

Originally intended as a part of VO 7, the lack of progress with identifying the scope and details of this proposed variation, to cover issues discussed in section 9.5, will now be treated as a separate matter.

The Employer should anticipate a claim for extension of time as well as extra costs when the final variation is issued although the scope of proposed works is now less than had originally been envisaged. Any such claim will be reviewed and dealt with under the terms of the contract.

30.9 Variation No. 9 – Basecourse Specification

The variation order was issued on 29th March 2014, to cover a change in basecourse specification as reported at section 10.4, subject to the Contractors' acceptance of various conditions. The Contractor has accepted those conditions which provided for no additional costs as a direct result of the change being accepted.

There is no financial impact from this variation.

30.10 Variation No. 10 – Deferral of Betio Causeway Pavement

The variation order was issued on 31st March 2014 and covers the deferral of pavement works, across the Betio causeway, as reported at section 9.2.

The Contractor has provided an updated programme showing completion of works on 10th July 2015 ie a delay of 50 calendar days. This has been assessed by the Engineer and a recommendation provided to the Employer. If agreed to the financial impact would be an increased cost of AUD 571,366.

30.11 Variation No. 11 – Prime and Tack Coat Requirements

Consideration has been given towards the type of surface treatment needed before laying the asphalt surfacing. The Contract documents make provision for both 'prime' and 'tack coat' and the Engineer has advised the Contractor that 'prime' (with blinding) is what is required.

The Bill of Quantities includes an item for 'tack coat' but not for 'prime'. The Contractor has put forward unit rates for prime/blinding and, following assessment, overall costs for prime/blinding (depending on final application rates for materials) are expected to be similar to the current allowance for 'tack coat'. Following donor 'no objection', and Employer instruction, a formal variation is being prepared for issue to the Contractor.

There is expected to be no financial impact from this variation.

31. CLAIMS

31.1 Potential

There are a number of Contract variations pending, as reported at section 30, and if/when they are issued to the Contractor there is a likelihood that some will attract Contractual claims (for additional time and associated costs).

Additionally, following a recent change in Regional Construction Manager the Contractor has now seemingly adopted a more contractually litigious approach and the receipt of claim notices has increased significantly.

Costs associated with 'delays' are provided for under Specification clause 1303 and specifically Pay Item 13.01 (b) 'Maintenance of the Contractors Establishment' which stipulates that "In the event of an extension of the Contract period being granted by the Engineer (excluding any extension for which the Contractor is not entitled to costs, eg. extensions pursuant to Clause 1215 of the Specification) then payment shall be due at the lump sum rate per month for an extension not exceeding three months. Thereafter, costs associated with time extension shall be determined as provided for by the contract."

The amount assigned, by the Contractor, against Pay Item 13.01(b) is Australian Two Hundred and Ninety Thousand Nine Hundred and Five Dollars and Seventy-Nine Cents (AUD 290,905.79) per month. The inclusion of time related costs (for performance bond and certain other BoQ items) would raise this figure to around Australian Three Hundred and Fifty Thousand Dollars (AUD 350,000) per month ie an amount of ~\$12,000/day (for each day of delay). It is to be noted that such amount would need to be re-negotiated with the Contractor for delays beyond the three (3) month time span stipulated.

Issues where potential 'claims', associated with pending variations, might arise are:

- Supply of local materials
- Coastal protection
- Valve chambers (KAP)
- Valve chambers (STSISP)

The nature of any Contract variation that is likely to be considered is such that a Contractual claim from the Contractor can be expected and that this will be for additional time and costs (time and works related).

31.2 Notices

The Contractor has provided a number of 'notices of claim'. For future reference all contractual 'claims' are assigned a 'claim number' and a summary of their status is provided at Appendix J. The Contract requires that the Engineer seek the specific approval of the Employer before providing the Contractor with any determination on any claims issues. If the Employer/Engineer fail to provide a determination within the required timeline then the Contractor can refer the issue to the Dispute Board. Each of the claims are briefly described hereunder:

31.2.1 Claim No.01; Work Scope (1)

Issues of a changed work scope, leading to the Contractor providing notice of a claim on this issue (NTC 047 dated 7th June 2013) have now been finalised (under variation no.01). At this time the Contractor has provided no indication that this claim will be pursued.

31.2.2 Claim No.02; Betio Causeway Remedial Works

Issues related to remedial works required to damage of the concrete revetment protection along the causeway, leading to the Contractor providing notice of a claim on this issue (NTC 029 dated 22nd August 2013), have now been finalised (under variation no.03). At this time the Contractor has provided no indication that this claim will be pursued.

31.2.3 Claim No.03; Damage to Betio Causeway

Issues related to three localised failures in the Betio causeway concrete revetment protection, leading to the Contractor providing notice of a claim on this issue (NTC 103 dated 3rd February 2014) have largely been

dealt with, through works undertaken by the Contractor and the MPWU, but the MPWU have yet to fully complete more robust repairs as a 'follow up' (there are signs of further scour now taking place). At this time the Contractor has provided no indication that this claim will be pursued.

31.2.4 Claim No.04; Deferral of Pavement Works across Betio Causeway

Issues related to deferral of pavement works across the Betio causeway, instructed as variation no.10, led to the Contractor providing notice of a claim on this issue (NTC 132 dated 25th March 2014). The Contractor has pursued this claim and has provided detailed particulars for consideration.

31.2.5 Claim No.05; Introduction of VAT

Issues related to introduction of VAT has led to the Contractor providing notice of a claim on this issue (NTC 150 dated 17th April 2014).

This is deemed to be a 'change in legislation' and the Contractor will be fairly entitled to reimbursement of any justified additional costs. Whilst this has been recognised the mechanism of how such reimbursement is to take place has to be confirmed with the options being:

- If the Contractor is registered for VAT then through VAT returns, and
- If the Contractor is not registered for VAT then through the KRRP contract

The Employer has been asked to be clarification of how the introduction of VAT is to be dealt with under the terms of the KRRP Contract and advice is awaited.

31.2.6 Claim No.06; Prime Coat

The lack of 'Prime' as a specific line item in the Bill of Quantities has led to the Contractor providing notice of a claim on this issue (NTC 154 dated 26th April 2014).

The Contract documents make provision for both 'Prime' and 'Tack Coat' and the merits of the claim have been assessed giving due consideration to the technical merits of the preferred 'surface treatment'. Following site trials and technical assessment it has been confirmed to the Contractor the 'prime' is required and the Contractor has subsequently suggested unit rates for the proposed works. The overall cost implications are neutral as the cost of the prime/blinding is similar to the cost scheduled for tack coat (and which will no longer be required).

A recommendation from the Engineer for a Contract variation, to reflect the change from tack coat to prime, has been accepted by the Employer (following donor no objection) and the required variation is being prepared.

It seems likely that the instruction of the variation will allay the Contractors concerns on this matter (but the recent more vigorous 'claims' approach may see the matter pursued).

31.2.7 Claim No.07; Underground service obstructions

Issues related to underground service obstructions has led to the Contractor providing notice of a claim on this issue (NTC 173 dated 16th June 2014).

The Contractor is alleging that the presence of underground services is adversely impacting his programme causing delay and additional cost.

There have been a number of meetings between the Employer/Engineer/Contractor and service providers in order to establish procedures for dealing with areas where existing services conflict with the new road works (and, in particular, u-drain installation). It is recognised that service providers have limited capacity and resources to undertake necessary relocation/repair works and the assistance of the Contractor will, on occasion, be necessary.

Detailed particulars have not been provided however it likely that this will be an on-going issue (although the extent of any conflict can only be confirmed as works progress). The Contractor has been quite vociferous in his discussions on this matter and the claim can be expected to be pursued.

31.2.8 Claim No.08; Survey controls and Setting out

Although not formally presented under clause 20.1 the Contractor has indicated that he is reviewing his position in regards to the provision of Survey Control information and subsequent set-out information for the road alignments.

There were some errors identified in the primary control points (primarily related to level) and the Engineer surveyors returned to Tarawa in 2013 to undertake checks and, following such exercise, agreed control points were established. Subsequently there has been some discrepancy in horizontal alignment data and the Engineer has been working through these, with their CAD designer, to provide the Contractor with revised set-out information in a timely manner.

It is currently uncertain whether the Contractor will take things further but the recent more vigorous 'claims' approach may see the matter pursued.

31.2.9 Claim No.09; Services, no power disconnection

The Contractor has provided notice for a specific event that occurred on the 18th June 2014, notably the inability of the PUB (power) to isolate areas of work from 415V and 240V services (NTC 178 dated 18th June 2014). Circumstances leading to the claim were described in the same communication and these are under consideration by the Engineer.

31.2.10 Claim No.10; Supply of local materials

Issues related to the availability (or lack thereof) of local material has led to the Contractor providing notice of a claim on this issue (NTC 179 dated 18th June 2014).

Pending finalisation of separate 'agreements' for obtaining coralline material from 'local' suppliers the Contractor has advised that material was not available and that this has caused delay to the Works.

31.2.11 Claim No.11; Services, Impact on clearing & u-drain works

Issues related to service conflict with on-going work activities has led to the Contractor providing notice of a claim on this issue (NTC 181 dated 27th June 2014).

This can be considered as an extension of 'claim 07' albeit, on this occasion, that specific parts of the site (various locations) are referred to. These issues are likely to continue for some time and, as stated under 'claim 07', can be expected to be vigorously pursued by the Contractor.

31.2.12 Claim No.12; Ducts provided through sea walls

Issues related to the provision of drainage ducts through existing seawalls has led to the Contractor providing notice of a claim on this issue (NTC 183 dated 30th June 2014).

The Contract does make provision, within the BoQ, for installation of such ducts however the Contractor contends that the item is not appropriate for what is involved and further information is being collated to support their position.

31.3 Under Consideration

The following claims are under consideration:

31.3.1 Claim No.04; Deferral of Pavement Works across Betio Causeway

The Contractor provided documentation in support of the claim to the Engineer on 14th May 2014 (NTC 163). The quantum of the claim is for an extension of time of fifty (50) calendar days plus associated costs (which were not quantified).

The Engineer has reviewed the merits and quantum of the claim and has made a recommendation to the Employer on 20th May 2014 (MPWU-0109). The Engineer supports the Contractors claim for prolongation (50 calendar days) and, in accordance with Contract provisions, has assessed the associated costs at AUD 571,366.

The Employer had until 25th June 2014 to respond to the Engineers recommendation however, by mutual agreement (Employer/Contractor) this was extended until 27th July 2014. The Employer sought extension so that time was available to give consideration to work scope requirements across the Betio causeway as, if

works are deleted, some or all of the prolongation may be offset by the reduced work scope (a change from asphalt to chip seal surfacing is unlikely to impact on any prolongation requirement).

31.3.2 Claim No.09; Services, no power disconnection

The Contractor explained particulars of their claim in their 'notice' communication of 14th May 2014 (NTC 163). The quantum of the claim is for an extension of time of one (1) calendar day plus associated costs (which were not quantified).

The Engineer is currently assessing the merits of the claim before responding further.

31.4 Approved

To date no Contractual claims have been 'approved'.

32. DISPUTE BOARD

Issues relating to the establishment of a Dispute Board (DB) are as reported at section 2.2.9. Mr Firth (the appointed candidate) visited the site (from 11th to 15th May 2014), in accordance with the procedural rules, to keep himself acquainted with recent developments. The DB visited the site and met with the Engineer and Contractor. Mr Firth has submitted a brief report on his visit to the project and the Engineer has provided Mr Firth with copies of relevant site correspondence (on DVD).

At the time of the most recent visit there were no specific issues that needed to be addressed although advice was offered on 'construction law principles' relating to the deletion of parts of the works for possible execution by others (which could be up for consideration by the Employer depending on financial constraints).

Mr Firth is next scheduled to visit the site in mid-August 2014 (TBC).

33. PAYMENTS

33.1 General

The KRRP Contract was awarded for the 'Accepted Contract Amount' of Australian Forty-Eight Million One Hundred and Ninety-Seven Thousand Nine Hundred and Fifty-Seven Dollars and Twenty Cents (AUD 48,197,957.20) and it is to be noted that such sum was derived using unit rates and prices that excluded local taxes and duties. It is also to be noted that such amount is not a 'Lump Sum' and the final 'Contract Price' will be determined according to the actual works undertaken and measured and evaluated in accordance with the provisions of clause 12 of the Conditions of Contract.

Clause 14.3 of the Conditions of Contract does make provision for amounts to be deducted for Retention. Such amounts are based on ten percent (10%) of the amount due, under any Certificate (excluding the Advance Payment), to a maximum amount of five percent (5%) of the 'Accepted Contract Amount'. Retention is repaid on Practical Completion (50% on issue of the Taking Over Certificate) and Contract Completion (50% on issue of the Performance Certificate) with provision for the Contractor to provide a 'Bond', in lieu of Retention, for the 50% still held after Practical Completion.

Although amounts due to the Contractor will be certified entirely in Australian Dollar (AUD) payments to the Contractor will be made in the various currencies, and at the designated exchange rates, nominated by the Contractor in their Bid.

As highlighted in previous reports the Government of Kiribati has now introduced 'Value Added Tax' (effective from 1st April 2014). Exactly how this might be enacted, and the implications with respect to the KRRP, are currently uncertain. Guidance has been sought from the Employer and advice is awaited. For now Interim Payment Certificates continue to be prepared and processed without the inclusion of VAT.

33.2 Interim Payment Certificates

In accordance with clause 14.3 of the Conditions of Contract the Contractor has submitted fourteen (14) statements as an Application for Interim Payment Certificate (No.15 is due at the start of July 2014). The Engineer, pursuant to clause 14.6 of the Conditions of Contract, has subsequently issued Interim Payment Certificate (IPC) Nos. 01 to 14 for amounts that have been deemed to be fairly due to the Contractor, in accordance with the Contract, for activities carried out up to the end of June 2014. Notwithstanding issues that delayed payment on IPC No.01 subsequent IPC's have, apart from some minor delay to a few of the IPC's, generally been processed with no apparent difficulties. A summary of all IPC's issued to date, together with copies of IPC's issued during the report period, is included at Appendix K.

33.3 Cost Fluctuation

Cost Fluctuation adjustment is provided for under clause 13.8 of the General Conditions of Contract and the Particular Conditions state that the first adjustment is due 6 months after the closing date for bids, with adjustment factor amended every three months thereafter.

There are no schedules bound into the Contract Documents although the Contractor did supply indices during pre-Contract Award negotiations. Despite being reminded to do so, the Contractor has so far presented no indices for review and approval although this can be expected (possibly once it has been compiled). There are no time limitations (other than that mentioned above) on applying price adjustment to payments due and adjustments can be back-dated, to past certificates, as IPC's do only represent interim assessments which can be 'corrected' by subsequent IPC's.

In the absence of any information from the Contractor the Engineer has started to compile information and, once sufficient details are collected, appropriate adjustment will be made to payments already processed (through IPC's). This will also allow an assessment of overall financial implications to be made.

34. OVERALL STATUS

34.1 General

Giving due regard to the various issues reported on herein, some of which still require further action, the KRRP project does continue to progress forward albeit not at the rate that had been anticipated. Following the establishment of a formal Contract 'Commencement Date' of 1st July 2013, the Contractor has proceeded to confirm contracts for material supplies. The particular circumstances of working in Kiribati do involve certain logistical difficulties and 'lead' time for delivery of materials is generally of the order of two (2) to three (3) months.

34.2 Physical Works

There have been limited permanent physical works to date although there are signs of improvement in general progress. Works have now progressed sufficiently for progress graphs (actual vs scheduled works) and schematic diagrams (actual and scheduled works) to be prepared. These are presented as Appendices D & G and show the status of the various road works activities, for the separate road components, together with general summaries of the percentage completion for key work activities on a section-by-section basis.

34.3 Financial Position

The quantum of Interim Payment Certificates issued to date amounts to Australian Thirteen Million Three Hundred and Thirty-Six Thousand Two Hundred and Twenty-Five Dollars and Sixty-Two Cents (AUD 13,336,225.62). The amount certified includes deductions for Retention which currently stands at Australian Eight Hundred and Forty-Two Thousand and Eighty Dollars and Four Cents (AUD 842,080.04). Retention is deducted at a rate of 10% up to a limit of 5% of the Accepted Contract Amount.

It is to be noted that the Contract Conditions do allow payment for certain 'Materials on Site', as reported at section 5.5.1, and currently this amounts to Australian Nine Hundred and Thirty-Seven Thousand Seven Hundred and Nine Dollars and Fifty-Three Cents (AUD 937,709.53).

Following the issue of instructions to the Contractor in respect of 'approved' variations, as described at section 30, the Contract Price has been adjusted and currently stands at Australian Forty-Six Million Eight Hundred and Fifty-Eight Thousand Seven Hundred and Fifty-Five Dollars and Fifty-Two Cents (AUD 46,858,755.52).

Although there are a number of other Contract variations pending, as set out at section 30, these have so far not been formally prepared and issued. Once clarifications and/or approvals have been provided the various issues will be assessed and the cost implications associated with the various variations reported on.

Likewise, although the Contractor has provided due 'notice' of potential Contractual claims, as reported on at section 31, full and detailed particulars are not available for most of these at present and issues will be assessed and reported on in due course. The one claim that has been assessed by the Engineer, in connection with the deferral of certain works across the Betio causeway, is currently under consideration by the Employer and, if accepted, will result in additional costs of Australian Five Hundred and Seventy-One Thousand Three Hundred and Sixty-Six Dollars (AUD 571,366). This amount has not yet been added to the projected final Contract Price as deleting the works across the causeway (potentially negating any requirement for additional time) is also under consideration by the Employer.

34.4 Completion Date

The automatic Extension of Time (EoT) that arises from weather conditions, as reported at section 11.1, will be calculated from the Commencement Date that has been established as 1st July 2013. To date the EoT due to adverse weather conditions stands at plus twenty-three (+23) calendar days. If normal rainfall patterns were to continue for the remainder of the contract period then the date for Practical Completion would be 14th June 2015 with corresponding adjustment to the Contract Completion date ie to 13th June 2017.

If the Engineers recommendation for an extension of the Contract period, due to deferral of certain works across the Betio causeway, is accepted by the Employer then the date for practical completion would be set back to 10th July 2015 and for Contract Completion to 9th July 2017. Applying current adjustments for weather conditions the date for Practical Completion (issue of the Taking Over Certificate) would move out

to 2nd August 2015 and, following the Defects Notification Period, for Contract Completion (issue of the Performance Certificate) to 1st August 2017.

34.5 Completion of Physical Works vs Elapsed Time

Following receipt by the Contractor, of an instruction from the Engineer, the Commencement Date has been established as 1st July 2013. Together with progress graphs and schematic diagrams a good indication of the overall status of the project can be obtained by comparing progress made on physical works against time that has elapsed.

34.5.1 Physical Works

The current status of physical works (on a financial basis), excluding General, Dayworks and Provisional Sums, and adjusted for instructed variations, is set out at Table 34-1.

Table 34-1: Status of Physical Works

Bill Series	Amounts (AUD)				Completion %
	As Bid	Variations	To Complete	To Date	
Drainage	4,930,764.15	-132,624.00	4,798,140.15	430,134	9.0
Earthworks	613,730.00	0.00	613,730.00	15,814	2.6
Pavement	7,901,230.00	-132,624.00	7,716,081.40	333,587	4.3
Surfacing	14,987,282.20	-1,544,828.00	13,442,454.20	218,509	1.6
Ancillary	4,596,370.77	511,824.22	5,108,194.99	8,826	0.2
Structures	1,106,239.54	0.00	1,106,239.54	414,361	37.5
Water	1,008,230.35	11,574.70	1,019,805.05	318,679	31.2
Totals(1)	35,143,847.01	-1,286,677.08	33,804,645.33	1,739,910	5.2
Materials on Site				894,928	
Totals(2)				2,634,838	7.8

The 'totals to date' include amounts certified through to end of February 2014 and amounts certified by the Engineer for June 2014.

34.5.2 Elapsed Time

The current status of elapsed time is set out at Table 34-2.

Table 34-2: Elapsed Time

Period	Description	Date	Time (calendar days)
To Complete	Contract Period		690
	Extensions of Time		0
	Revised Contract Period		690
To Date	Commencement Date	1 st July 2013	
	Effective Report Date	30 th June 2014	
	Elapsed Time		364
	Elapsed time less 90 day mobilisation		274
Completion (%) – elapsed time			53
Completion (%) – elapsed time less 90 day mobilisation			40

The adjustment for 90 day mobilisation is made to reflect the lack of 'General' items in the assessment of physical works.

34.5.3 Cumulative Record

An overview of the cumulative status of the KRRP is presented at Table 34-3.

Table 34-3: Overview of Project Status

	Percentage Completion (%)								
	2013			2014				2015	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Physical Works									
Exc Materials on Site	0	0	0.2	1.6	5.2				
Inc Materials on Site				2.4	7.8				
Elapsed Time									
Elapsed time	0	13	22	40	53				
Elapsed time – 90 days				26	40				

Although there are signs of improvement there continues to be concern over the poor progress achieved to date and this is an issue that has been taken up with the Contractor. Issues related to the Contractors' asphalt subcontractor (entering receivership) did have initial adverse implications on progress and subsequent poor weather conditions, experienced throughout much of 2014, have not been conducive to achieving good progress. The Contractor has also cited other difficulties, associated with conflict between the new works and existing underground services, as a cause of poor production levels in more recent work activities.

35. PROJECTED COST TO COMPLETION

The KRRP Contract is an 'add-measure' contract based on a Bill of Quantities prepared at the time of inviting bids. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment (and hence final cost) will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.

Depending on site conditions and circumstances instructions may need to be issued that will either increase or decrease quantities (and hence costs) as works are progressed. It is not anticipated that quantities will be reassessed for every instruction that is issued however the Engineer will monitor the progress of the works and, when required, will review outstanding remaining works (in conjunction with completed works) in order to keep the Employer apprised of the potential final cost to complete the Works.

Given the limited progress to date on physical works, the expectation remains that the current quantities in the Bill of Quantities, as may have been revised by formal contract variations, will not change significantly. Instructions for works along the Temaiku road, as previously reported, have resulted in additional costs totalling ~AUD 50,000.

Detailed below in Table 35-1 is an assessment of the 'Costs to Completion' as discussed with the Employer and as currently projected:

Table 35-1: Projected Costs to Completion

Ref	Details	Amount (AUDx10 ⁶)	Comments
1	Current estimated cost at completion	47.00	Includes instructed Variations
	Sub-total (1)	47.00	
2	Potential Savings (Works)		
2.1	Betio causeway; replace asphalt with 2-coat seal	0.92	Subject to confirmed work scope
2.2	Temaiku road; replace asphalt with 2-coat seal	1.03	Subject to confirmed work scope
	Sub-total (2)	1.95	
3	Potential Increases (Works)		
3.1	Local aggregate supply (PVU)	0.08	Subject to detailed assessment
3.2	Local aggregate supply (TACL)	0.67	Subject to detailed assessment
3.3	Chambers (KAP)	0.02	Subject to confirmed work scope
3.4	Chambers (STSISP)	0.18	Subject to confirmed work scope
3.5	Coastal works (site 10)	1.60	Subject to confirmed work scope & Based on Contractor price comparison
3.6	Coastal works (site 11)	0.80	Subject to confirmed work scope & Based on Contractor price comparison
3.7	Modified scope for Bairiki feeder/loop roads	0.02	Subject to confirmed work scope
3.8	Road realignment; airport (west end of runway)	0.20	Subject to final design
	Sub-total (3)	3.57	

4	Potential Increases (Contractual)		
4.1	Prolongation (time)	0.70	Based on 2 month EoT @ ~\$350k/month
4.2	Inflation adjustment	2.50	Based on 5% of final 'Cost to Complete' of \$50 million
4.3	Contingency allowance	1.00	
	Sub-total (4)	4.20	
5	TOTAL (1)-(2)+(3)+(4)	52.82	Potential 'Cost to Complete'
6	Accepted Contract Amount	48.10	At time of Contract Award
7	Additional Cost	4.72	Does not include currency fluctuations

It is very important that the Employer appreciates that there are likely to be increases in the contract price that, unless alternative arrangements are made, will require financing by the Government of Kiribati. The amendment to coastal protection designs, if formalised by proposed Variations, is likely to lead to cost increases that will significantly exceed the amount of additional funding that is available from KAP III for this purpose (USD 980,000). The situation with cost and funding from KAP/STSISP/KAIP for various works remains uncertain. The worst case scenario with supply of local material from ESAT (ie no local material supply) will require additional financing of about AUD 4m. The impacts of any price fluctuation (as set out under Contract provisions), currency fluctuation (costs assessed by the KFSU) and costs associated with approved extensions of time resulting from variations or claims (the 'order of cost' of which will be at least AUD 350,000/month) will all be to the Government's account and will impact on overall financing arrangements and provisions.

It is understood that the Employer is preparing a Cabinet paper that will outline potential work scope options/costs in order that an informed decision can be reached on what works are to be undertaken under the KRRP.

Appendix A:

Environment Licences

A.1 – PVU extraction Sites

Near High Court (Betio) &

Near Otintaai Hotel (Bikenibeu)



GOVERNMENT OF THE REPUBLIC OF KIRIBATI
MINISTRY OF ENVIRONMENT LANDS AND AGRICULTURAL DEVELOPMENT
P.O. Box 234, Bikenibeu, Tarawa, Republic of Kiribati. Phone: 686 28000. Fax: 686 28334

ENVIRONMENT LICENCE

is hereby issued in accordance with Section 32 (1) (a) of the
Environment Act 1999

Licence Holder:	Ministry of Works & Public Utilities
Description of allowed activity:	Reef mud mining
Site	Existing pit at KPA adjacent to High Court
Licence Number:	ELA 036/14

This licence is issued subject to the attached conditions.

Signed this 16th day of May 2014.


Principal Environment Officer

CONDITIONS OF THE ENVIRONMENT LICENCE ISSUED TO LICENCE HOLDER/
KAETIETI IAAAN TE RAITIENTI ARE E ANGANAKI TE TIA BUBUTI

The conditions attached to this environment license are as
follows:/Aikaikaetietiibukinteraيتienti:

1. This Licence is for **reef mud dredging required to infill potholes in the road** as applied for in the Environment License application No. 036/14.
Te raitienti aio bon ibukin te anai riburibu ibukin taunakin manonon te kawai are bon kanoan te booma ni bubuti ae nambana 036/14.
2. If the licence holder changes the purpose of this licence, this licence will lose its validity immediately.
Ngkana te tia anganaki te raitienti e bita kanoan te raitienti aio, ao te raitienti aio e na toki korakorana man te tai naba anne.
3. The validity of this license will enter into force once the applicant has obtained a mining licence certificate from Land Management office.
E na moa korakoran te raitienti aio man te tai are e reke iai iroun te tia bubuti te beeba ni kariaiakaki ibukin te anai riburibu man aobitin tararuan Aaba.
4. The licence holder shall comply with Mining Licence condition from Land Management Office.
Te tia anganaki te raitienti e riai n iri kaetieti ake e anganaki man Aobitin Tararuan Aaba ake kanoan te beeba ni kariaiakaki ibukin te anai riburibu.
5. The applicant must settle the Environment Licence application lodging fee of \$10.00 before issued with the licence.
Te tia bubuti e riai ni kabwaka moa te roo ae \$10.00 ibukin karinan te beeba ni bubuti imwaain ae e anganaki te raitienti.
6. This licence valid for **3 months only**, and will expire on *16/08/14*.... Should the licence holder need to continue with the development, he/she must reapply for the renewal of the licence one week before the licence is expired.
Te raitienti aio bon tii 3 namakaina manna, ao e na toki korakorana n 16/08/14
Ngkana e tangiria te tia anganaki te raitienti bwa e na manga waaki riki imwiin tokin korakoran ana raitienti, ao e na riai ni manga kabooua teuana te wiki imwaain ae bane korakoran te raitienti aio.
7. The licence holder must mine **Reef mud** from within the existing pit at KPA adjacent to High Court at the site provided and shown in the attached site plan.
Te tia anganaki te raitienti e riai n tii ana te riburibu mai inanon te rawa ni uakaan ma te KPA ke te High Court n te tabo are e kaotaki n te mwabe ane e nim ma te raitienti aio.

8. Any mining carried out outside the approved site (as in 7) will violate the conditions of this license, and the licence will lose its validity.
Ngkana e karaoaki te makuri ni kenken itinanikun te tabo are e a tia ni katauaki, ao nanona bwa e a uruakaki ngkanne kanoan te kaetieti ao e na toki korakoran te raitienti aio.
9. A mining should be carried out at **low tide only**.
Anakin te riburibu e na tii karaoaki n tain te ora.
10. All mining should be carried out at least 15m away from the shoreline, and the licence holder shall not harm mangroves, sea grasses and live corals.
Kenken ana riai ni karaoaki 15m man mataniwiin te aba, ao te tia anganaki te raitienti e riai n aki kamatei ke n urui taian tongo, uteuten taari, ao taian ane aika a maeu.
11. The licence holder shall be liable or responsible for any environmental damage to the designated site that may be caused by carrying out an environment significant activity, and shall be responsible to rehabilitate the proposed and adjacent sites that are affected by this activity
Te tia anganaki te raitienti ngaia ae e na karaoa te kabomwii nakon taaboake a rootaki ke n uruaki man waakinan te makuri aio, ao man karaoi naba uruaki akanne.
12. The licence holder must produce a **Return on a 3 month basis** to the Principal Environment Officer at the Environment and Conservation Division, on the quantity of material extracted during the license period. Failure to submit the return would delay the renewal of the Environment Licence.
Te tia anganaki te raitienti e riai n anga mwaitin te riburibu ae e a tia n anaia ni katoa 3 namakaina ke imwiin banen korakoran ana raitienti. Aki iran nanon aio ao e na bon aki kabouaki ana raitienti ngkana e a manga kan anai riburibu riki.
13. The licence holder must ensure that a copy of this License is made available to the Environment Inspector, Police officer, or other responsible authorities for inspection upon his/her request.
E riai n taraia raoi te tia anganaki te raitienti bwa e na tai irouna katoton te raitienti aio ao man kaotia nakon te Environment inspector ke te bureitiman ngkana e tangiria.
14. This License cannot be transferred unless written approval has been obtained from the Principal Environment Officer.
Te raitienti aio e aki kona ni manga anganaki temanna ni karokoa e a tia ni kariatakaki maiiroun te Tia Koroboki ibukin Aobitin Tararuan te Otabwanin.

15. The licence holder must inform the Principal Environment Officer about the names of contractors and sub-contractors who are contracted under this licence.
Te tia anganaki te raitienti e riai ni kaongoa moa Aobitin Tararuan te Otabwanin ngkana iai kaonturaeki aika ana anai riburibu iaan te raitienti aio.
16. The Principal Environment Officer can amend conditions at any time when required.
E kona ni manga bitaki kanoan kaetieti iaan te raitienti aio ngkana e nooraki riaina ao kainanoana.
17. The validity of this licence can be suspended until further notice when there are environmental damages, public complaints as a result of this activity, and when the licence holder did not comply with the conditions above.
Korakoran te raitienti aio e kona ni katokaki ni karokoa te tai are e na manga baireaki ngkana te makuri n anai riburibu iai ana urubwai nakon te Otabwanin, iai te tangtang ibukina, ao ngkana e aki irii kanoan kaetietititi a anganaki n te raitienti.
18. Legal actions under the Environment Act 1999 may be taken against the licence holder when he / she did not comply with the conditions above.
E kona te tia anganaki te raitienti n kateaki ke ni katuaeaki iaan tuan te Otabwanin 1999 ngkana e aki iri kanoan kaetieti akana a oti ni kabane I eta.

If any further clarification is required on the above points please contact the EIA Officer at the Environment and Conservation Division, 686 28593.

(Signing the conditions means you are now aware and agree with the requirements of this Environment Licence) / (Tiainakintebecbaaio e kaotiabwakoamatataraoiao n nanoraoinikanoankaetietinteraitientiaio)

Section 29 of the Environment Act, Contraventions of Conditions of an Environment Licence:

maximum penalty: fine of \$100,000, imprisonment for five years.

Tererei Moniketi / *Tavua Rehat M. Leche*
 Applicant (or on behalf) (sign and print name) ECD Staff (sign and print name)

16/05/14
 Date Date

16/05/14



GOVERNMENT OF THE REPUBLIC OF KIRIBATI
MINISTRY OF ENVIRONMENT LANDS AND AGRICULTURAL DEVELOPMENT
P.O. Box 234, Bikenibeu, Tarawa, Republic of Kiribati. Phone: 686 28000. Fax: 686 28334

ENVIRONMENT LICENCE

is hereby issued in accordance with Section 32 (1) (a) of the
Environment Act 1999

Licence Holder:	Ministry of Works & Public Utilities
Description of allowed activity:	Reef mud mining
Site	Existing channel at Otintaai Hotel
Licence Number:	ELA 037/14

This licence is issued subject to the attached conditions.

Signed this ... 16th ... day of ... May ... 2014.

.....
Principal Environment Officer

CONDITIONS OF THE ENVIRONMENT LICENCE ISSUED TO LICENCE HOLDER/
KAETIETI IAAN TE RAITIENTI ARE E ANGANA KI TE TIA BUBUTI

The conditions attached to this environment license are as follows: /Aikaikaetietiibukinteraitienti:

1. This Licence is for **reef mud dredging required to infill potholes in the road** as applied for in the Environment License application No. 037/14.
Te raitienti aio bon ibukin te anai riburibu ibukin taunakin manonon te kawai are bon kanoan te booma ni bubuti ae nambana 037/14.
2. If the licence holder changes the purpose of this licence, this licence will lose its validity immediately.
Ngkana te tia anganaki te raitienti e bita kanoan te raitienti aio, ao te raitienti aio e na toki korakorana man te tai naba ane.
3. The validity of this license will enter into force once the applicant has obtained a mining licence certificate from Land Management office.
E na moa korakoran te raitienti aio man te tai are e reke iai iroun te tia bubuti te beeba ni kariaiakaki ibukin te anai riburibu man aobitin tararuan Aaba.
4. The licence holder shall comply with Mining Licence condition from Land Management Office.
Te tia anganaki te raitienti e riai n iri kaetieti ake e anganaki man Aobitin Tararuan Aaba ake kanoan te beeba ni kariaiakaki ibukin te anai riburibu.
5. The applicant must settle the Environment Licence application lodging fee of \$10.00 before issued with the licence.
Te tia bubuti e riai ni kabwaka moa te roo ae \$10.00 ibukin karinan te beeba ni bubuti imwaain ae e anganaki te raitienti.
6. This licence valid for **3 months only**, and will expire on ...16/08/14.. Should the licence holder need to continue with the development, he/she must reapply for the renewal of the licence one week before the licence is expired.
*Te raitienti aio bon til 3 namakaina manna, ao e na toki korakorana n ...16/08/14
Ngkana e tangiria te tia anganaki te raitienti bwa e na manga waaki riki imwiin tokin korakoran ana raitienti, ao e na riai ni manga kabooua teuana te wiki imwaain ae bane korakoran te raitienti aio.*
7. The licence holder must mine **Reef mud** from the existing channel at the Otintaai Hotel at the site provided and shown in the attached site plan.
Te tia anganaki te raitienti e riai n tii ana te riburibu mai inanon te rawa iaan te Otintaai Hotel n te tabo are e kaotaki n te mwabe ane e nim ma te raitienti aio.
8. Any mining carried out outside the approved site (as in 7) will violate the conditions of this license, and the licence will lose its validity.

Ngkana e karaoaki te makuri ni kenken itinanikun te tabo are e a tia ni katauaki, ao nanona bwa e a uruakaki ngkanne kanoan te kaetiati ao e na toki korakoran te raitienti aio.

9. A mining should be carried out at **low tide only**.
Anakin te riburibu e na tii karaoaki n tain te ora.
10. All mining should be carried out at least 15m away from the shoreline, and the licence holder shall not harm mangroves, sea grasses and live corals.
Kenken ana riai ni karaoaki 15m man mataniwiin te aba, ao te tia anganaki te raitienti e riai n aki kamatei ke n urui taian tongo, uteuten taari, ao taian ane aika a maeu.
11. The licence holder shall be liable or responsible for any environmental damage to the designated site that may be caused by carrying out an environment significant activity, and shall be responsible to rehabilitate the proposed and adjacent sites that are affected by this activity
Te tia anganaki te raitienti ngaia ae e na karaoa te kabomwii nakon taaboake a rootaki ke n uruaki man waakinan te makuri aio, ao man karaoi naba uruaki akanne.
12. The licence holder must produce a **Return on a 3 month basis** to the Principal Environment Officer at the Environment and Conservation Division, on the quantity of material extracted during the license period. Failure to submit the return would delay the renewal of the Environment Licence.
Te tia anganaki te raitienti e riai n anga mwaitin te riburibu ae e a tia n anaia ni katoa 3 namakaina ke imwiin banen korakoran ana raitienti. Aki iran nanon aio ao e na bon aki kabouaki ana raitienti ngkana e a manga kan anai riburibu riki.
13. The licence holder must ensure that a copy of this License is made available to the Environment Inspector, Police officer, or other responsible authorities for inspection upon his/her request.
E riai n taraia raoi te tia anganaki te raitienti bwa e na iai irouna katoton te raitienti aio ao man kaotia nakon te Environment inspector ke te bureittiman ngkana e tangiria.
14. This License cannot be transferred unless written approval has been obtained from the Principal Environment Officer.
Te raitienti aio e aki kona ni manga anganaki temanna ni karokoa e a tia ni kariatakaki maitroun te Tia Koroboki ibukin Aobitin Tararuan te Otabwanin.
15. The licence holder must inform the Principal Environment Officer about the names of contractors and sub-contractors who are contracted under this licence.
Te tia anganaki te raitienti e riai ni kaongoa moa Aobitin Tararuan te Otabwanin ngkana iai kaonturaeki aika ana anai riburibu iaan te raitienti aio.

16. The Principal Environment Officer can amend conditions at any time when required.

E kona ni manga bitaki kanoan kaetieti iaan te raitienti aio ngkana e nooraki riaina ao kainanoana.

17. The validity of this licence can be suspended until further notice when there are environmental damages, public complaints as a result of this activity, and when the licence holder did not comply with the conditions above.

Korakoran te raitienti aio e kona ni katokaki ni karokoa te tai are e na manga baireaki ngkana te makuri n anai riburibu iai ana urubwai nakon te Otabwanin, iai te tangtang ibukina, ao ngkana e aki irii kanoan kaetietiteti a anganaki n te raitienti.

18. Legal actions under the Environment Act 1999 may be taken against the licence holder when he / she did not comply with the conditions above.

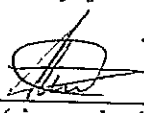
E kona te tia anganaki te raitienti n kateaki ke ni katuaeaki iaan tuan te Otabwanin 1999 ngkana e aki iri kanoan kaetieti akana a oti ni kabane I eta.

If any further clarification is required on the above points please contact the EIA Officer at the Environment and Conservation Division, 686 28593.

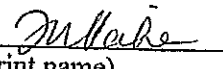
(Signing the conditions means you are now aware and agree with the requirements of this Environment Licence) / (Tiainakintebaaio e kaotiabwakoamatataraoiao n nanoraoinikanoankaetietinteraitientiaio)

Section 29 of the Environment Act, Contraventions of Conditions of an Environment Licence:

maximum penalty: fine of \$100,000, imprisonment for five years.

Tererei Monicchi 

Applicant (or on behalf) (sign and print name)

Tauea Reiteri Mlake 

ECD Staff (sign and print name)

16/05/14
Date Date

16/05/14

A.2– Amendment to EL No.118/12

Bairiki Causeway, Nanikaai (Coastal Site #1)



GOVERNMENT OF KIRIBATI
MINISTRY OF ENVIRONMENT, LANDS and AGRICULTURAL DEVELOPMENT

ENVIRONMENT AND CONSERVATION DIVISION

P.O BOX 234, BIKENIBEU TARAWA, REPUBLIC OF KIRIBATI
Telephone Number: (686) 28507 28000 28593 Fax Number (686) 28334,
e-mail: information@environment.gov.ki

File ref: 3/103(a)

Date: 09 June 2014

To: Secretary, MPWU

Re: Amendment of conditions of Environment Licence No. 118/12 (Site #1)

This letter notifies the proponent of the change in the conditions of the Environment Licence No. ELA 0118/12 in response to the letter of request referenced 19/24 dated 09th May 2014. Condition no. 1.5 of the Environment Licence No. ELA 118/12 states that

"the Principal Environment Officer (PEO) may amend the conditions of this licence in writing, if required by MELAD and/or the licence holder through consultation"

In my capacity as a Principal Environment Officer, I hereby amend the conditions of the Environment Licence No. 118/12 to include the following:

- A seawall to be constructed from Ch. 4+930 – 5+000 on the lagoon side as indicated in the attached drawing KIR-001/MR/017B.
- The low level wall will be 600/750 mm in depth as indicated in the attached drawing KIR-001/GE/310B
- Trees shall be incorporated within the construction of the wall.
- Rocks are to be placed at each end of the wall to reduce the potential flanking and erosion. Type of rock to be used is similar to the drawing 750968.200-10.

The proponent and its contractor are also required to comply with the existing ELA 118/12. This amendment will come into effect upon countersigning this letter and it will become invalid once the low level wall is duly completed.

Principal Environment Officer/Secretary of MELAD

Signed this 17th day of June 2014.

Signing the amendment means you are now aware and agree with the requirements of this amendment.

Manoa Arewana M. Boroh

Name & signature of applicant (or on behalf)/Date
23/6/14.

Pot. Totirua

Name & signature of MELAD staff/Date

23/6/14.

Appendix B:
Key Materials
& Material Suppliers

B.1 – Key Material Deliveries

Included for Payment as ‘Materials on Site’

KIRIBATI ROAD REHABILITATION PROJECT

MATERIALS ON SITE

[illegible]

KIRIBATI ROAD REHABILITATION PROJECT

MATERIALS ON SITE

[illegible]

KIRIBATI ROAD REHABILITATION PROJECT

MATERIALS ON SITE

[illegible]

B.2 – Material Suppliers & Service Providers

[illegible]

Appendix C:

Programme (rev3, April 2014)

Summary in Bar Chart Form

Summary Programme for Key Activities - Betio-Temaiku Road (Based on Contractor programme revision 3)

[illegible]

Summary Programme for Key Activities - Airport, Teraiku, Buota & Feeder Roads (Based on Contractor programme revision 3, April 2014)

[illegible]

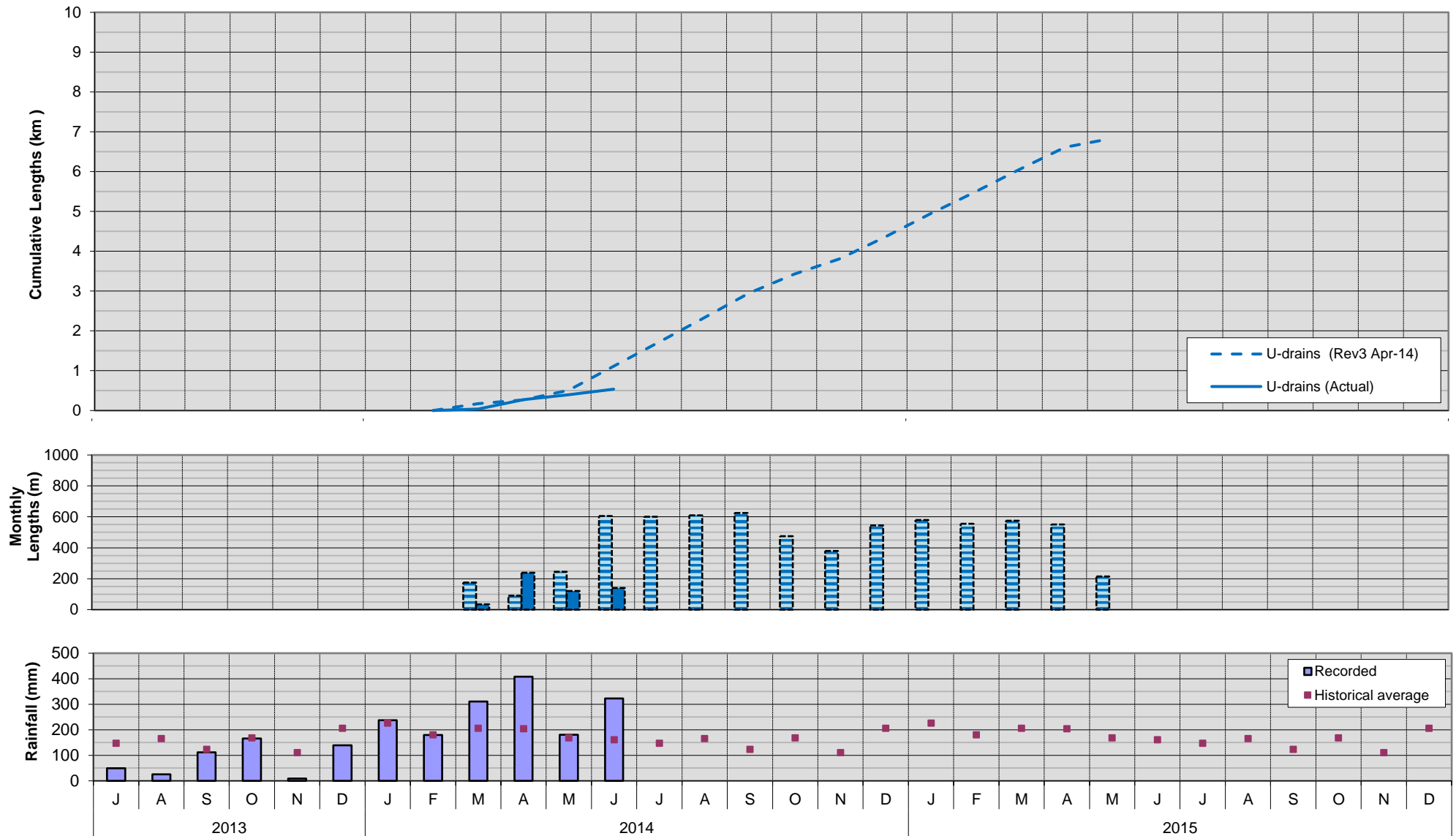
Appendix D:

Progress graphs

D.1 - Progress Graphs

Betio-Temaiku Road

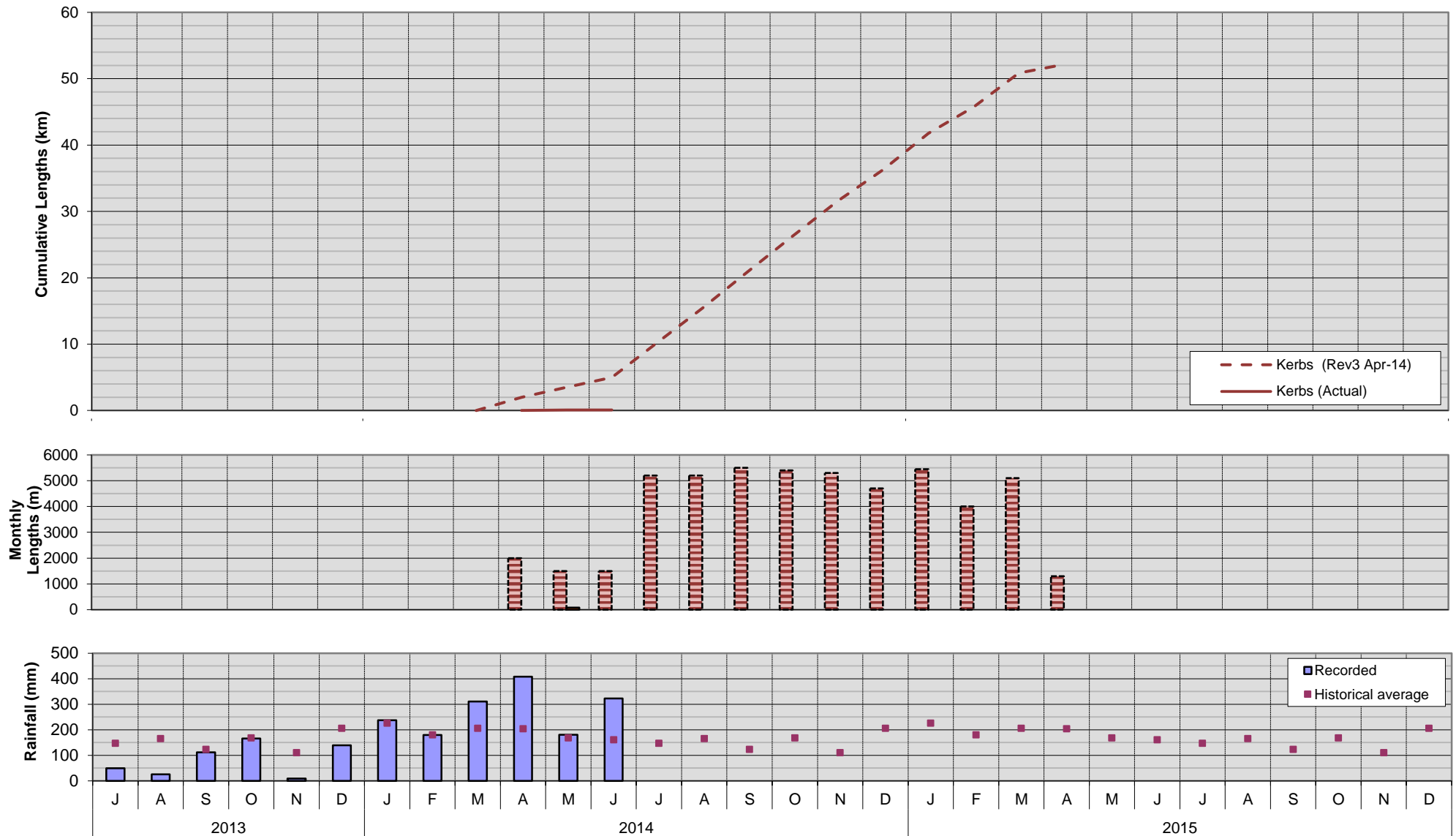
KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Betio-Temaiku Road (Ch 0-23950)
Progress with U-drain Installation



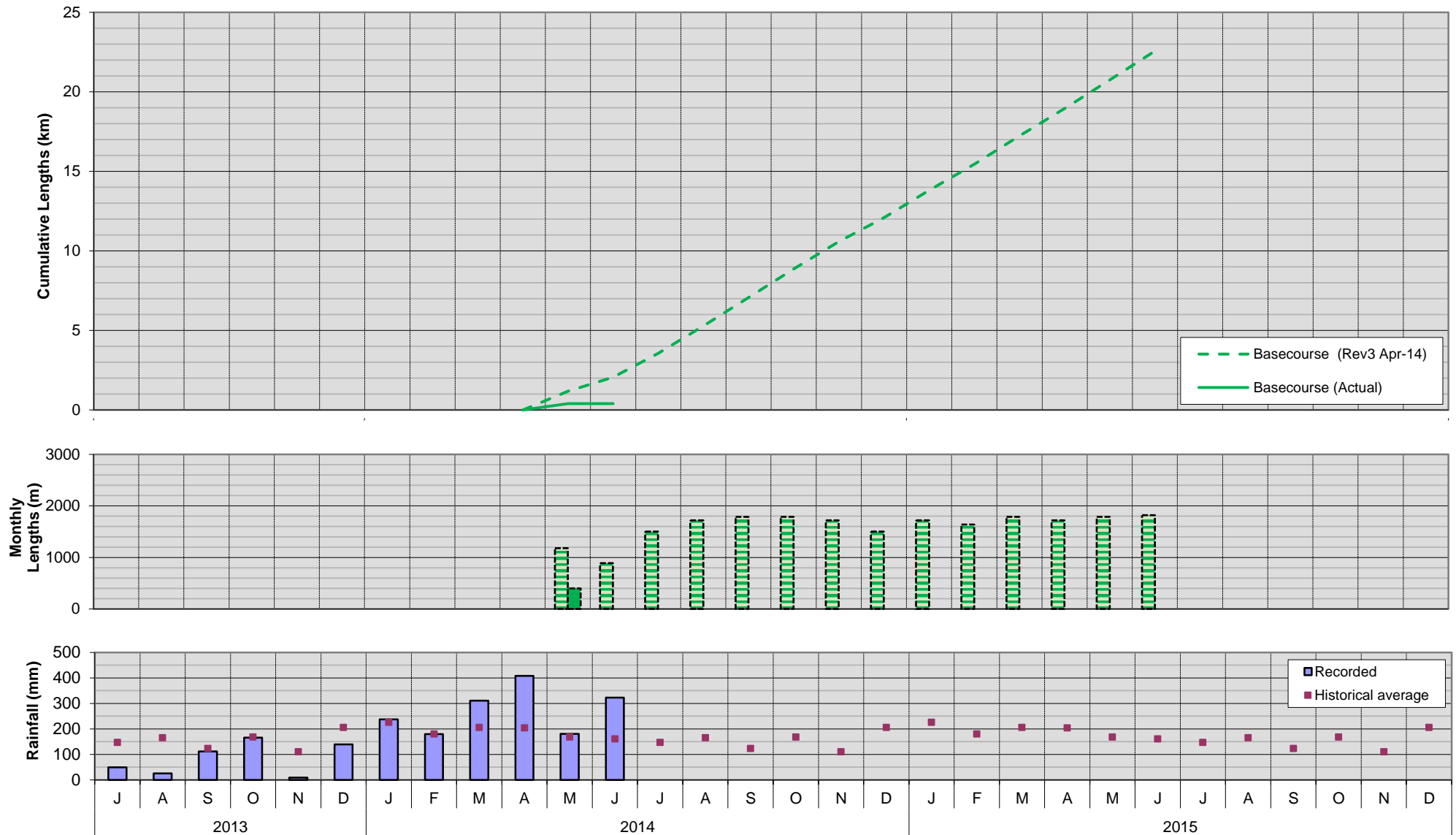
KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Betio-Temaiku Road (Ch 0-23950)

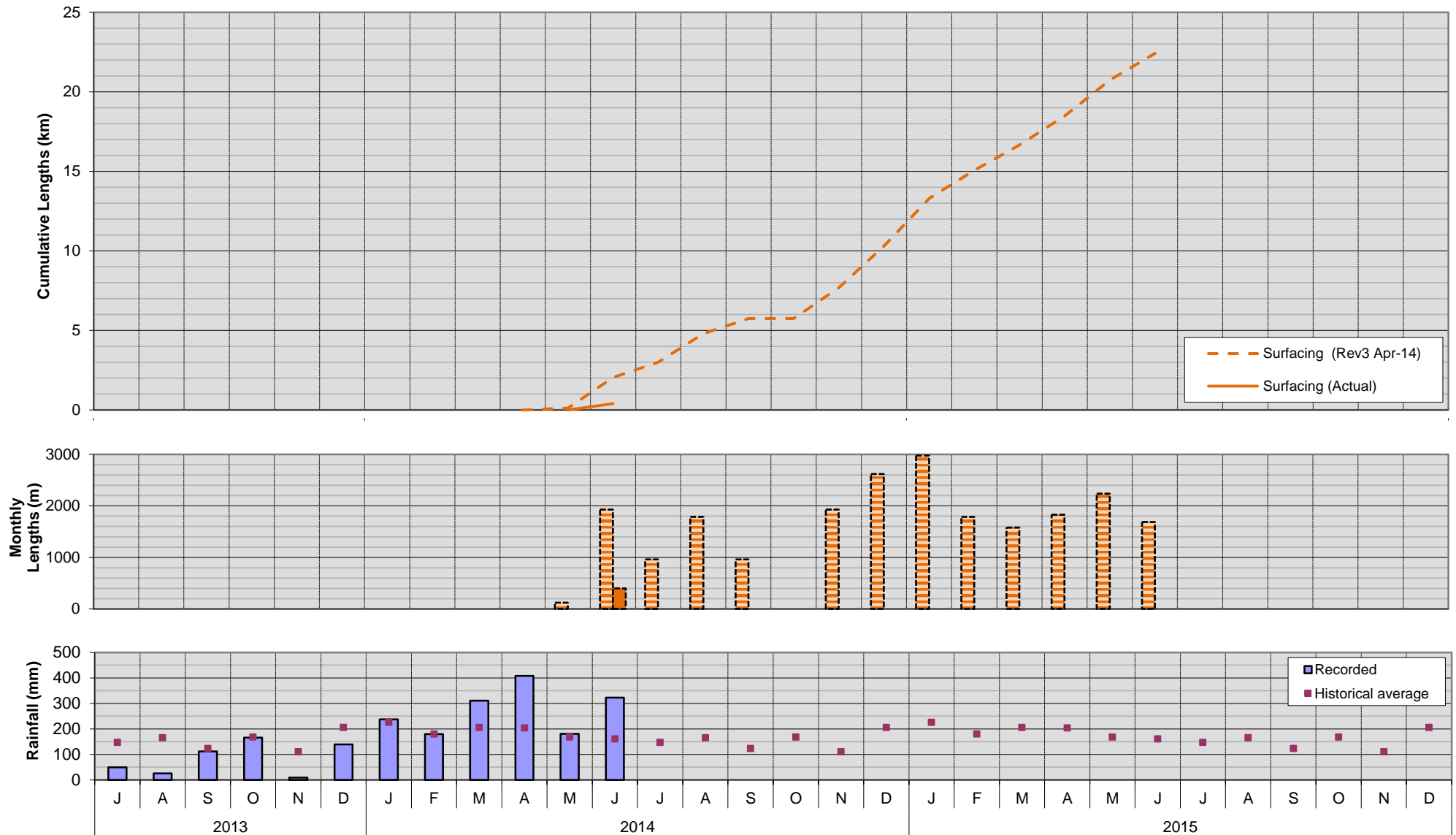
Progress with Kerbing and Edge Strips



KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Betio-Temaiku Road (Ch 0-23950)
Progress with Basecourse Construction



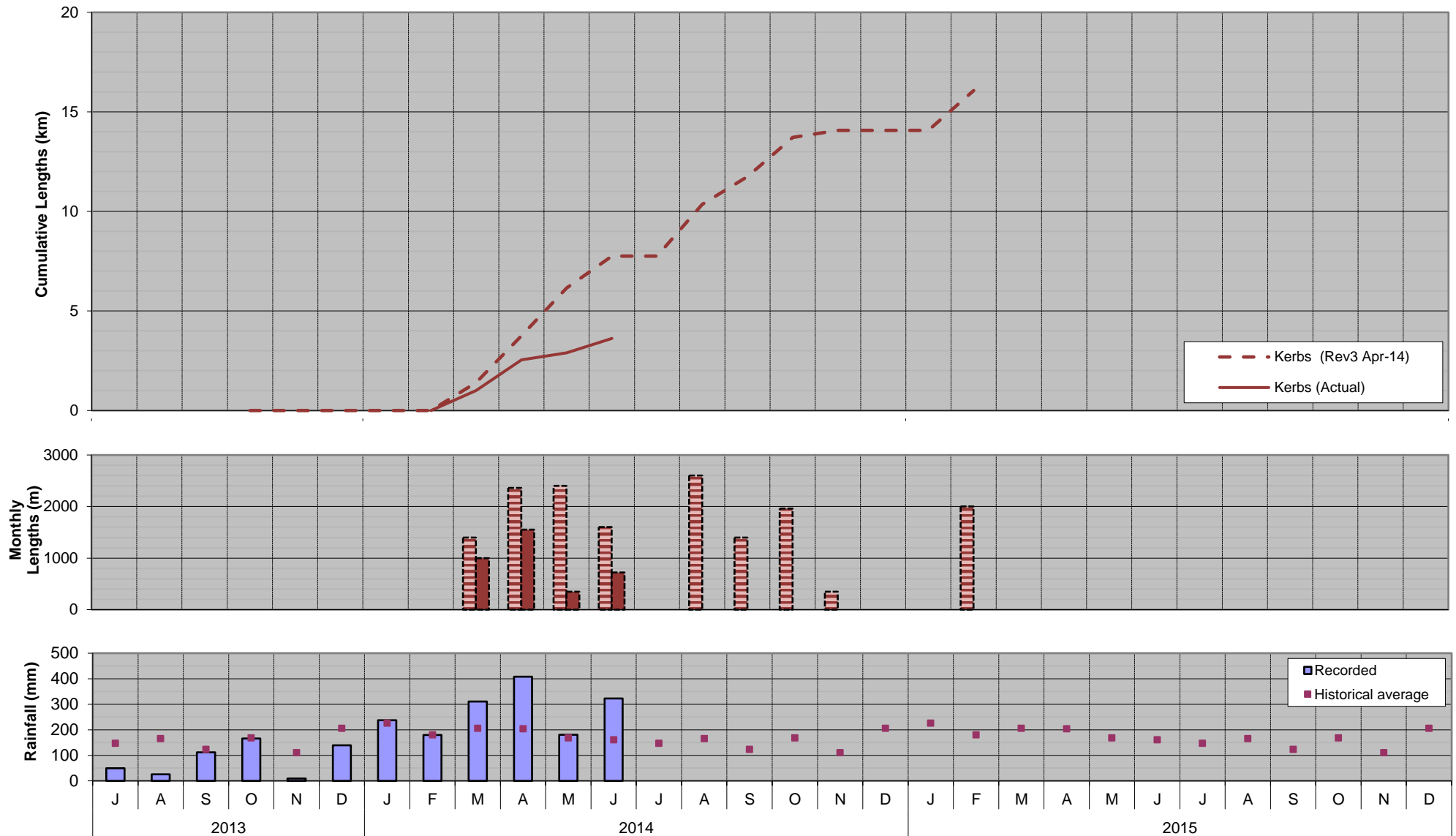
KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Betio-Temaiku Road (Ch 0-23950)
Progress with Surfacing



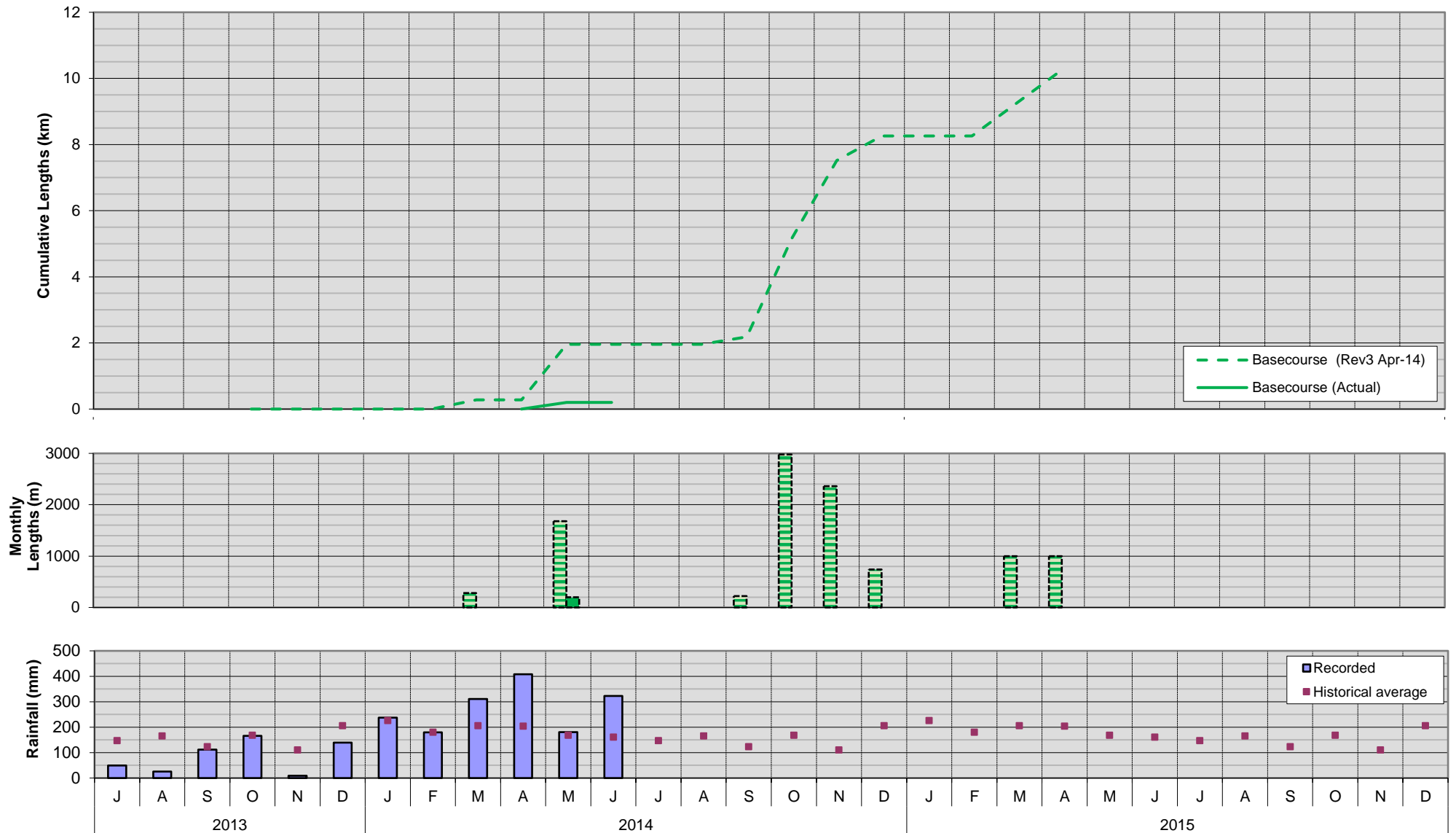
D.2 - Progress Graphs

Airport, Temauku & Buota Roads

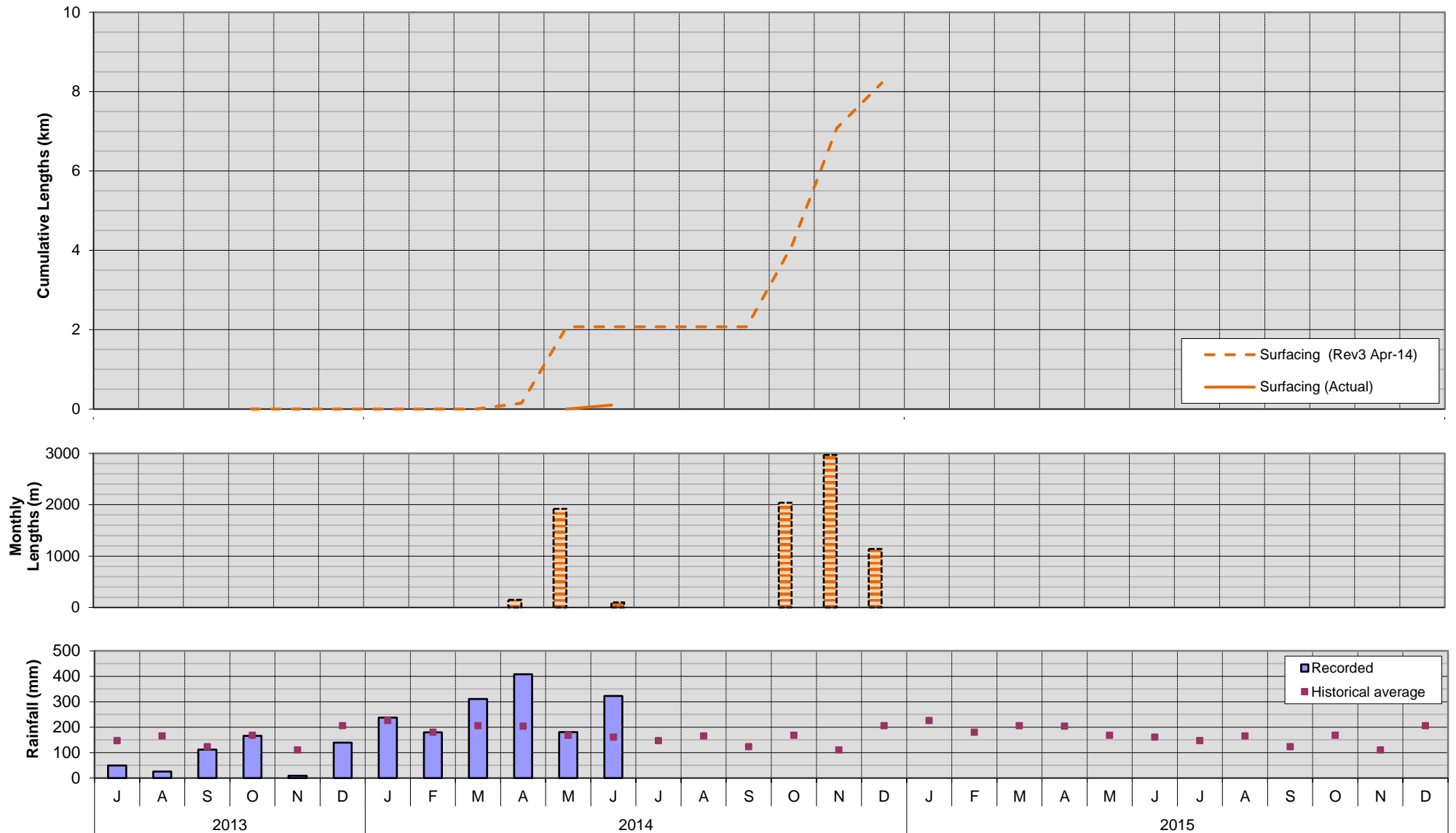
KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Airport (Ch 0-2200), Temaiku (Ch 0-6100) and Buota (Ch 0-2000) Roads
Progress with Kerbing and Edge Strips



KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Airport (Ch 0-2200), Temaiku (Ch 0-6100) and Buota (Ch 0-2000) Roads
Progress with Basecourse Construction



KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01
Airport (Ch 0-2200), Temaiku (Ch 0-6100) and Buota (Ch 0-2000) Roads
Progress with Surfacing



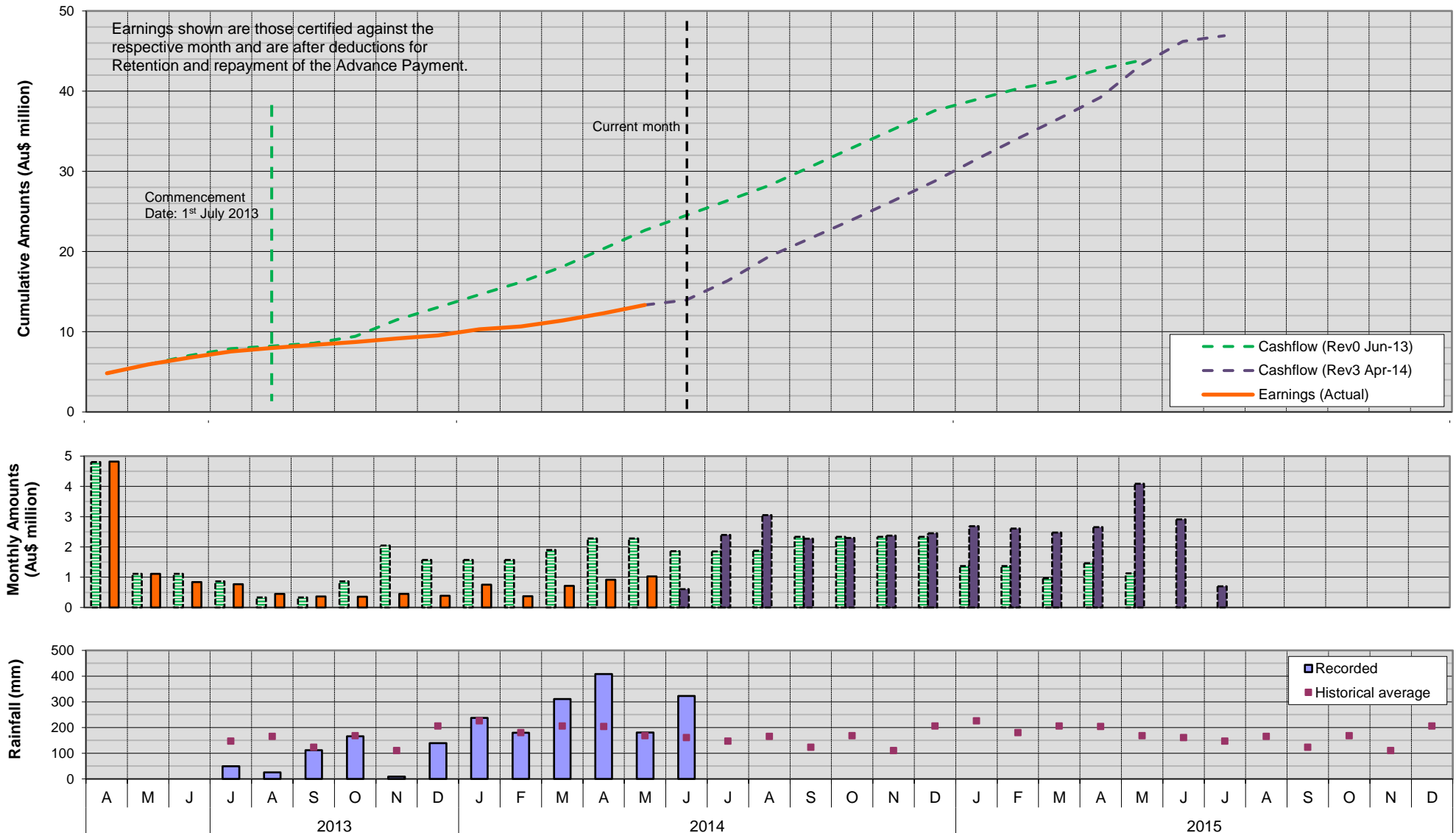
Appendix E:

Cash Flow

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

ALL Works

CASHFLOW (Expected) vs EARNINGS (Actual)



Appendix F:

Weather

KIRIBATI ROAD REHABILITATION PROJECT - Contract KIR-12/01

WEATHER CONDITIONS : As recorded at the BETIO metrological station

$$V = (N_w - N_n) + \frac{(R_w - R_n)}{X}$$

V - Extension of Time (calendar days)

X - constant (20)

N_w - Actual number of days with >= 10 mm rainfall

N_n - Historical average number of days with >= 10 mm rainfall

R_w - Actual total monthly rainfall

R_n - Historical average total monthly rainfall

DAY	YEAR	2013						2014											2015						
	MONTH	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
1			8.2	16.0	2.5						12.8		14.4												
2			6.6	1.2	29.8					11.2	12.6														
3			0.6		8.2		0.2			5.0	0.8	16.0	5.0												
4		0.6					0.4				24.4														
5			2.1		2.2			10.8			0.4	3.9													
6								17.6	TCE	6.4	2.5														
7		1.5		0.4				23.0	0.6	1.5	9.7	5.1	76.3												
8		2.9			18.3			1.2			8.9	3.9	6.3												
9					2.3			11.3		19.8	15.6	2.2	1.6												
10							10.9	43.8		4.2	9.9	5.1	3.4												
11		0.5		17.8				24.0	7.0	3.9	49.3	0.6	54.3												
12				2.7	0.2		2.2	18.6	2.4	61.1	3.3		1.3												
13		0.4		30.0						0.3	14.8		13.4												
14		18.8		1.9		3.9				0.6	29.5	3.0													
15		2.8	TCE			0.6			TCE	2.7			1.8												
16					0.4		0.9		22.0	80.7	21.2		0.2												
17		0.3			2.8			10.8	143.9	5.5	10.5		2.7												
18			0.6	0.8	0.3				0.4	1.5	67.3	0.7	76.5												
19					68.5				3.1	28.4	1.5	1.3													
20		0.4					4.1			0.2	9.2	2.5													
21		0.8			2.3		1.4	3.7	0.1		26.8	26.4													
22		0.1			6.3		1.5	23.7	0.4		19.7	1.7	0.8												
23		TCE					12.6	35.6			0.3	0.5	13.8												
24		5.1		19.2	8.0	0.1	5.6			4.1	37.9														
25		0.1				0.5	0.5			0.2	0.1	25.8													
26				7.8		4.3		2.5		1.5			18.4												
27		3.9			9.1		14.9			9.6	11.0		18.2												
28							14.0	2.7		25.2		14.8	3.2												
29			0.2		2.4		45.8	6.1			7.4	51.2	2.4												
30		11.2	6.8	14.3			24.4	2.1		0.9	0.3	0.6	9.1												
31					2.2					36.4		15.0													
Nw		3	1	5	3		6	10	4	7	14	6	8.0												
Nn		4.5	4.9	3.5	4.0	3.0	5.7	5.3	4.6	6.0	5.2	5.0	4.5	4.5	4.9	3.5	4.0	3.0	5.7	5.3	4.6	6.0	5.2	5.0	4.5
Rw		49.4	25.1	112.1	165.8	9.4	139.4	237.5	179.9	310.9	407.7	180.3	323.1												
Rn		146.7	164.6	122.6	167.5	110.2	205.0	225.7	179.5	205.7	203.3	168.0	160.7	146.7	164.6	122.6	167.5	110.2	205.0	225.7	179.5	205.7	203.3	168.0	160.7
Extension of Time		-4.5	-4.9	1.0	-1.1	-3.0	-3.0	5.3	-0.6	6.3	14.0	1.6	11.6												

TOTAL EoT : 22.7 Days

If the total is negative the time for completion shall not be reduced

Appendix G:

**Schematic Progress Diagrams
(and selected photos)**

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

June 2014

Main Betio-Temaiku Road

Progress Summary

% Complete on km by km basis

[illegible]

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

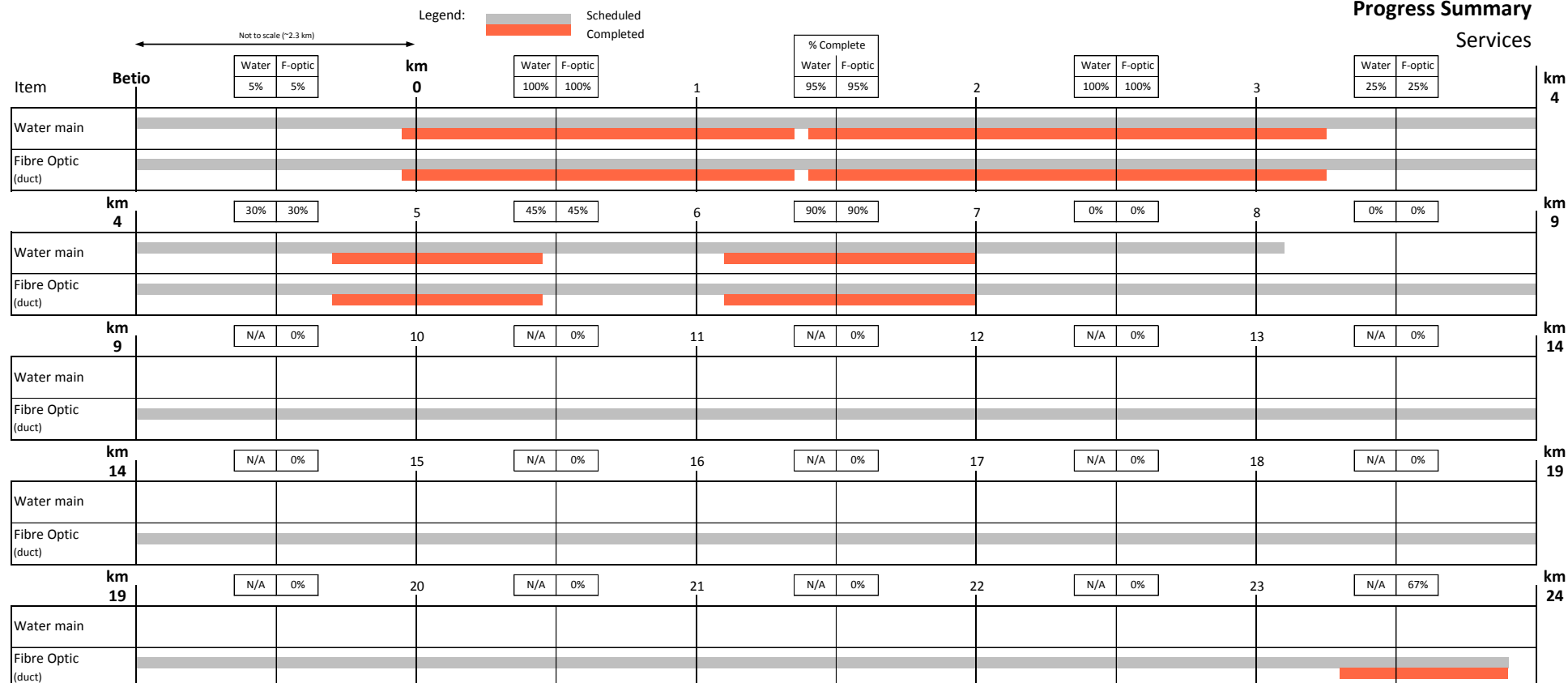
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary

Services



Photographs:

Item	% Complete
Water main	49%
Fibre Optic (duct)	11%



1 Location: Ch 5+100 Direction: Looking Down chainage
Description: Installing water transmission main (200mm)



2 Location: Ch 6+550 Direction: Looking Down chainage
Description: Air/Gate valve installed on new water main



3 Location: Ch 6+900 Direction: Looking Down chainage
Description: Trenching for w/pipe and f/o duct

G.1 – Schematic Progress Diagrams

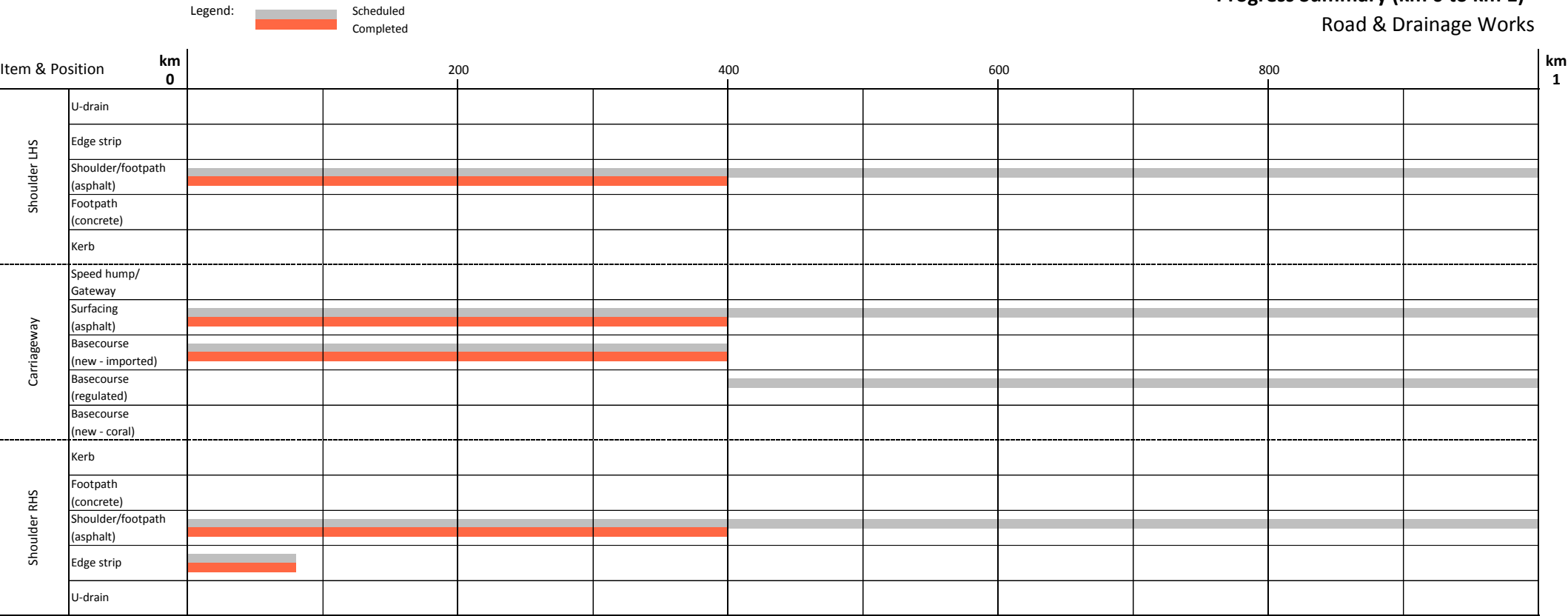
Betio-Temaiku Road

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 0 to km 1)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	40%
Shoulder (asphalt)	40%
Basecourse (imported)	100%
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	100%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:



1 Location: Ch 0+300 Direction: Looking Down chainage
Description: Placing basecourse (imported) material



2 Location: Ch 0+300 Direction:
Description: Asphalt paver and follow up rolling (RHS)



3 Location: Ch 0+300 Direction: Looking Up chainage
Description: Placing asphalt surfacing (LHS)

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 1 to km 2)
Road & Drainage Works

Legend:

Scheduled

Completed

Item & Position		km 1		200		400		600		800		km 2
Shoulder LHS	U-drain											
	Edge strip											
	Shoulder/footpath (asphalt)											
	Footpath (concrete)											
	Kerb											
Carriageway	Speed hump/ Gateway											
	Surfacing (asphalt)											
	Basecourse (new - imported)											
	Basecourse (regulated)											
	Basecourse (new - coral)											
Shoulder RHS	Kerb											
	Footpath (concrete)											
	Shoulder/footpath (asphalt)											
	Edge strip											
	U-drain											

Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	N/A
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 2 to km 3)

Road & Drainage Works

Legend:

Scheduled

Completed

Item & Position		km 2		200	400	600	800	km 3
Shoulder LHS	U-drain							
	Edge strip							
	Shoulder/footpath (asphalt)							
	Footpath (concrete)							
	Kerb							
Carriageway	Speed hump/ Gateway							
	Surfacing (asphalt)							
	Basecourse (new - imported)							
	Basecourse (regulated)							
	Basecourse (new - coral)							
Shoulder RHS	Kerb							
	Footpath (concrete)							
	Shoulder/footpath (asphalt)							
	Edge strip							
	U-drain							

Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	N/A
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

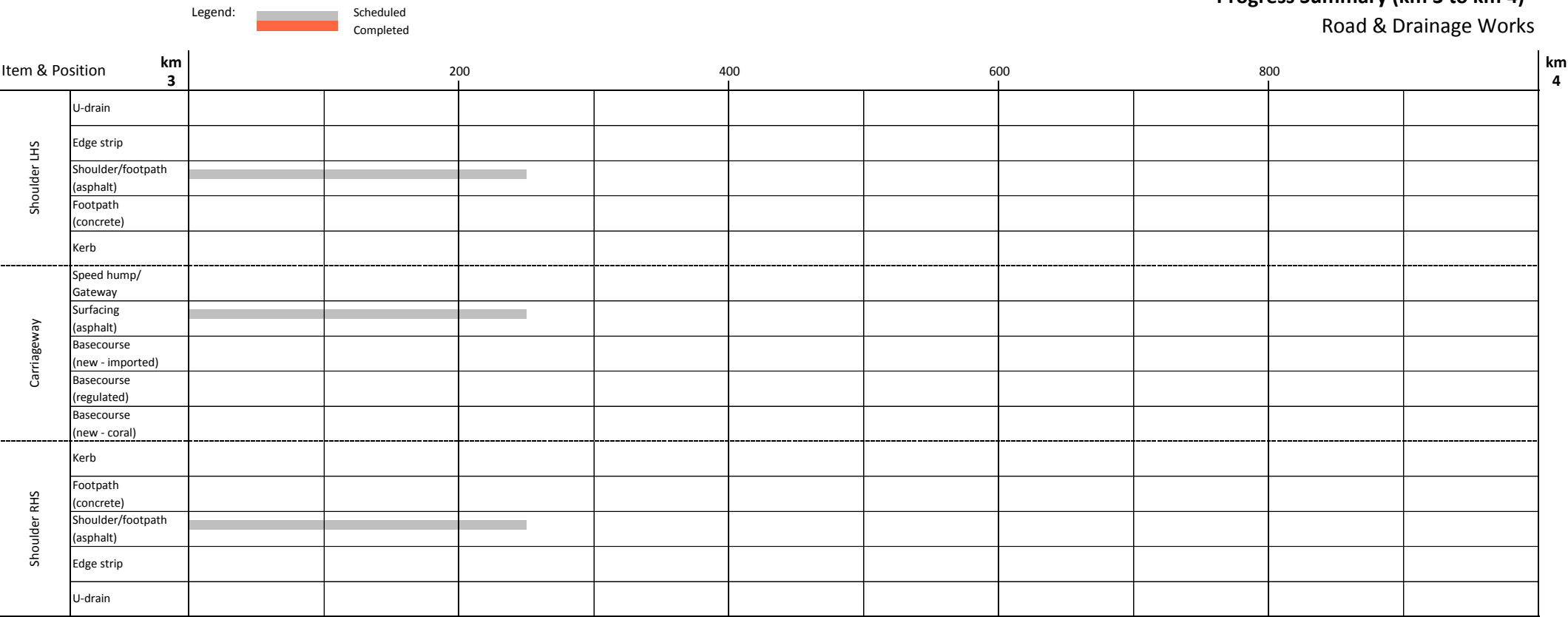
3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 3 to km 4)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	N/A
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

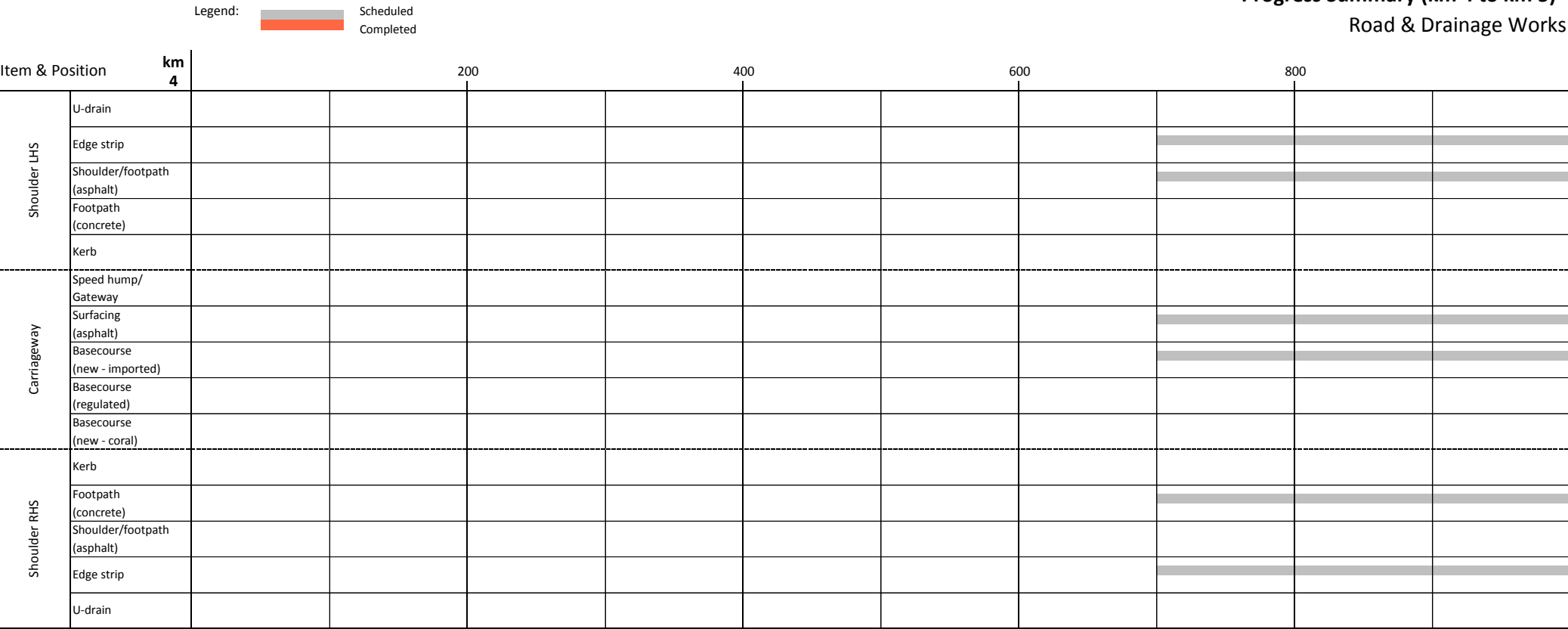
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 4 to km 5)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	0%
Kerb	N/A
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

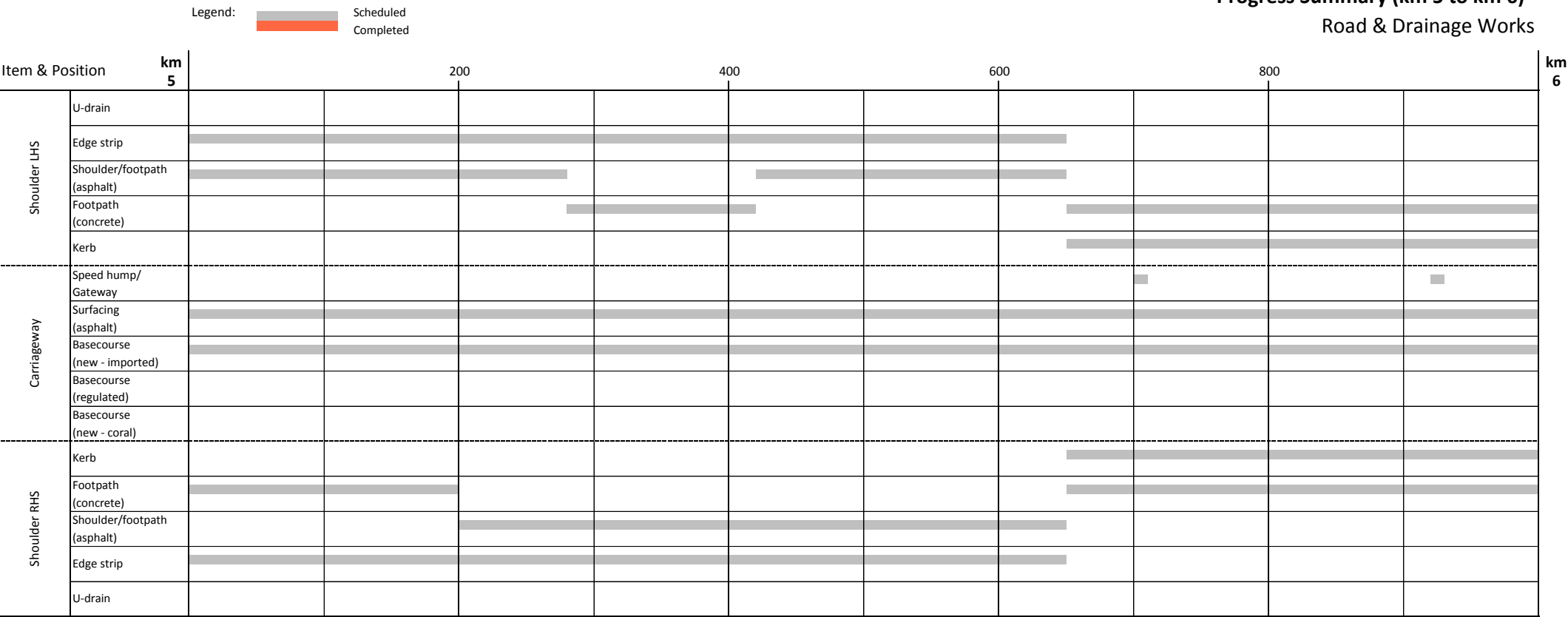
3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 5 to km 6)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

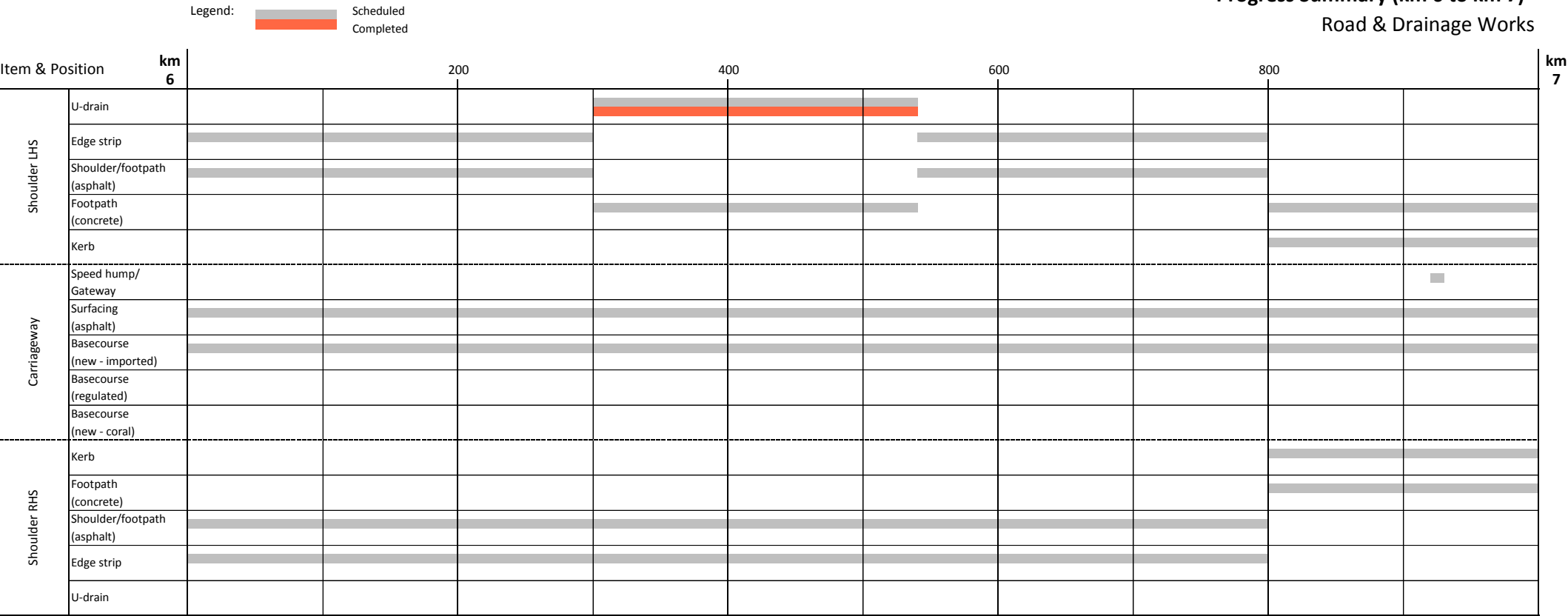
3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 6 to km 7)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	100%

Photographs:



1 Location: Ch 6+400 Direction: Looking Down chainage
Description: P/C u-drains installed



2 Location: Ch 6+300 Direction: Looking Down chainage
Description: Sub-base being trimmed to level



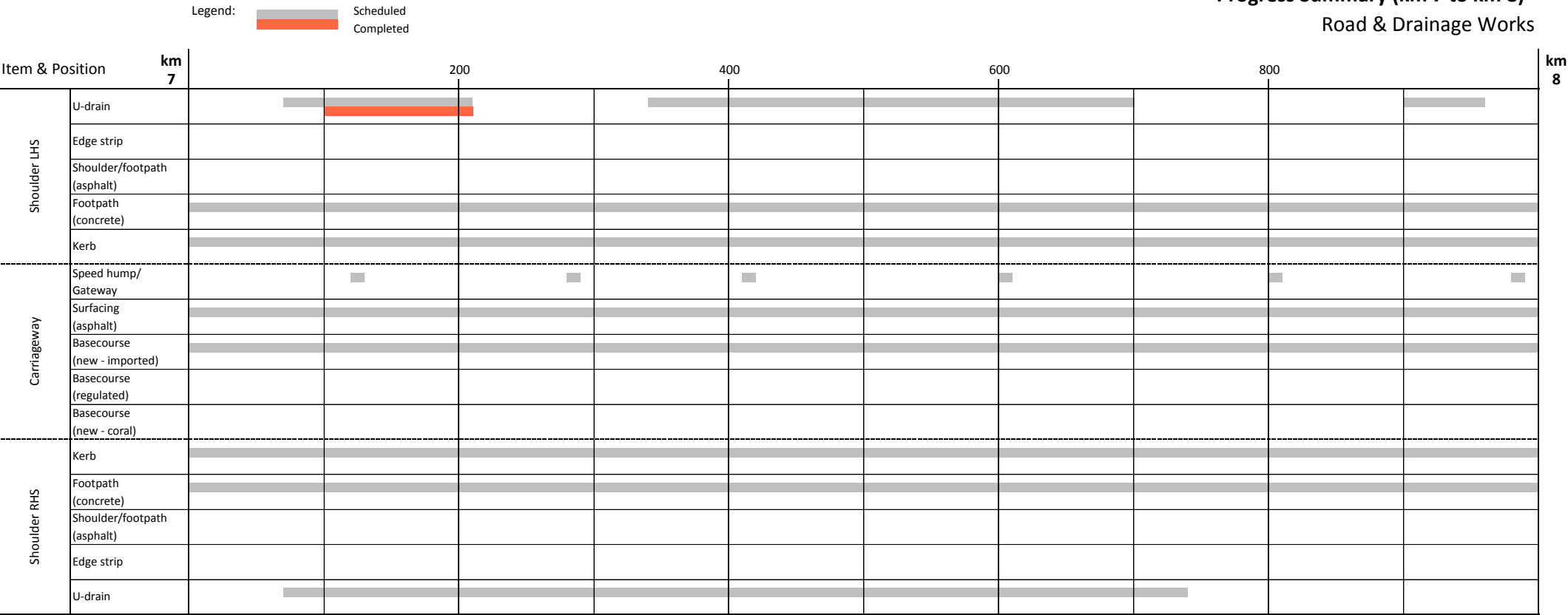
3 Location: Ch 6+400 Direction:
Description: Installing drainage through ex seawall

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 7 to km 8)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	N/A
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	N/A
Kerb	0%
Footpath (concrete)	0%
U-drain	9%

Photographs:



1 Location: Ch 7+150 Direction: Looking Down chainage
Description: Installing u-drains

2 Location:
Description:

Direction:

3 Location:
Description:

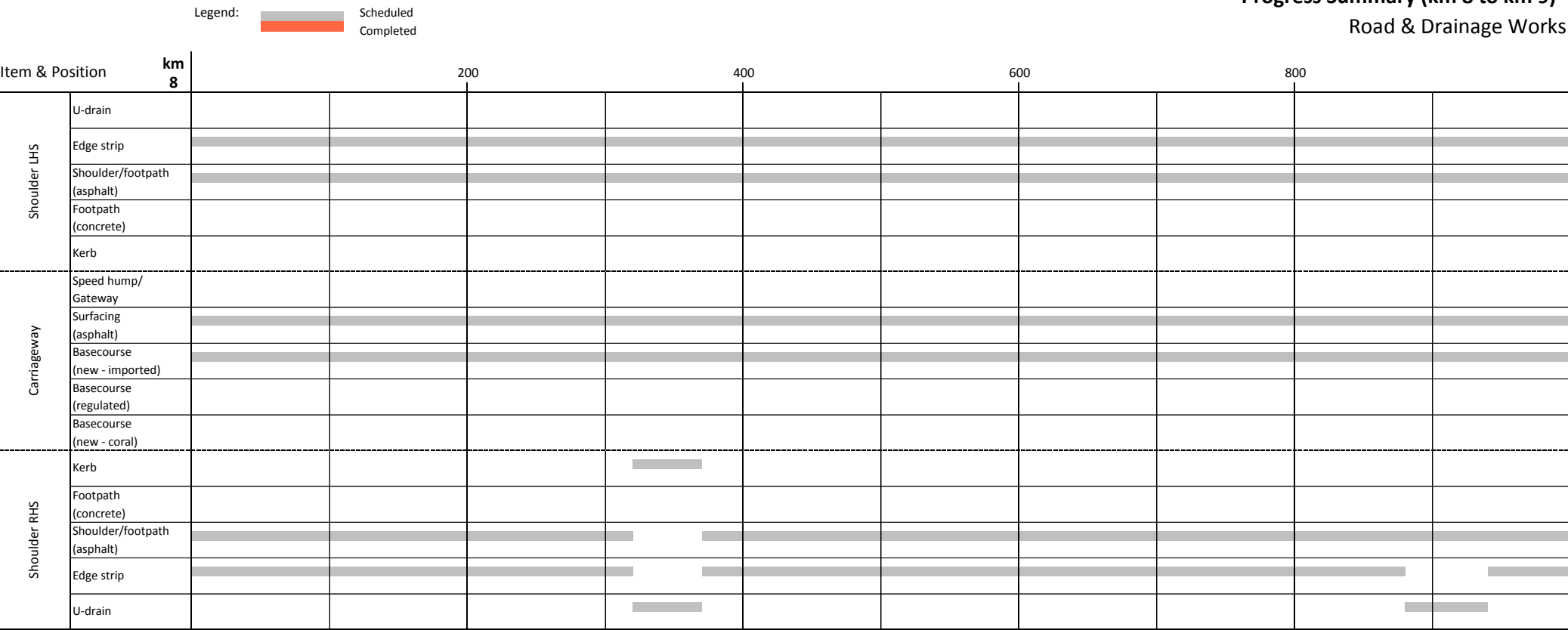
Direction:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road
Progress Summary (km 8 to km 9)
Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	N/A
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

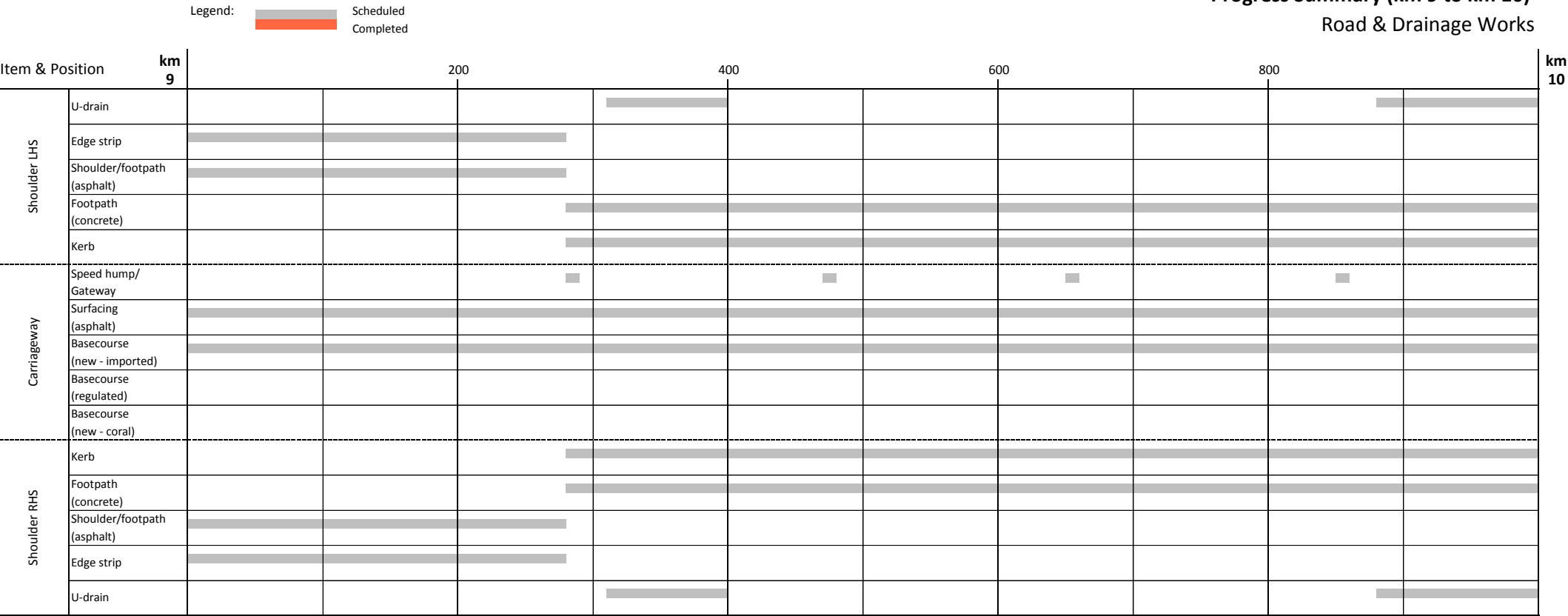
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 9 to km 10)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

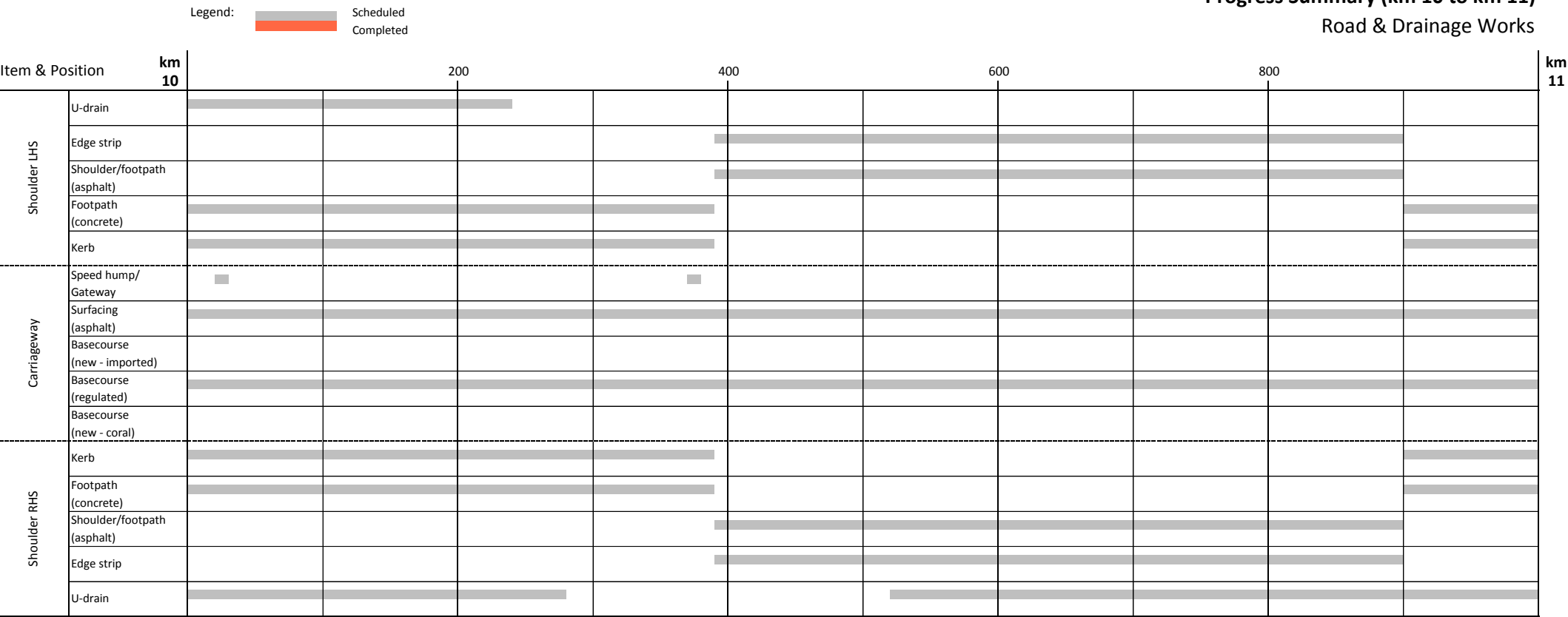
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 10 to km 11)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

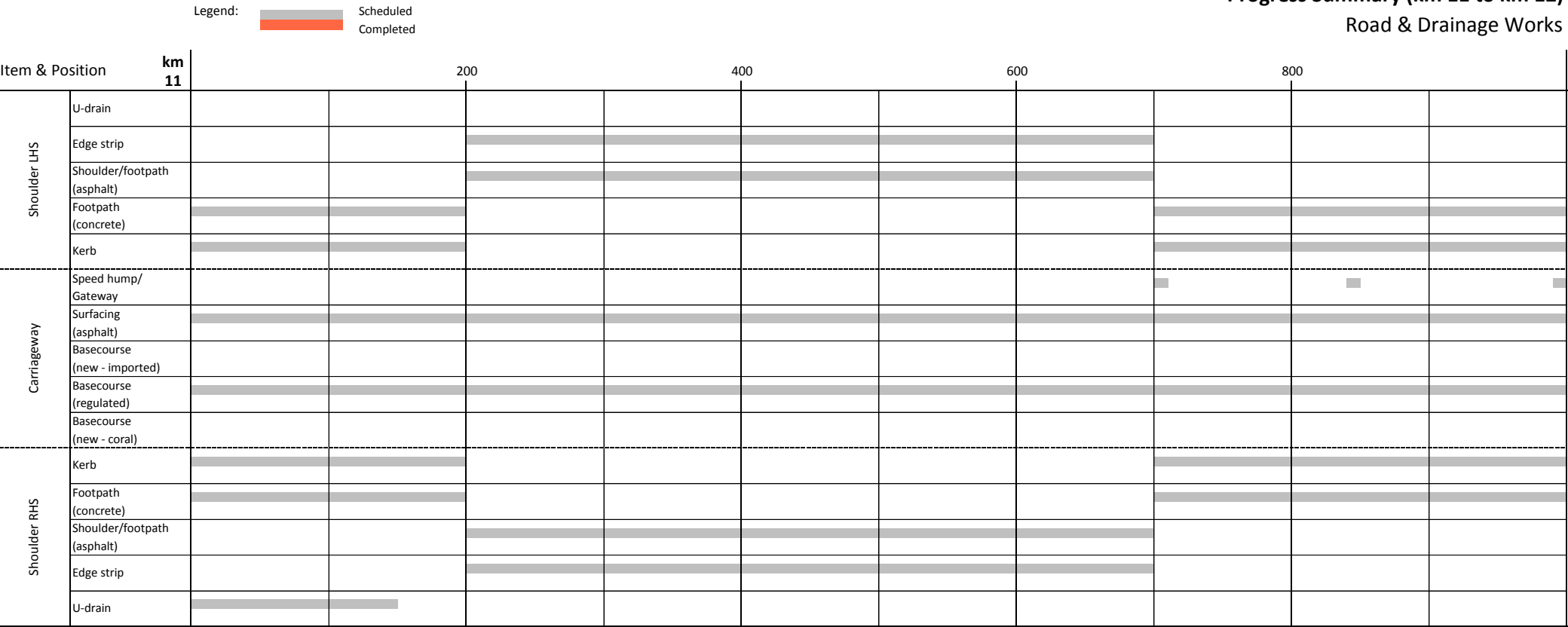
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 11 to km 12)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

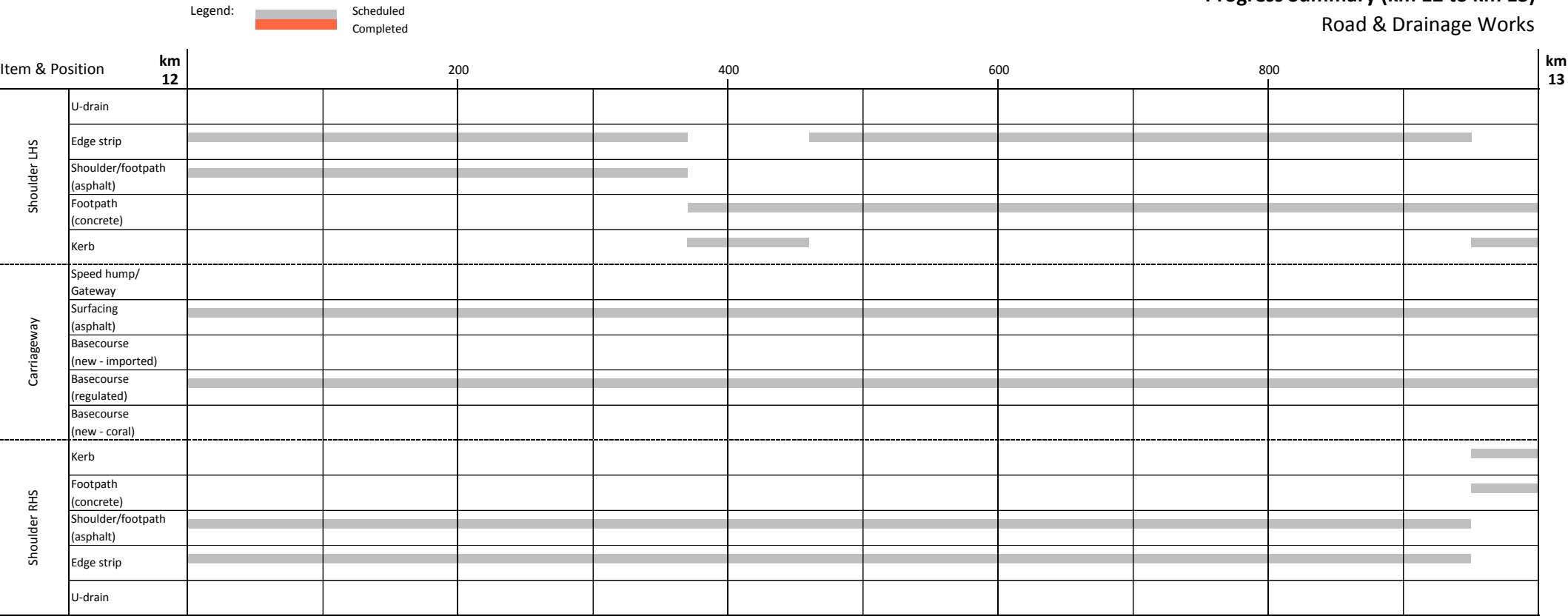
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 12 to km 13)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

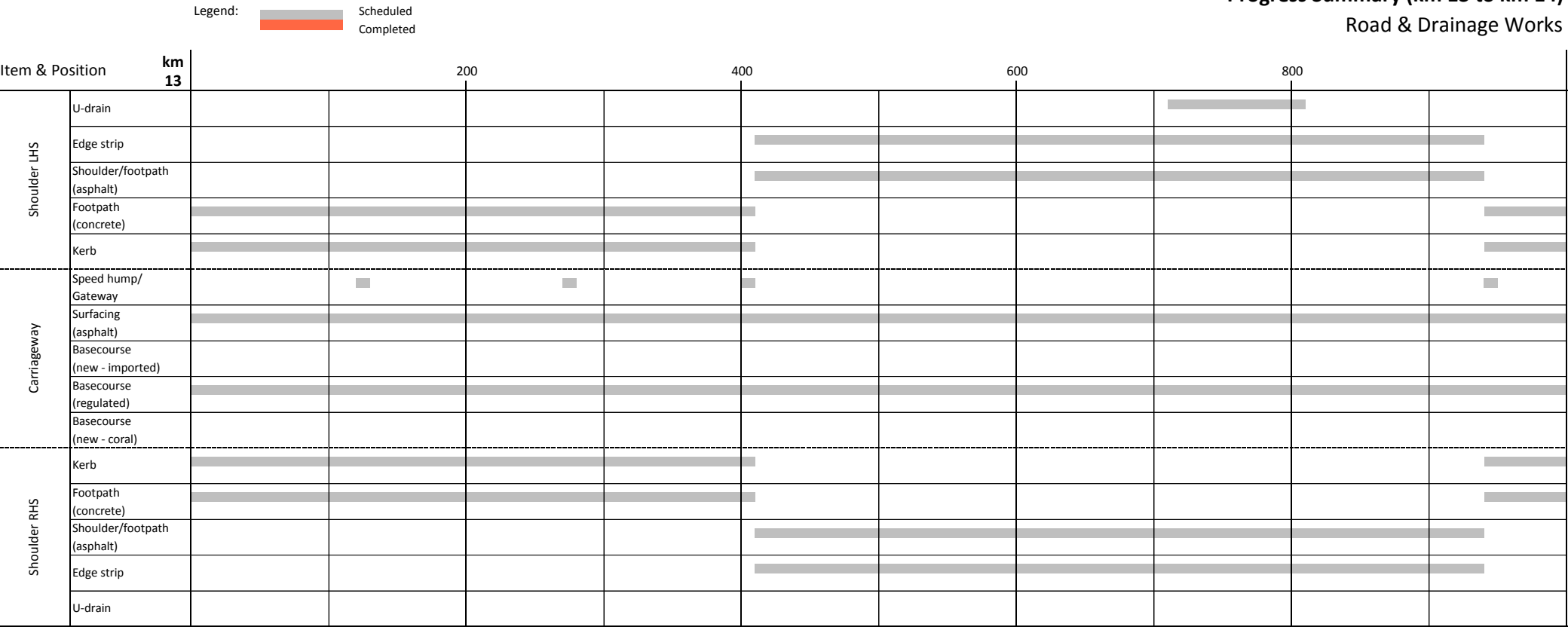
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 13 to km 14)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

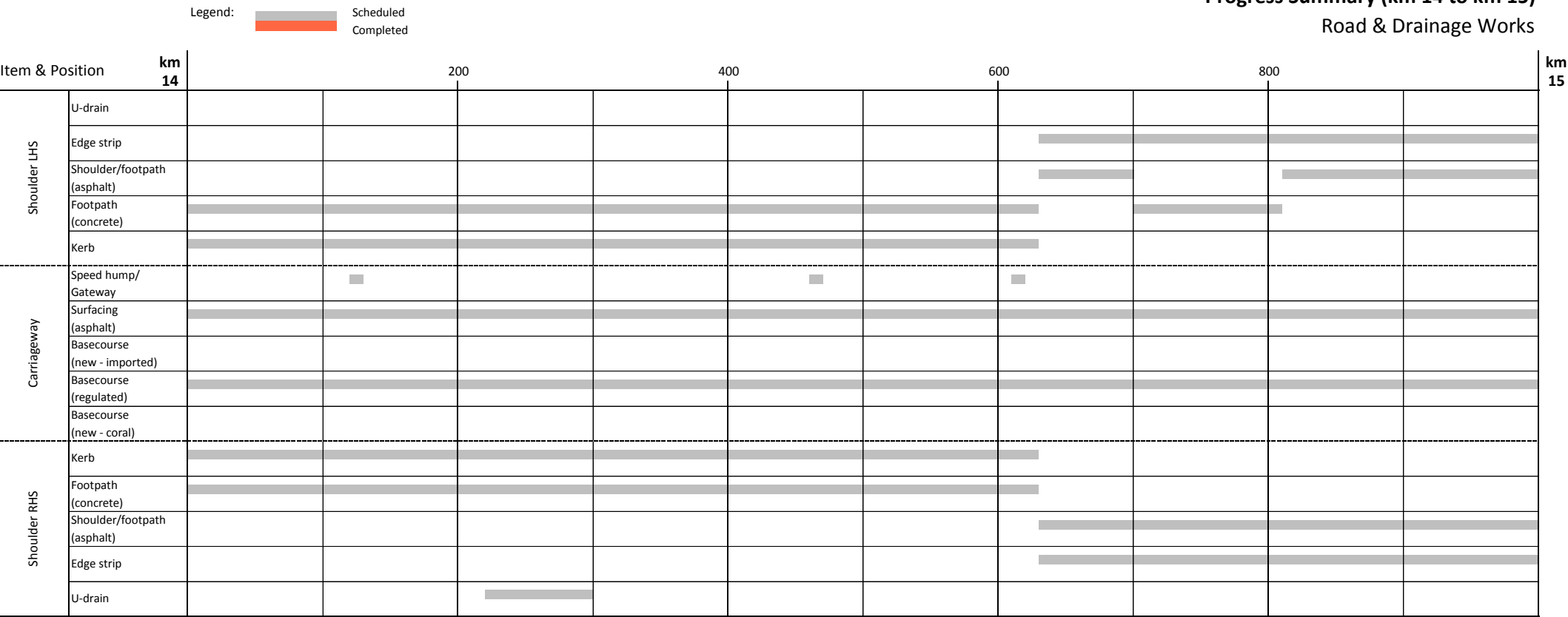
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 14 to km 15)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

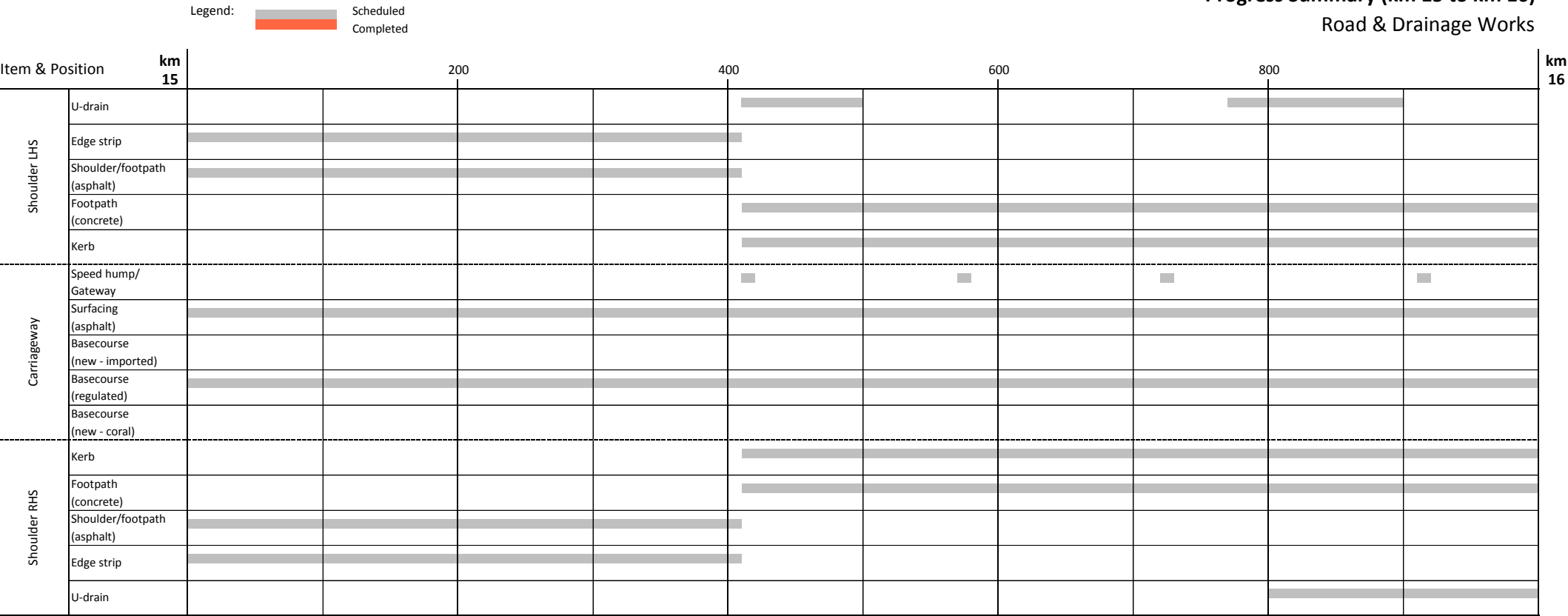
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 15 to km 16)

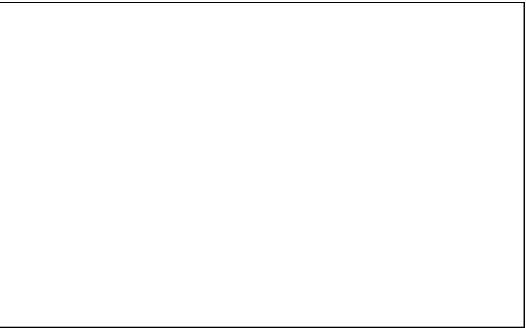
Road & Drainage Works



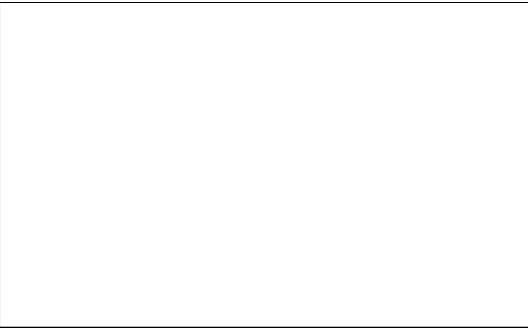
Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

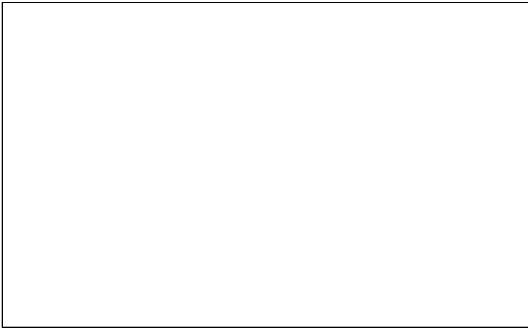
Photographs:



1 Location: Direction: Description:



2 Location: Direction: Description:



3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

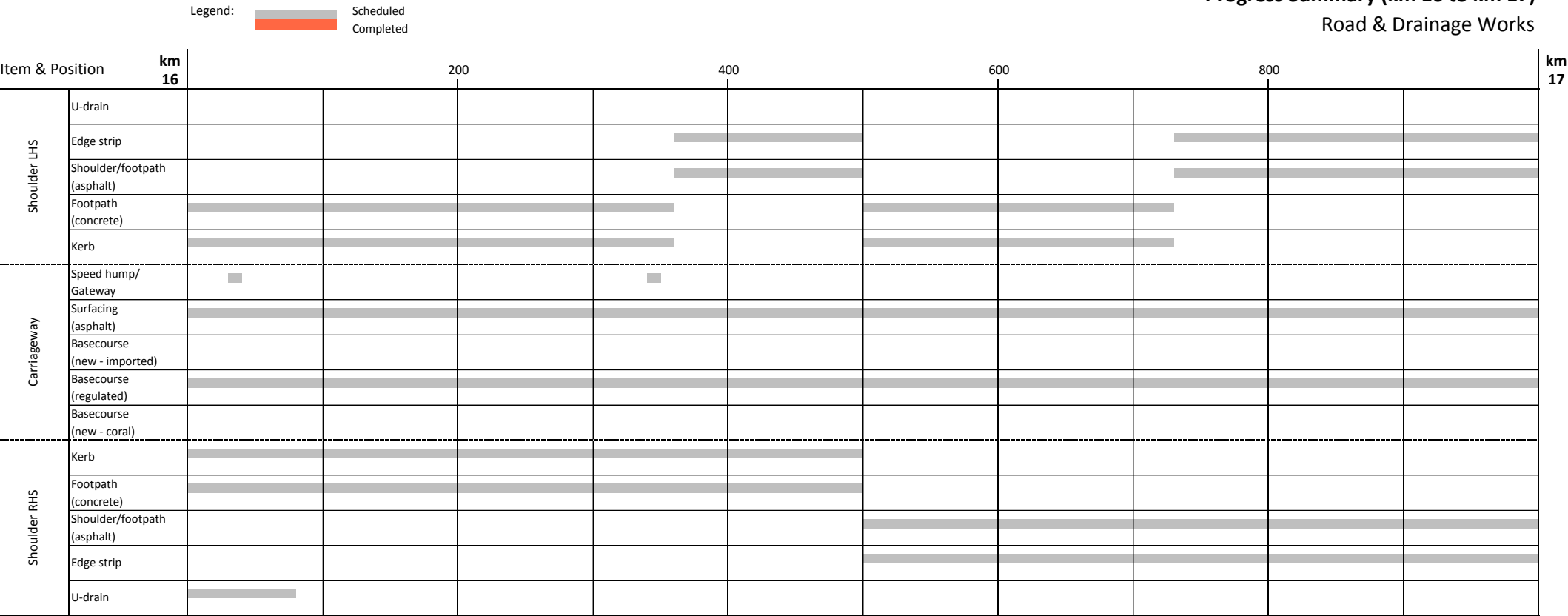
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 16 to km 17)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

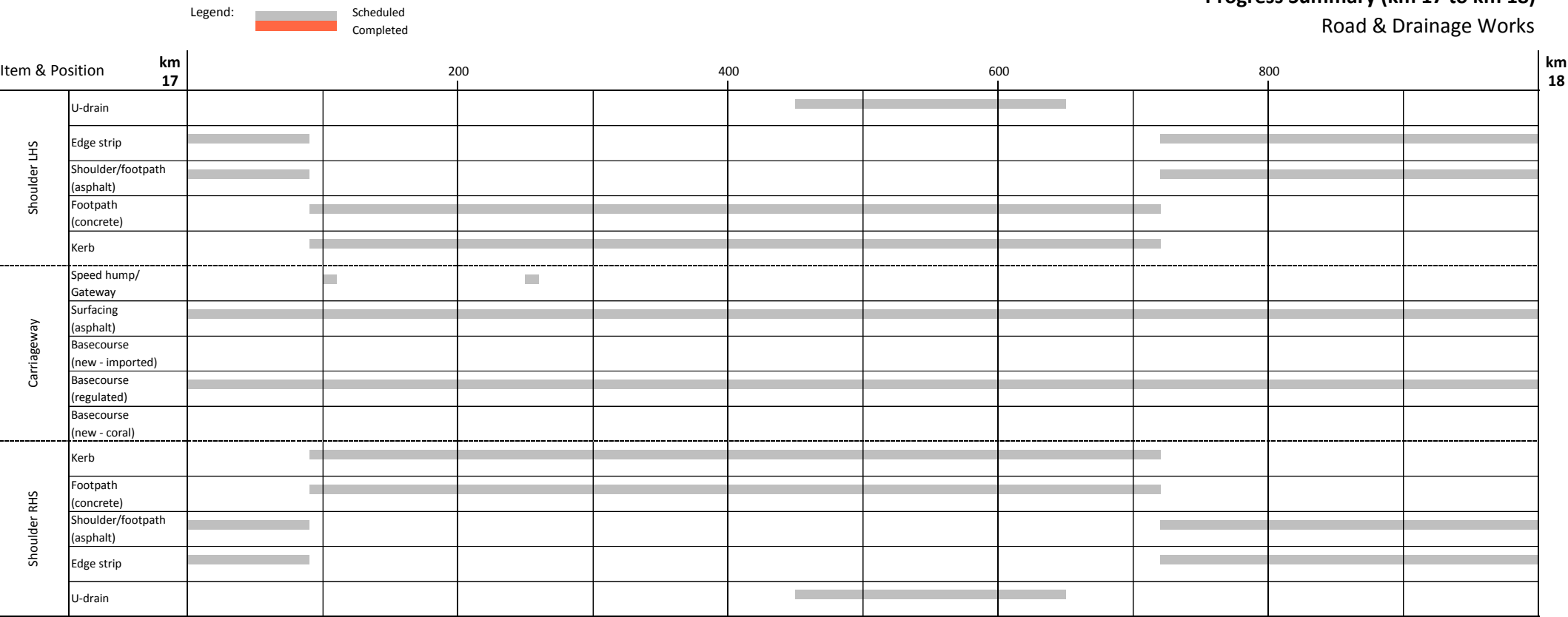
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 17 to km 18)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

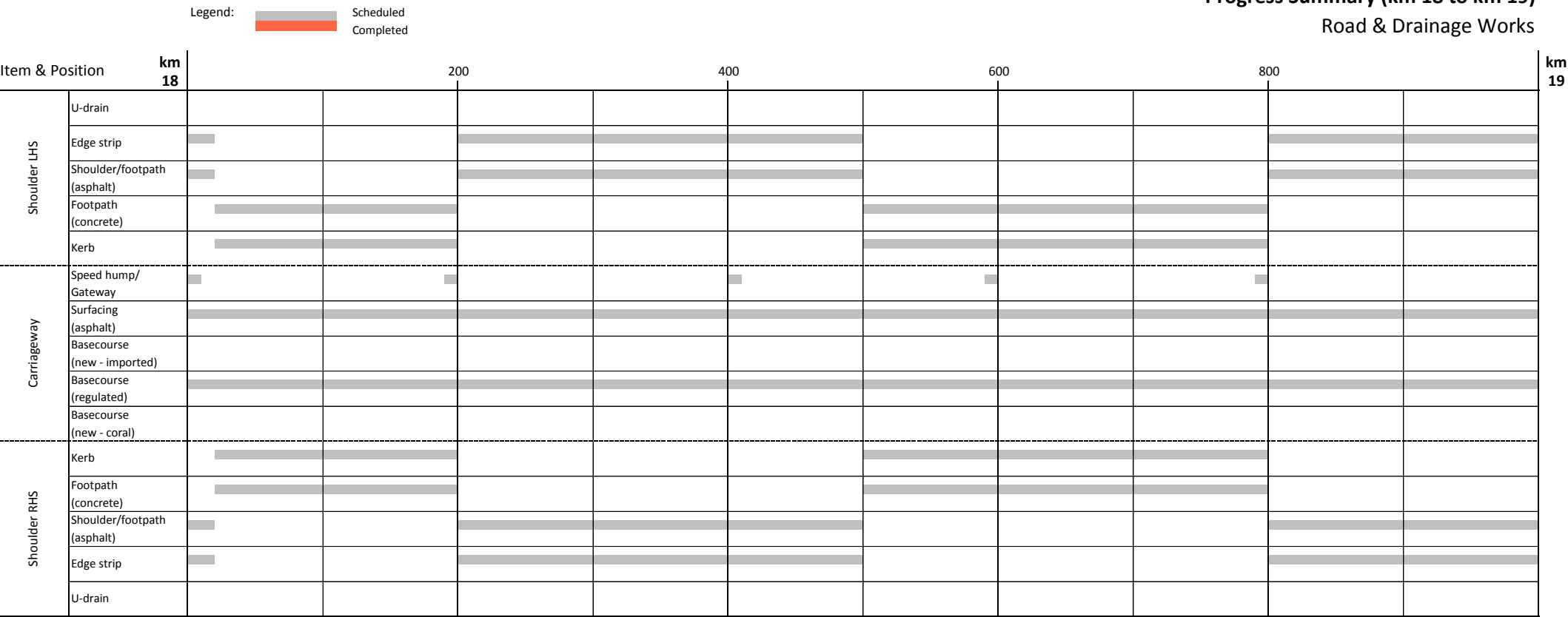
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 18 to km 19)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

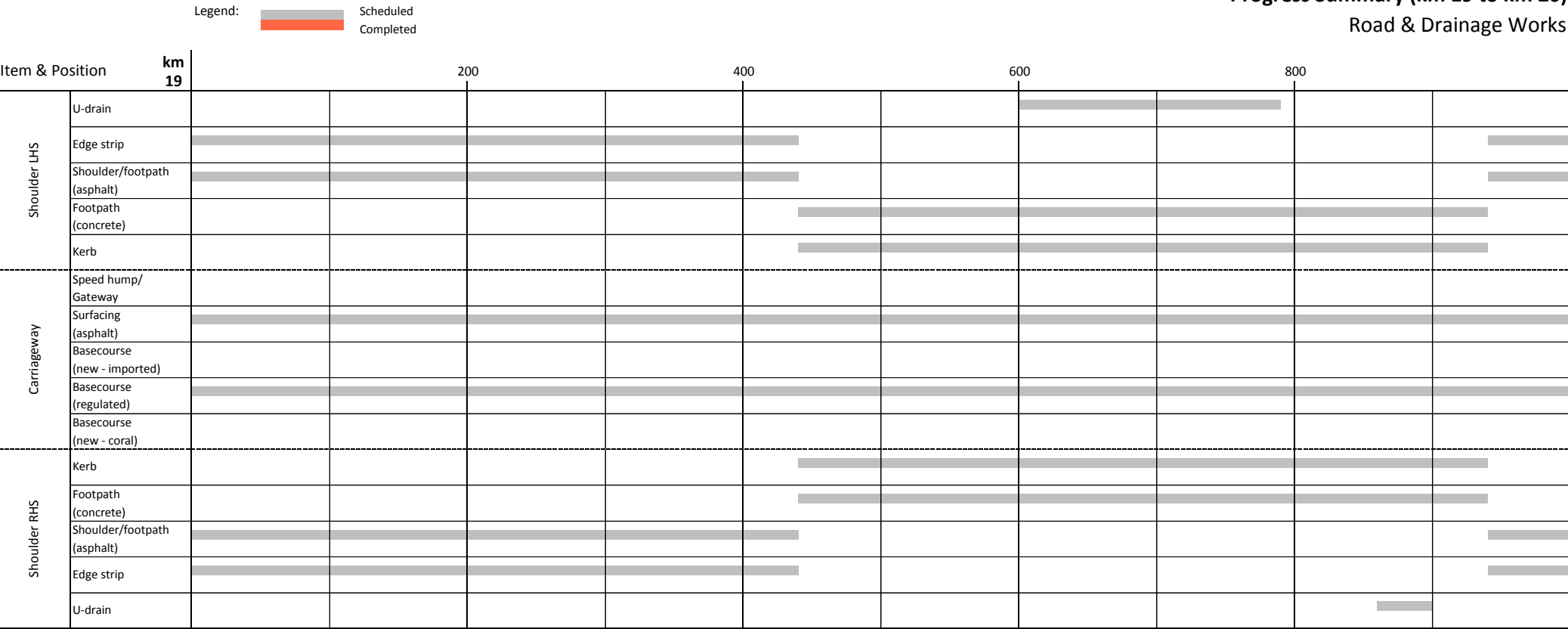
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 19 to km 20)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

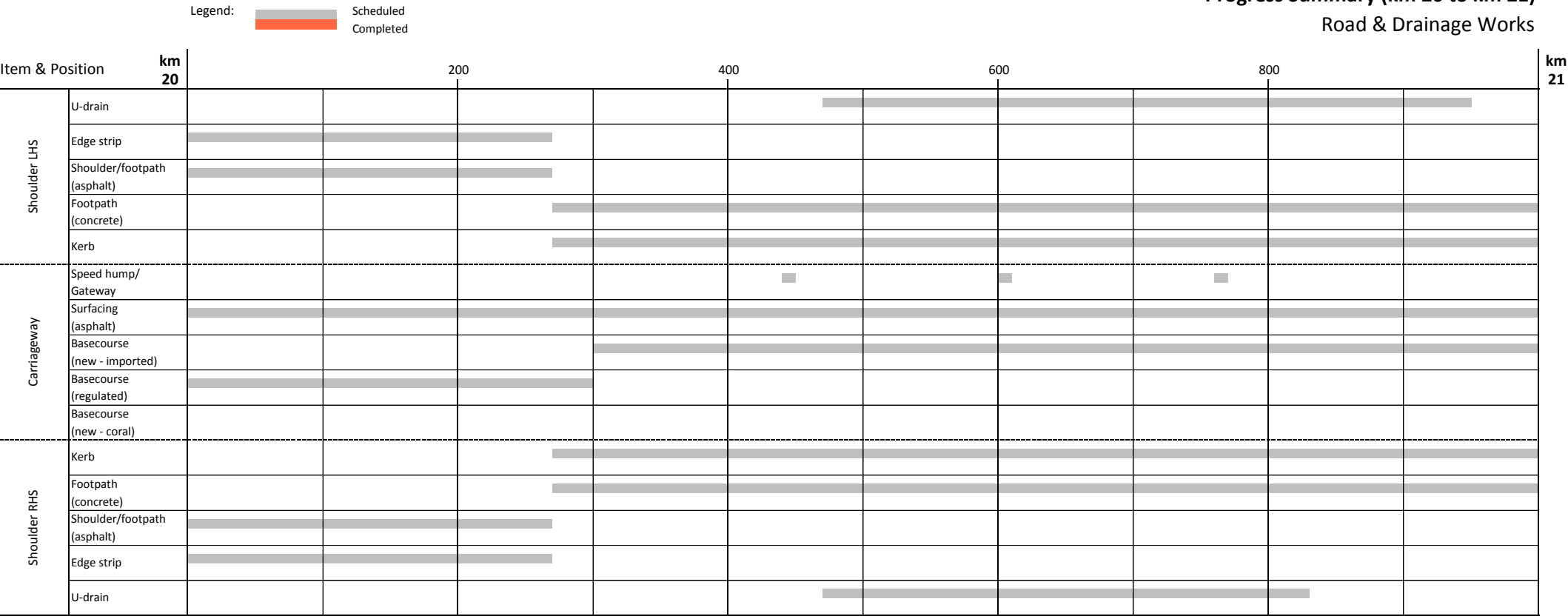
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 20 to km 21)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	0%

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

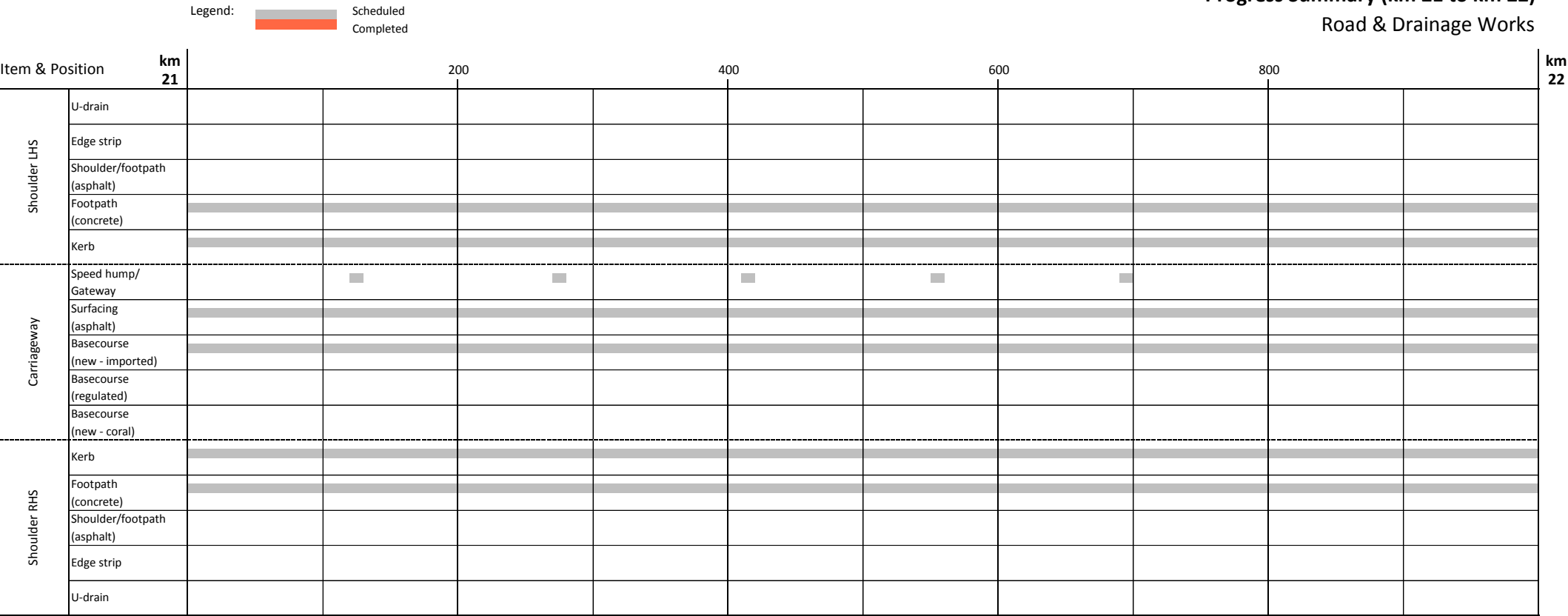
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 21 to km 22)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	N/A
Basecourse (imported)	0%
Basecourse (regulated)	N/A
Basecourse (coral)	N/A
Edge strip	N/A
Kerb	0%
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

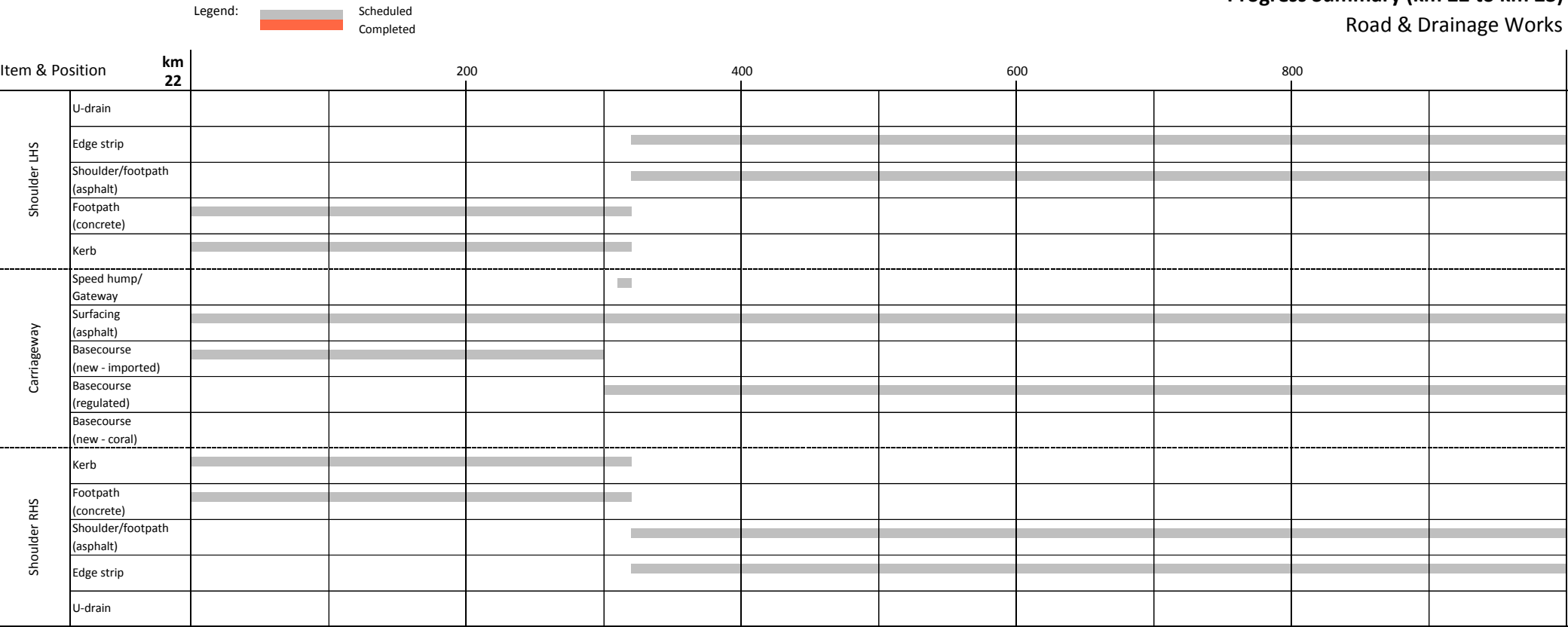
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 22 to km 23)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	0%
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

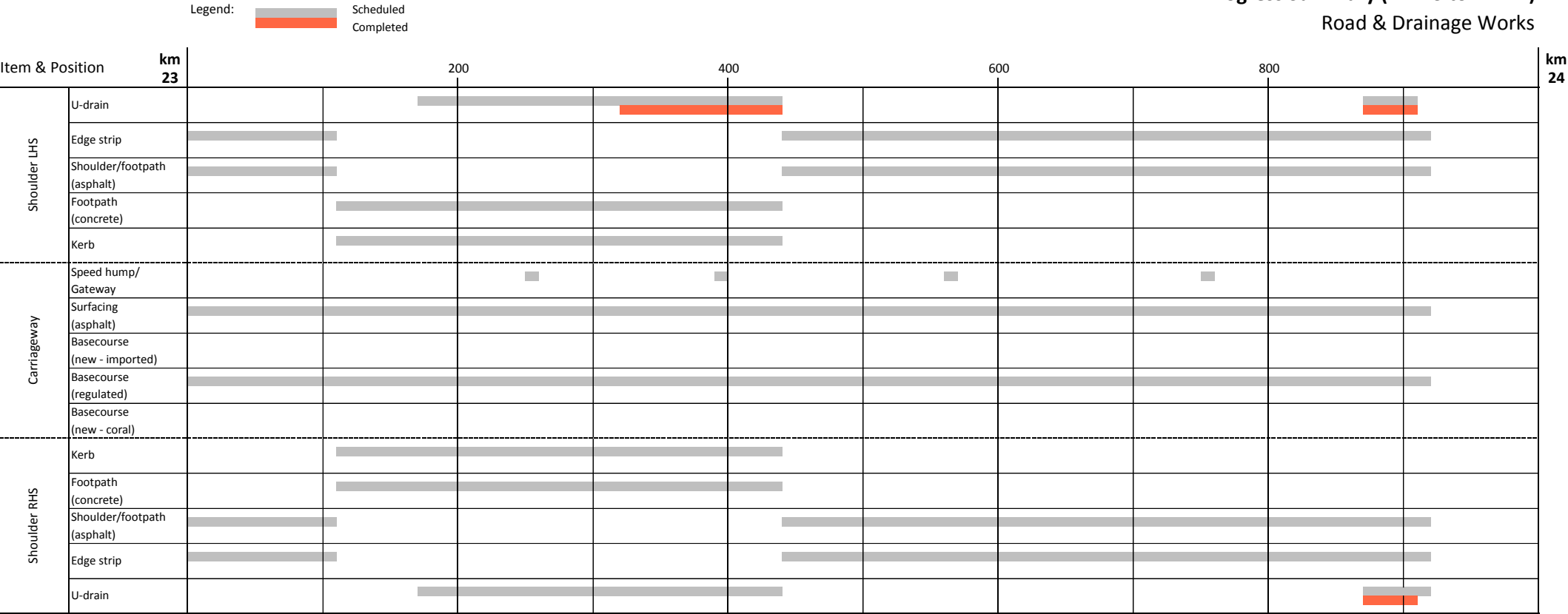
Schematic Diagram showing progress of Key Activities

June 2014

Main Betio-Temaiku Road

Progress Summary (km 23 to km 24)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	0%
Footpath (concrete)	0%
U-drain	32%

Photographs:



1 Location: Ch 23+400 Direction: Looking Down chainage
Description: Installing u-drains



2 Location: Ch 23+920 Direction: Looking Up chainage
Description: Installing u-drains (LHS)



3 Location: Ch 23+920 Direction: Looking Up chainage
Description: U-drain conflict with ex underground services

G.2 – Schematic Progress Diagrams

Airport, Temaiku, Buota and Feeder Roads

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

June 2014

Airport, Temaiku & Buota Roads

Progress Summary

% Complete on km by km basis

Item	Airport Road				Temaiku Road							Buota Road				All Roads		
	km 0	1	2	Over Full Road Length	km 0	1	2	3	4	5	6	Over Full Road Length	km 0	1	2	Over Full Road Length		
Speed hump/ Gateway		N/A	0%	0%		N/A	0%	0%	0%	0%	N/A	0%		N/A	N/A			0%
Carriageway (asphalt)		0%	0%	0%		0%	0%	0%	0%	0%	10%	2%		N/A	N/A			1%
Shoulder/footpath (asphalt)		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%		N/A	N/A			0%
Basecourse (new - imported)		N/A	N/A			N/A	N/A	N/A	N/A	N/A	100%	100%		N/A	N/A			100%
Basecourse (regulated)		0%	0%	0%		0%	0%	N/A	N/A	N/A	N/A	0%		N/A	N/A			0%
Basecourse (new coral)		N/A	N/A			N/A	0%	0%	0%	0%	0%	0%		0%	0%	0%		0%
Edge strip		95%	61%	78%		0%	0%	0%	0%	0%	25%	4%		N/A	N/A			23%
Kerb		N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A			
Footpath (concrete)		N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A			
U-drain		N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A			

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

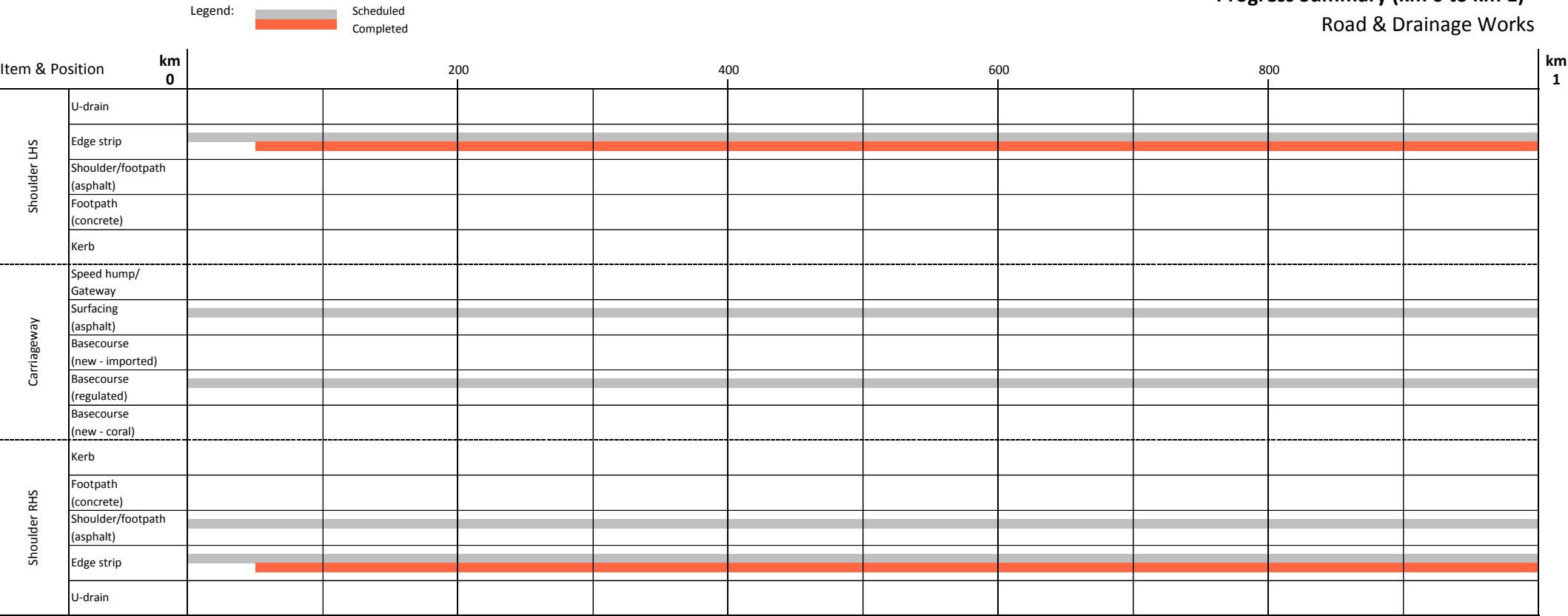
Schematic Diagram showing progress of Key Activities

June 2014

Airport Road

Progress Summary (km 0 to km 1)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	95%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:



1 Location: Ch 0+800 Direction: Looking Up chainage
Description: Coastal protection works



2 Location: Ch 0+880 Direction: Looking Down chainage
Description: Edge strips installed, basecourse regulated



3 Location: Ch 0+400 Direction: Looking Down chainage
Description: Preparing basecourse (coral) layer

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

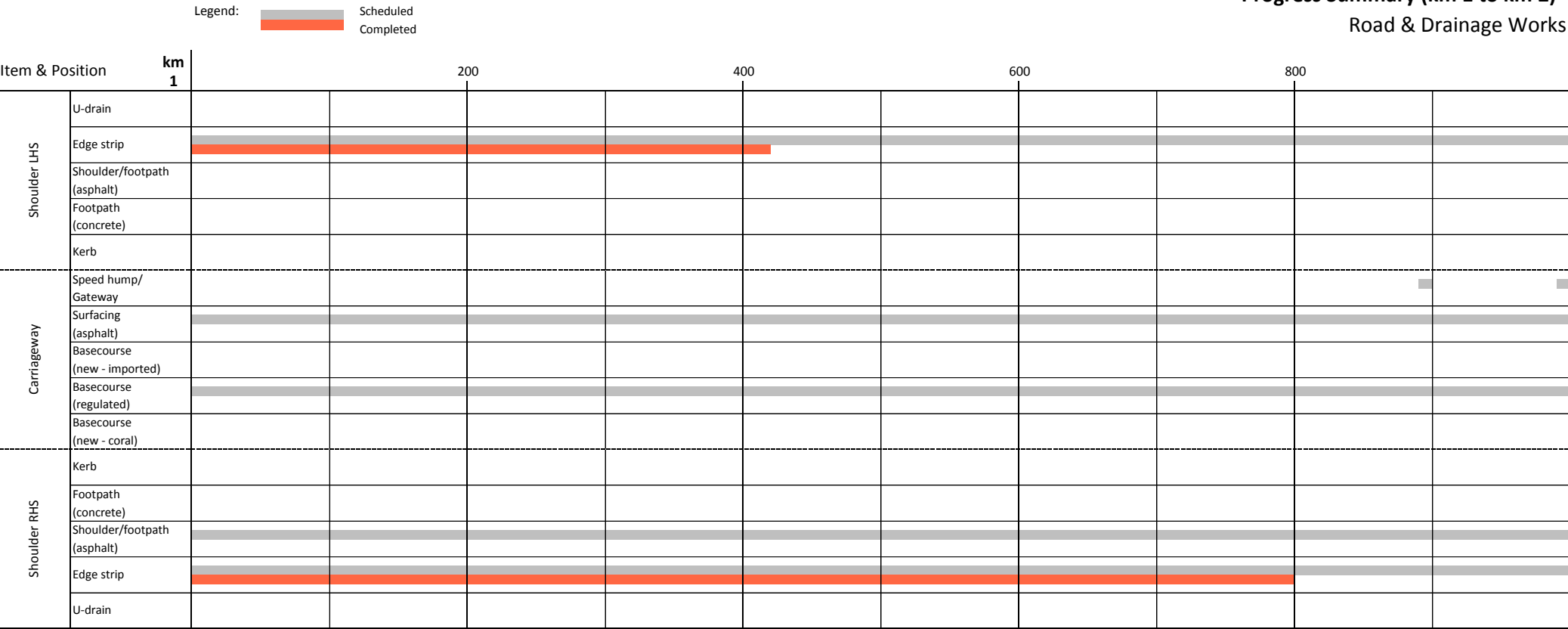
Schematic Diagram showing progress of Key Activities

June 2014

Airport Road

Progress Summary (km 1 to km 2)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	61%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:



1 Location: Ch 1+160 Direction: Looking Down Chainage
Description: Edge strips installed, basecourse regulated



2 Location: Ch 1+350 Direction: Looking Up Chainage
Description: Preparing foundations for extruded edge strips



3 Location: Ch 2+000 Direction: Looking Down Chainage
Description: S/W culverts installed through coastal works

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 0 to km 1)

Road & Drainage Works

Legend:

Scheduled

Completed

Item & Position		km 0		200		400		600		800		km 1
Shoulder LHS	U-drain											
	Edge strip											
	Shoulder/footpath (asphalt)											
	Footpath (concrete)											
	Kerb											
Carriageway	Speed hump/ Gateway											
	Surfacing (asphalt)											
	Basecourse (new - imported)											
	Basecourse (regulated)											
	Basecourse (new - coral)											
Shoulder RHS	Kerb											
	Footpath (concrete)											
	Shoulder/footpath (asphalt)											
	Edge strip											
	U-drain											

Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	N/A
Edge strip	0%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

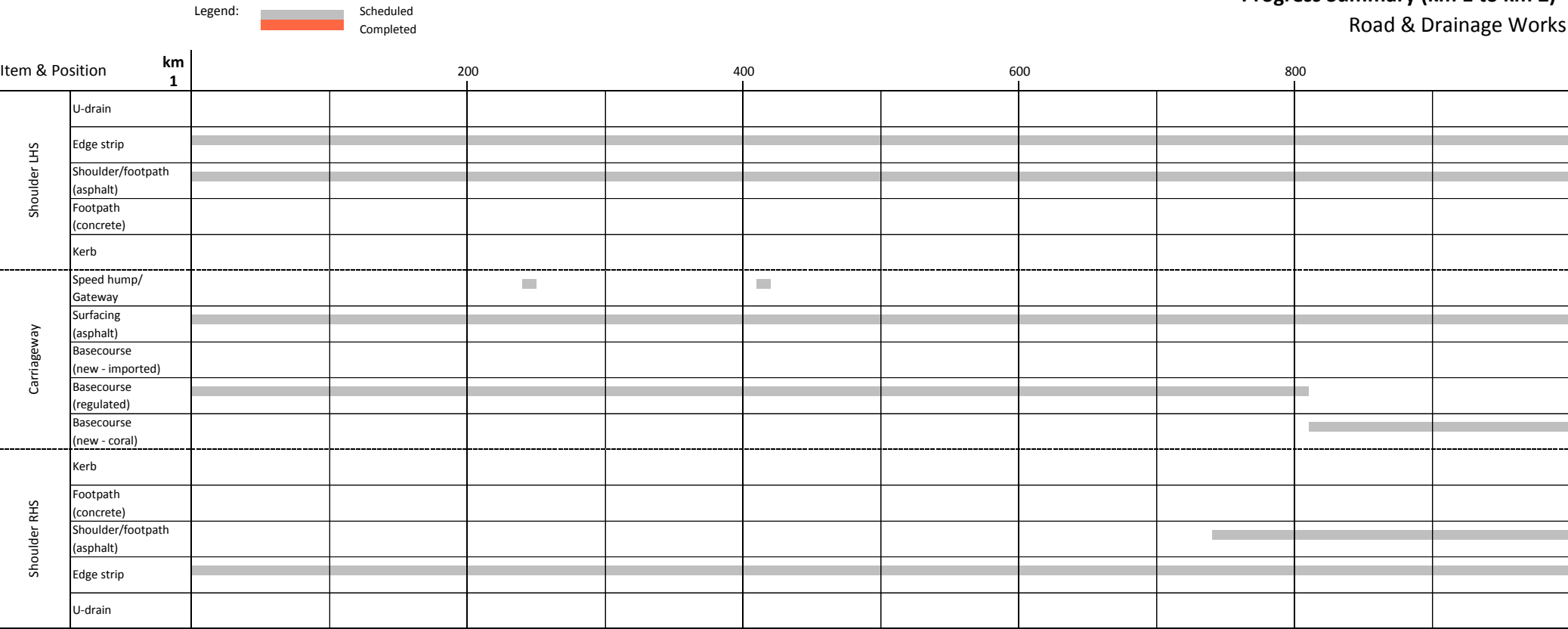
Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 1 to km 2)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	0%
Basecourse (coral)	0%
Edge strip	0%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

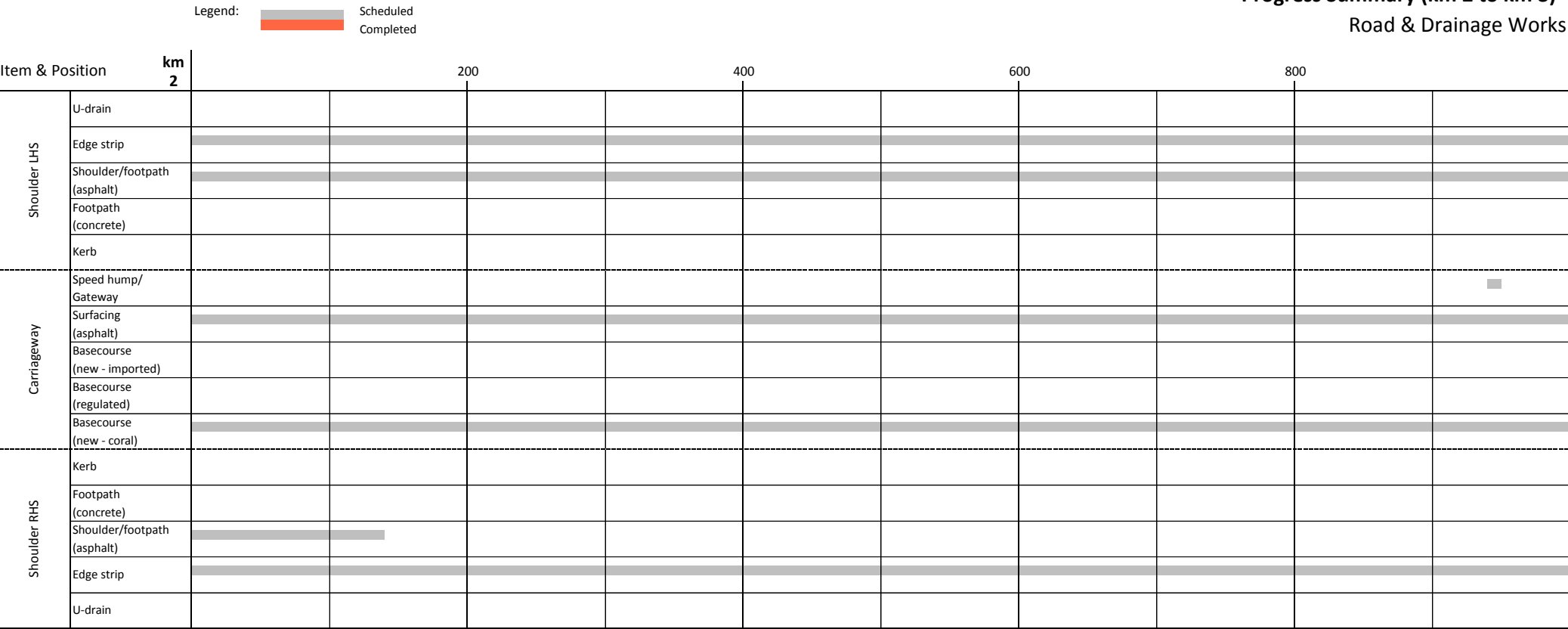
Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 2 to km 3)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	0%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Ch 23600 Direction: Looking Up Chainage
Description: Kerbing works

2 Location: Ch 23600 Direction: Looking Up Chainage
Description: Kerbing works

3 Location: Ch 23600 Direction: Looking Up Chainage
Description: Kerbing works

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

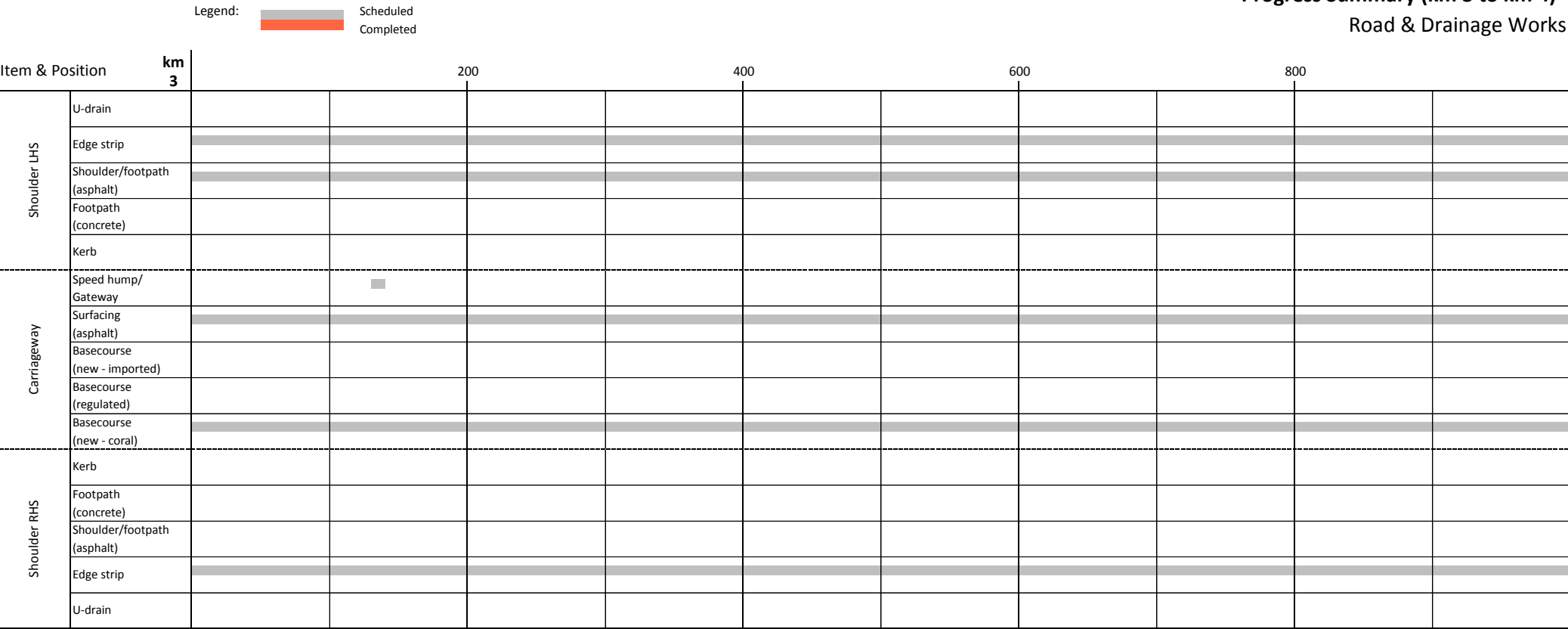
Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 3 to km 4)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	0%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

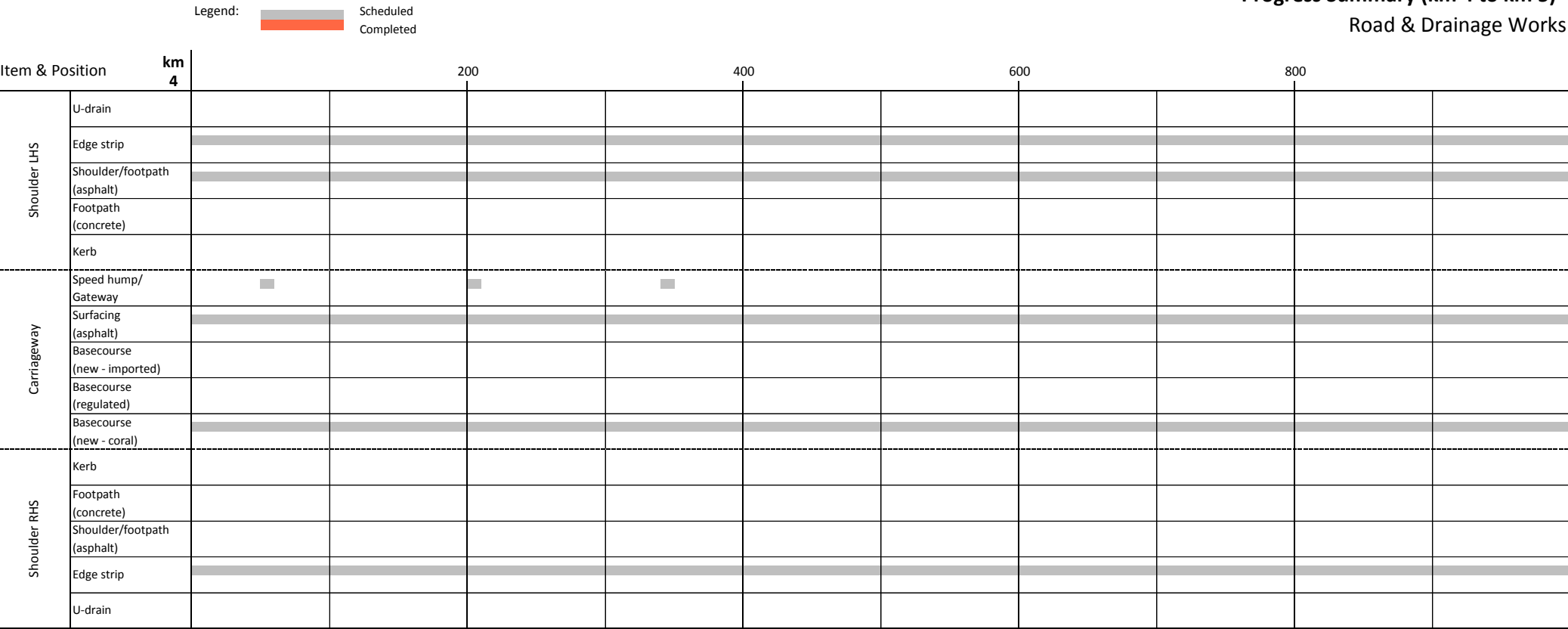
Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 4 to km 5)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	0%
Carriageway (asphalt)	0%
Shoulder (asphalt)	0%
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	0%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

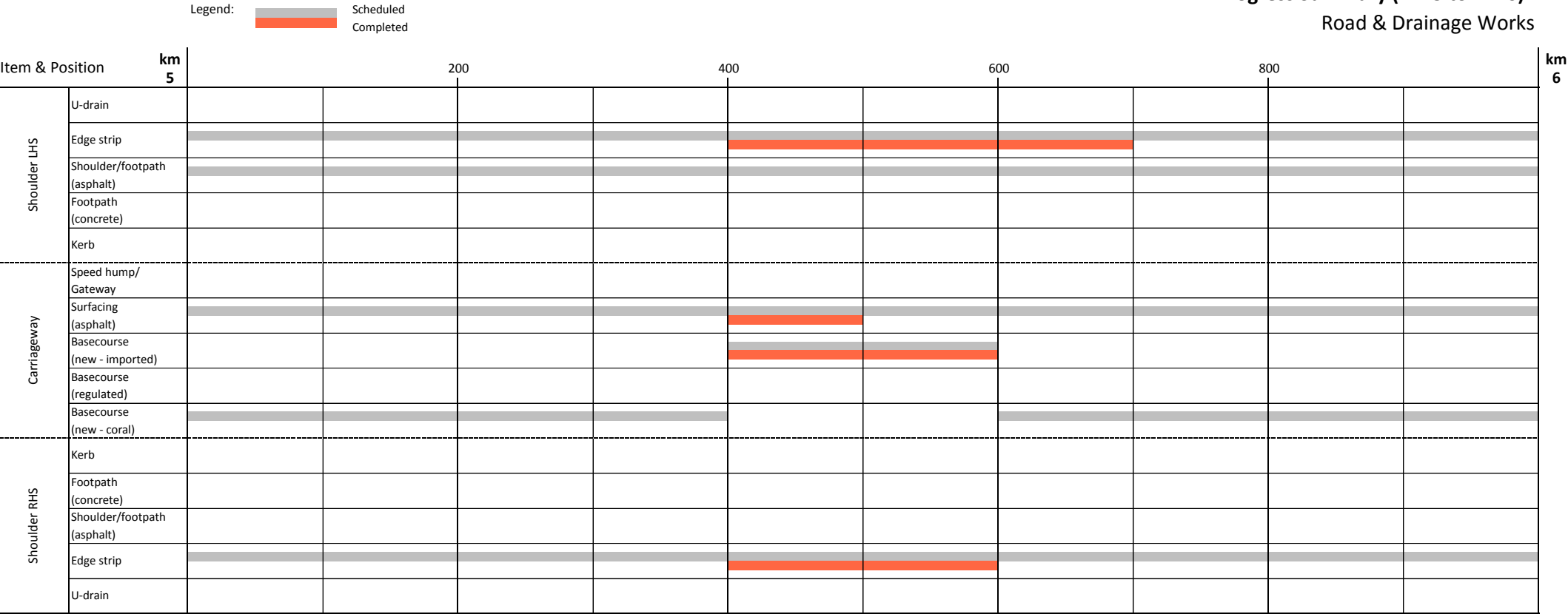
Schematic Diagram showing progress of Key Activities

June 2014

Temaiku Road

Progress Summary (km 5 to km 6)

Road & Drainage Works



Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	10%
Shoulder (asphalt)	0%
Basecourse (imported)	100%
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	25%
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:



1 Location: Ch 5+500 Direction: Looking Up chainage
Description: Section of primed basecourse



2 Location: Ch 5+500 Direction: Looking Down chainage
Description: Asphalt surfacing (trial sections)

3 Location: Direction:
Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Buota Road

Progress Summary (km 0 to km 1)

Road & Drainage Works

Legend:  Scheduled
 Completed

Item & Position		km 0		200	400	600	800	km 1
Shoulder LHS	U-drain							
	Edge strip							
	Shoulder/footpath (asphalt)							
	Footpath (concrete)							
	Kerb							
Carriageway	Speed hump/ Gateway							
	Surfacing (asphalt)							
	Basecourse (new - imported)							
	Basecourse (regulated)							
	Basecourse (new - coral)							
Shoulder RHS	Kerb							
	Footpath (concrete)							
	Shoulder/footpath (asphalt)							
	Edge strip							
	U-drain							

Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	N/A
Shoulder (asphalt)	N/A
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	N/A
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

KIRIBATI ROAD REHABILITATION PROJECT - Contract No. KIR-12/01

Schematic Diagram showing progress of Key Activities

June 2014

Buota Road

Progress Summary (km 1 to km 2)

Road & Drainage Works

Legend:

Scheduled

Completed

Item & Position		km 1											km 2
Shoulder LHS	U-drain												
	Edge strip												
	Shoulder/footpath (asphalt)												
	Footpath (concrete)												
	Kerb												
Carriageway	Speed hump/ Gateway												
	Surfacing (asphalt)												
	Basecourse (new - imported)												
	Basecourse (regulated)												
	Basecourse (new - coral)												
Shoulder RHS	Kerb												
	Footpath (concrete)												
	Shoulder/footpath (asphalt)												
	Edge strip												
	U-drain												

Progress:

Item	% Complete
Speed humps	N/A
Carriageway (asphalt)	N/A
Shoulder (asphalt)	N/A
Basecourse (imported)	N/A
Basecourse (regulated)	N/A
Basecourse (coral)	0%
Edge strip	N/A
Kerb	N/A
Footpath (concrete)	N/A
U-drain	N/A

Photographs:

1 Location: Direction: Description:

2 Location: Direction: Description:

3 Location: Direction: Description:

Appendix H:
**Import Permit &
Fumigation Certificates**

KIRIBATI GOVERNMENT



RECEIVED
25-14

MINISTRY OF ENVIRONMENT, LANDS & AGRICULTURE DEVELOPMENT
AGRICULTURAL DIVISION

BIOSECURITY ACT 2011

PERMIT TO IMPORT SOIL, SAND & GRAVEL

TO: McConnell Dowell Construction
P. O B 426
Tarawa
Phone: 9019

Permit Number: 05/13
Type: Multiple

Subject to the provision of the Biosecurity Act 2011, and to the conditions endorsed below, permission is granted to you to import sand and gravel.

Name of Item	Amount in tonnes	Country of Origin
Aggregate (for road pavement)	6,000	Fiji
Aggregate (40 mm crushed)	44,000	
Sand	14,500	
Aggregate (crushed builders mix for concrete)	8,500	

Import requirements:

1. The contractor/importer should apply for an import permit to the Division of Agriculture & Livestock (ALD), Ministry of Environment, Lands and Agricultural Development (MELAD) prior to placing an order to a supplier from the country of origin.
2. Upon receipt of the application form, the import permit will be issued to the applicant
3. The contractor/importer should send a copy of the import permit to the supplier at the country of origin who will be responsible in complying with import conditions stated on the permit
4. Upon arrival at the port of entry, the consignment will be inspected to be free from invasive species (pests and seeds of weeds) that have a high risk status prior to release
5. The consignment could only be released once a Biosecurity Officer is satisfied that it is free from contaminants and invasive species

McConnell Dowell Constructors (Aust) Pty Ltd
PO Box 426 Betio South Tarawa Kiribati Island
Telephone 00686 26320

To:	Roughton International	No:	023
Attention:	Ian Archer	Ref:	Fum
Date:	30 May 14	Project:	KRRP. KIR – 12/01
Remarks:	Fumigation Certs May 14		

[illegible]

FOR: ☐ COMMENT ☐ APPROVAL ☐ CONSTRUCTION
☒ INFORMATION/REFERENCE ☐ QUOTATION ☐ OTHER

Issued By: Mark Lees **Location:** KRRP

PLEASE SIGN AND RETURN TRANSMITTAL COPY TO McConnell Dowell
Constructors (Aust) Pty Ltd

Received By: Regina Fay Company: Roughton International

Date: 30/05/14



WG GENERA PACIFIC LTD

SUVA - 82 HARRIS ROAD
P.O. BOX 79, SUVA
PH: (679) 3312 633
FAX: (679) 3236 336

LAUTOKA - LOT 9 ROYAL PALM ROAD, NAVUTU
P.O. BOX 226 LAUTOKA
PH: (679) 665 4090
FAX: (679) 666 3470

WAILEKUTU - LAMU
P.O. BOX 79, SUVA
PH: (679) 3681 190
FAX: (679) 3681 191

Web: www.wgfiji.com.fj

Email: genera@wgfiji.com.fj

FUMIGATION CERTIFICATE

Certificate No: 29881

Article Details

Description of goods: 1 X 20FT STC: SAND IN BULK BUGS

Container/Distinguish
markings: PDLU3005825

Country of origin: FIJI ISLANDS

Country of destination: TARAWA

Client:

PACIFIC MARINE & CIVIL SOLUTION
9-12 NUKUWATU ST, LAMU
P O BOX 2611, GOVT BUILDING
SUVA
FIJI ISLANDS

Port of loading: SUVA, FIJI ISLANDS

Vessel: SOUTHERN PEARL - V82

Name and address of consignee

MCCONNELL DOWELL CONTRACTORS LIMITED
P O BOX 426
BETIO
TARAWA

Treatment Details

Fumigation standards: MAF

Name of fumigant: Methyl Bromide

Date of fumigation: 26/04/2014

Duration of
fumigation:

Time of fumigation: 1115

Minimum
temp:

Fumigation officer:

CHRIS RAFOI

Place of
fumigation: KINGS WHARF, SUVA

Total Volume
M³: 41.91

24Hours

Dosage rate: 150g/m3

21°C

Actual gas reading after
release: 5ppm

Bio security
officer:

SAIMONE

Signature.....

Signature.....

Fumigation was carried out at KINGS WHARF, SUVA



WG GENERA PACIFIC LTD

SUVA - 82 HARRIS ROAD
P.O. BOX 79, SUVA
PH: (679) 3312 033
FAX: (679) 3236 336

LAUTOKA - LOT 9 ROYAL PALM ROAD, NAVUTU
P.O. BOX 228 LAUTOKA
PH: (679) 666 4090
FAX: (679) 666 3470

WAILEKUTU - LAMI
P.O. BOX 79, SUVA
PH: (679) 3681 190
FAX: (679) 3681 191

Web: www.wgfiji.com.fj

Email: genera@wgfiji.com.fj

FUMIGATION CERTIFICATE

Article Details

Certificate No: 29819

Description of goods: AP 40 - AGGREGATE & 10MM KERB MIX

Container/Distinguish markings: 1 X BARGE

Country of origin: FIJI ISLANDS

Port of loading: SUVA, FIJI ISLANDS

Country of destination: KIRIBATI

Vessel: BARGE : MYCON

Client:

Name and address of consignee

PACIFIC MARINE & CIVIL SOLUTION
9-12 NUKUWATU ST, LAMI
P O BOX 2611, GOVT BUILDING
SUVA,
FIJI ISLANDS

MACONNELL DOWELL
TARAWA
KIRIBATI

Treatment Details

Fumigation standards: Fiji Quarantine Standards

Place of fumigation: AT SEA FUMIGATION BAY

Name of fumigant: Methyl Bromide

Total Volume
M³: 920.04

Date of fumigation: 9/04/2014

Duration of
fumigation:

24Hours

Dosage rate: 150g/m3

Time of fumigation: 1730

Minimum temp: 21°C

Actual gas reading after
release: 5ppm

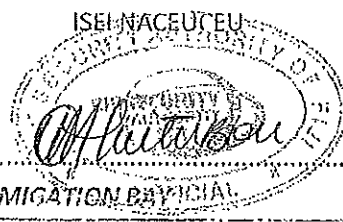
Fumigation officer: CHRIS RAFOI

Bio security
officer:

ISEI NACEUCEU

Signature.....

for Signature.....



Fumigation was carried out at AT SEA FUMIGATION BAY

VOYAGE #7

FUMIGATION CERTIFICATE

Article Details

Certificate No: 29813

Description of goods: 2 X STACK AP 40 - AGGREGATES

Container/Distinguish
markings: 1 X BARGE

Country of origin: FIJI ISLANDS

Port of loading: SUVA, FIJI ISLANDS

Country of destination: KIRIBATI

Vessel: BARGE : TAMA

Client:

Name and address of consignee

PACIFIC MARINE & CIVIL SOLUTION
9-12 NUKUWATU ST, LAMI
P O BOX 2611, GOVT BUILDINGS
SUVA
FIJI ISLANDS

MACONNELL DOWELL
TARAWA
KIRIBATI

Treatment Details

Fumigation standards: Fiji Quarantine Standards

Place of fumigation: AT SEA FUMIGATION BAY

Name of fumigant: Methyl Bromide

Total Volume M³: 259.9

Date of fumigation: 5/04/2014

Duration of
fumigation:

72Hours

Dosage rate: 150g/m³

Time of fumigation: 1930

Minimum
temp:

21°C

Actual gas reading
after release: 5ppm

Fumigation officer: CHRIS RAFOI

Bio security officer: OLIVIATUITUBOU

Signature.....

Signature.....

Fumigation was carried out at AT SEA FUMIGATION BAY

**Rentokil
Initial**

PO Box 486
Suva, Fiji Islands
T: (679) 3340000
F: (679) 3395720
www.rentokil.com.fi

Certificate No: 22640

FUMIGATION CERTIFICATE

DESCRIPTION OF GOODS: **STC AGGREGATES**

CONTAINER MARKINGS: **As Attached**

FUMIGATION PREPARATION: **METHYL BROMIDE** FORMULATION: **GAS**

TOTAL VOLUME FUMIGATED (597.60M³): **18 X 20FCL** VESSEL: **HIGHLAND CHEIF**

DOSAGE (CH₃Br): **REQUIRED 100g/m³** @ **21°C**

FUMIGATION DATA

DATE FUMIGATED: **10.04.14**

DATE RELEASED: **13.04.14**

EXPOSURE PERIOD REQUIRED: **72 HOURS**

GAS RELEASE: **5PPM**

CONSIGNOR

NAME: **STANDARD CONCRETES**
ADDRESS: **P O BOX 369**
SUVA

CONSIGNEE

NAME: **MC CONELL DOWELL CONSTRUCTION**
ADDRESS: **TARAWA**
KIRIBATI.

COMPANY REPS: **Rakesh Raju**

BIO SECURITY OFFICER: **Poonam Devi**

SIGNATURE.....

SIGNATURE.....

DATE: **17.04.14**

THIS FUMIGATION WAS CARRIED OUT AT SCIL, NASINU YARD, NASINU.
'BRINGING EXCELLENCE AND QUALITY ASSURED'

Rentokil Initial

Nautilus Container Markings as per Job Sheet: 22640

No:	Container Markings
1	PRSU – 290694-5
2	FCIU – 305575-3
3	TTNU – 184978-9
4	IRNU – 152787-5
5	CAXU – 297728-6
6	CAXU – 332605-1
7	TCKU – 341746-8
8	TGHU – 063647-4
9	GLDU – 314001-2
10	TEMU – 281456-8
11	FCIU – 201584-3
12	IPXU – 216955-6
13	TCKU – 340537-0
14	TCKU – 346921-9
15	CAIU – 215942-0
16	TGHU – 066507-1
17	CAIU – 250320-1
18	TCKU – 316291-6



Certificate No: 22641(2)

FUMIGATION CERTIFICATE

DESCRIPTION OF GOODS: **STC AGGREGATES**

CONTAINER MARKINGS: **As Attached**

FUMIGATION PREPARATION: **METHYL BROMIDE** FORMULATION: **GAS**

TOTAL VOLUME FUMIGATED (1162M³): **22 X 20FCL** VESSEL: **HIGHLAND CHEIF**

DOSAGE (CH₃Br): **REQUIRED 100g/m³** @ **21°C**

FUMIGATION DATA

DATE FUMIGATED: **11.04.14**

DATE RELEASED: **14.04.14**

EXPOSURE PERIOD REQUIRED: **72 HOURS**

GAS RELEASE: **5PPM**

CONSIGNOR

NAME: **STANDARD CONCRETES**
ADDRESS: **P O BOX 369**
SUVA

CONSIGNEE

NAME: **MC CONELL DOWELL CONSTRUCTION**
ADDRESS: **TARAWA**
KIRIBATI.

COMPANY REPS: **Rakesh Raju**

BIO SECURITY OFFICER: **Isei N**

SIGNATURE



SIGNATURE.....



DATE: **17.04.14**

THIS FUMIGATION WAS CARRIED OUT AT SCIL, NASINU YARD, NASINU.
'BRINGING EXCELLENCE AND QUALITY ASSURED'

Rentokil Initial

Nautilus Container Markings as per Job Sheet: 22641

No:	Container Markings
1	CXDU 173668-2
2	CAIU 284067-1
3	CRXU 119097-9
4	FCIU 337145-3
5	CXDU 105100-3
6	CAXU 617925-8
7	CRXU 324323-4
8	FCIU 298836-9
9	CAIU 339864-6
10	TCKU 333617-6
11	MAXU 243958-9
12	CAIU 218285-8
13	CAIU 283290-6
14	CAIU 250081-4
15	CAIU 295884-9
16	BHCU 303786-1
17	BHCU 307305-1
18	CAIU 269930-5
19	CAIU 341321-0
20	CAIU 284272-0
21	CAXU 677842-5
22	CAXU 672866-1



Certificate No: 22641(1)

FUMIGATION CERTIFICATE

DESCRIPTION OF GOODS: **STC AGGREGATES**

CONTAINER MARKINGS: **As Attached**

FUMIGATION PREPARATION: **METHYL BROMIDE** FORMULATION: **GAS**

TOTAL VOLUME FUMIGATED (1162M³): **13 X 20FCL** VESSEL: **HIGHLAND CHEIF**

DOSAGE (CH₃Br): **REQUIRED 100g/m³** @ **21°C**

FUMIGATION DATA

DATE FUMIGATED: **11.04.14**

DATE RELEASED: **14.04.14**

EXPOSURE PERIOD REQUIRED: **72 HOURS**

GAS RELEASE: **5PPM**

CONSIGNOR

NAME: **STANDARD CONCRETES**
ADDRESS: **P O BOX 369**
SUVA

CONSIGNEE

NAME: **MC CONELL DOWELL CONSTRUCTION**
ADDRESS: **TARAWA**
KIRIBATI.

COMPANY REPS: **Rakesh Raju**

BIO SECURITY OFFICER: **Isei N**

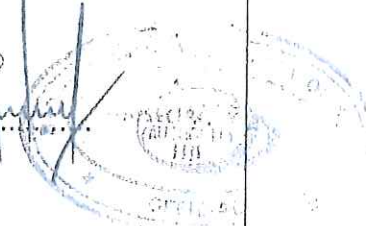
SIGNATURE.....



SIGNATURE.....



DATE: **17.04.14**



THIS FUMIGATION WAS CARRIED OUT AT SCIL, NASINU YARD, NASINU.
'BRINGING EXCELLENCE AND QUALITY ASSURED'

Rentokil Initial

Nautilus Container Markings as per Job Sheet: 22641

No:	Container Markings
1	CHLU – 387284-2
2	CAIU – 217353-7
3	FCIU – 287074-0
4	CAXU – 683948-0
5	FSCU – 390025-8
6	CAIU – 284353-6
7	CLHU – 242735-4
8	CXDU – 110121-2
9	CAIU – 297032-0
10	CRXU – 320756-1
11	TGHU – 223914-1
12	FCIU – 316479-6
13	TTNU – 357142-3



Specific conditions:

1. The sand and aggregates should be taken from a quarry or inland source.
2. They should be taken from a depth of at least 10 - 15 meters deep from the ground level.
3. The consignment should be free from roots, seeds of weeds and insect pests.
4. **Certification** of the location from which the consignment is sourced should be provided from the exporting company with confirmation from Biosecurity Authority or NPPO of the country of origin.
5. Sand & aggregates must be fumigated with Methyl bromide by rate of fumigation:

a) Sand	0 degree Celsius	150g per cubic meter	72 hours
b) Aggregate	0 degree Celsius	70g per cubic meter	72 hours
6. Fumigation should be done at least 1 – 2 weeks prior to shipment.
7. The consignments must be accompanied by an **Original Fumigation certificate**.
8. Sand & aggregates must be **closed** and **sealed** after fumigation has been done.
9. Failure to comply will result in the destruction or re – export of the consignment at the importer's expense.

Date and Stamp: 02/05/2014

Expiry date: 02/11/2014



Signature: 
for Director of Agriculture

Specific conditions:


1. The sand and aggregates should be taken from a quarry or inland source.
2. They should be taken from a depth of at least 10 - 15 meters deep from the ground level.
3. The consignment should be free from roots, seeds of weeds and insect pests.
4. **Certification** of the location from which the consignment is sourced should be provided from the exporting company with confirmation from Biosecurity Authority or NPPO of the country of origin.
5. Sand & aggregates must be fumigated with Methyl bromide by rate of fumigation:

a) Sand	0 degree Celsius	150g per cubic meter	72 hours
b) Aggregate	0 degree Celsius	70g per cubic meter	72 hours
6. Fumigation should be done at least 1 – 2 weeks prior to shipment.
7. The consignments must be accompanied by an **Original Fumigation certificate**.
8. Sand & aggregates must be **closed** and **sealed** after fumigation has been done.
9. Failure to comply will result in the destruction or re – export of the consignment at the importer's expense.

Date and Stamp: 02/05/2014

Expiry date: 02/11/2014



Signature: 
for Director of Agriculture

Appendix I:
Contract Variations

Schedule of Variations:

Details		Status				Cost Implications		
Ref	Description	Potential	Preparation	Review	Approved	Increase	Decrease	Amount (AUD)
1	Work scope (1)				X		X	-1,350,776.38
2	Material supply by ESAT	X						TBC
3	Betio causeway remedial works				X	X		TBC
4	Coastal protection works							
a	Coastal sites 1 & 5	X				Yes		TBC
b	Deletion of works, Betio-Temaiku road Ch 5+100				X			Minimal
b	Deletion of works, Betio-Temaiku road Ch 9+800				X			Minimal
5	Standardisation of Water Supply Fittings				X	X		11,574.80
6	Solar Street Lighting – LED proposal				X	None	None	0.00
7	Valve chambers (KAP)	X				Yes		TBC
8	Valve chambers (STSISP)	X				Yes		TBC
9	Basecourse specification change				X	None	None	
10	Deferral of Betio causeway pavement works				X	Yes		TBC
11	Prime				X	None	None	
								-1,339,201.58

Appendix J:
Contract Claims

Schedule of Claims:

[illegible]

Appendix K:

Payments

Kiribati Road Rehabilitation Project**Contract No. KIR-12/01**

Interim Payment Certificate No. IPC 14

Period Ending:

31 May 2014

Bill Group Series	Work Item Variations	Amounts(Au\$) As Bid	Certified		
			Previous	Current	To Date
1000	General	12,827,618.89	6,525,366.16	425,758.20	6,951,124.35
2000	Drainage ¹	4,798,140.15	264,708.40	75,697.87	340,406.26
3000	Earthworks	613,730.00	15,814.17	0.00	15,814.17
3000	Pavement ¹	7,716,081.40	5,317.84	316,922.76	322,240.60
4000	Surfacing ¹	13,442,454.20	0.00	29,341.00	29,341.00
5000	Ancillary ¹	5,108,194.99	8,826.40	0.00	8,826.40
6000	Structures	1,106,239.54	360,574.42	53,786.99	414,361.41
8000	Water ⁵	1,058,305.05	199,633.35	43,790.72	243,424.08
9000	Dayworks ³	237,991.30	95,262.14	0.00	95,262.14
Total Bid Price Exclusive of local taxes and duties		46,908,755.52	7,475,502.88	945,297.53	8,420,800.42
Adjustments (1)				0.00	
Changes in Legislation				0.00	
Changes in Cost				0.00	
Total Adjustments (1)				0.00	
Totals after Adjustments (1)			7,475,502.88	945,297.53	8,420,800.42
Adjustments (2)				0.00	
Retention (@10%)			-747,550.29	-94,529.75	-842,080.04
Advance			4,819,795.72	0.00	4,819,795.72
Advance Repayment				0.00	
Materials on Site			759,573.34	178,136.18	937,709.53
Total Adjustments (2)			4,831,818.78	83,606.43	4,915,425.21
Totals after adjustments (1) & (2)			12,307,321.66	1,028,903.97	13,336,225.62
Amount of this Certificate				1,028,903.97	

I hereby certify that the foregoing is a true and proper statement of amounts due to McConnell Dowell (Aust) Pty Ltd. as at 31 May 2014

Ian Archer
Resident Engineer
on behalf of Roughton International Ltd

Date:

06 June 2014

Kiribati Road Rehabilitation Project**Contract No. KIR-12/01**

Interim Payment Certificate No. IPC 13

Period Ending:

30 April 2014

Bill Group			Amounts(Au\$)		
Series	Work Item	Variations	As Bid	Certified Previous	Current To Date
1000	General		12,827,618.89	6,194,167.12	331,199.03 6,525,366.16
2000	Drainage	¹	4,798,140.15	149,470.10	115,238.30 264,708.40
3000	Earthworks		613,730.00	15,814.17	0.00 15,814.17
3000	Pavement	¹	7,716,081.40	0.00	5,317.84 5,317.84
4000	Surfacing	¹	13,442,454.20	0.00	0.00 0.00
5000	Ancillary	¹	5,108,194.99	8,826.40	0.00 8,826.40
6000	Structures		1,106,239.54	287,479.12	73,095.30 360,574.42
8000	Water	⁵	1,058,305.05	101,995.82	97,637.53 199,633.35
9000	Dayworks	³	237,991.30	94,425.36	836.78 95,262.14
Total Bid Price Exclusive of local taxes and duties			46,908,755.52	6,852,178.10	623,324.78 7,475,502.88
Adjustments (1)					0.00
Changes in Legislation					0.00
Changes in Cost					0.00
Total Adjustments (1)					0.00
Totals after Adjustments (1)				6,852,178.10	623,324.78 7,475,502.88
Adjustments (2)					0.00
Retention (@10%)				-685,217.81	-62,332.48 -747,550.29
Advance				4,819,795.72	0.00 4,819,795.72
Advance Repayment					0.00
Materials on Site				400,282.03	359,291.31 759,573.34
Total Adjustments (2)				4,534,859.94	296,958.84 4,831,818.78
Totals after adjustments (1) & (2)				11,387,038.04	920,283.62 12,307,321.66

Amount of this Certificate**920,283.62**

I hereby certify that the foregoing is a true and proper statement of amounts due to McConnell Dowell (Aust) Pty Ltd. as at 30 April 2014



Ian Archer
Resident Engineer
on behalf of Roughton International Ltd

Date:



Kiribati Road Rehabilitation Project

Contract No. KIR-12/01

Interim Payment Certificate No. IPC 12

Period Ending: 31 March 2014

Bill Group		Amounts(Au\$) As Bid	Certified		
Series	Work Item Variations		Previous	Current	To Date
1000	General	12,827,618.89	5,786,274.15	407,892.97	6,194,167.12
2000	Drainage ¹	4,798,140.15	82,744.51	66,725.59	149,470.10
3000	Earthworks	613,730.00	15,814.17	0.00	15,814.17
3000	Pavement ¹	7,716,081.40	0.00	0.00	0.00
4000	Surfacing ¹	13,442,454.20	0.00	0.00	0.00
5000	Ancillary ¹	5,108,194.99	8,826.40	0.00	8,826.40
6000	Structures	1,106,239.54	168,930.58	118,548.54	287,479.12
8000	Water ⁵	1,058,305.05	71,592.27	30,403.55	101,995.82
9000	Dayworks ³	237,991.30	94,425.36	0.00	94,425.36
Total Bid Price Exclusive of local taxes and duties		46,908,755.52	6,228,607.44	623,570.66	6,852,178.10
Adjustments (1)				0.00	
Changes in Legislation				0.00	
Changes in Cost				0.00	
Total Adjustments (1)				0.00	
Totals after Adjustments (1)			6,228,607.44	623,570.66	6,852,178.10
Adjustments (2)				0.00	
Retention (@10%)			-622,860.74	-62,357.07	-685,217.81
Advance			4,819,795.72	0.00	4,819,795.72
Advance Repayment				0.00	
Materials on Site			243,241.94	157,040.09	400,282.03
Total Adjustments (2)			4,440,176.91	94,683.03	4,534,859.94
Totals after adjustments (1) & (2)			10,668,784.35	718,253.69	11,387,038.04

Amount of this Certificate

718,253.69

I hereby certify that the foregoing is a true and proper statement of amounts due to McConnell Dowell (Aust) Pty Ltd. as at 31 March 2014

Ian Archer

Ian Archer
Resident Engineer
on behalf of Roughton International Ltd

Date:

26th April 2014