

**SPECIAL AUDIT REPORT OF THE  
JAMAICA DEVELOPMENT INFRASTRUCTURE PROGRAMME  
(JDIP)**

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## Auditor General's Overview

Jamaica Development Infrastructure Programme represents a major undertaking by the GOJ to improve significantly the Island's road network in order to enhance the quality of life of all citizens. The Ministry of Transport and Works, together with the National Works Agency and the Road Maintenance Fund, which has the responsibility for the implementation of the JDIP, has not executed the Programme in a transparent manner. This is evidenced by inadequate capital project planning, monitoring and record keeping.

The deficiencies highlighted in this report, threatens the Government's objective to achieve its goal to improve the country's road infrastructure under the Preferential Buyers Credit Facility with the Chinese EXIM Bank. The MTW and the NWA in executing the programme of works under JDIP and subsequent similar programmes, should seriously consider, for implementation, the recommendations contained within this report.



Pamela Monroe Ellis, FCCA, FCA, CISA  
Auditor General

## Executive Summary

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The Government of Jamaica (GOJ), through the Road Maintenance Fund (RMF), and the Export-Import (EXIM) Bank of China entered into a US\$400 million loan agreement, in August 2009, to finance the improvement and rehabilitation of the island's road network under an initiative called the Jamaica Development Infrastructure Programme (JDIP). The agreement was borne out of a US\$10 billion Preferential Buyer's Credit (PBC) programme launched by the EXIM Bank of China, through which the EXIM Bank agreed to make available US\$340 million under the agreement, while the GOJ/RMF *Pari Passu* contribution is US\$60 million. JDIP represents a major undertaking by the GOJ to improve the island's road network in order to enhance the quality of life of the citizens and to stimulate economic growth. The initiative is characterised as the single largest road improvement exercise undertaken by the GOJ.

The programme of work which will be undertaken over a period of five (5) years (February 2010 - 2015) *involves the repairs of main and parochial roads and the upgrading of the nation's road infrastructure. The breakdown is as follows:*

- Repairs to the main road network US\$60M
- Repairs to the parochial road network US\$50M
- Upgrading of the nation's road infrastructure US\$290M

Our audit focused on whether the Ministry of Transport and Works (MTW) along with the National Works Agency (NWA) and the Road Maintenance Fund (RMF) have employed appropriate mechanisms to ensure the effective and efficient management of the programme. With this, we seek to determine whether MTW/NWA employed adequate safeguards to ensure:

1. compliance with contractual obligations
2. transparency in the selection of the main contractor, sub-contractors and projects
3. value for money is obtained for projects undertaken

**The audit did not seek to determine neither the quality nor the status of the roadwork, consequently, no site visit was conducted.**

## Key Findings

### Selection of Contractor, Sub-contractors and Projects

1. **We found that the loan agreement application for the Preferential Buyer's Credit facility with the China EXIM Bank allowed for the engagement of a Chinese contractor by competitive tender.** However, MTW opted to utilise the sole source procurement methodology in awarding the contract to China Harbour Engineering Company,(CHEC) which may have deprived the Government of the ability to achieve value for money and maintain transparency and fairness in the process.
2. **We observed that CHEC sub-contracted works valued at JA\$12.3 billion, as at July 2011, to 15 NCC registered contractors.** There was no contractual relationship between the MTW/NWA and the sub contractors. However, there was an agreement between NWA and CHEC to select Sub-contractors from Grade 1 contractors on the NCC list in the category of General Road Works. However, we observed that grades two and three contractors also received sub-contracts from CHEC.
3. **The absence of adequate and appropriate records limits the scope of our audit in assessing the transparency of the MTW/NWA selection process for JDIP projects.** The NWA's web site states that 'the selection of projects is based on a prioritization exercise that takes into account the National Transport policy, the Road Sector Master Plan, Vision 2030 and stakeholder participation, among other considerations. However, NWA did not provide evidence to substantiate this statement.

### Stakeholders Responsibility

4. **Contrary to the provisions of the GOJ Procurement guidelines, the NWA used the sole source method to award a contract to CHEC for US\$1.2M, approximately JA\$102M, to refurbish its corporate offices without the required approval of the NCC.** The NWA did not determine if the option of Sole Source would earn or deny the entity any financial and qualitative gains, which could be garnered by using the competitive tender method. The required contractors levy of approximately US\$24,000 or JA\$2,040,000.00 was not deducted and remitted to Tax Administration of Jamaica in accordance with Sections 3 and 4 of the Contractors Levy Act.
5. **The NWA did not provide documents to inform the audit of the negotiation of individual contract prices.** Consequently, we were unable to assess the transparency of the process. Further, the NWA failed to provide 19 of the 25 engineer's estimates we requested to determine whether the contract prices were fair and reasonable.

## Quality Assurance

6. **We found that the NWA's quality assurance monitoring activities of JDIP projects failed to meet its Key Performance Indicators (KPIs).** For example, the NWA did not monitor 25 of the 77 active projects during the quarter January to March 2011 contrary to its Key Performance Indicator. Further, NWA failed to provide the related quality control plan for the Christiana Development Road. In addition, there was no evidence that NWA conducted the required reviews and provided the necessary comments to the Contractor for seven of the 11 quality control plans received.

## Major Projects

7. **We found that poor planning of the Christiana Development Road Project resulted in frequent changes in the design alignment and undue delays in implementation.** For example, the MTW had to submit two separate submissions to Cabinet, on November 10, 2010 and February 11, 2011, for the acquisition of 14 and 12 parcels of land respectively to facilitate the implementation of the project. Further, the MTW, in a letter dated January 11, 2011, asked the NWA to explain *'why some parcels of land that are in the middle of the new road were not a part of the original 14.'*
8. **Contrary to Cabinet's instruction, we found that the RMF used JDIP funds to acquire lands for JDIP projects instead of the Government's 2011-12 budgets.** We observed that the NWA, in two letters dated May 3, and July 4, 2011, informed CHEC to arrange payments, as a matter of urgency, to four landowners for the sum of JA\$8.2M. The aggregate appraised value for lands required for the road construction amounts to JA\$78.9M.
9. **NWA did not provide supporting documents, including the competency of the assessor, to allow for the authentication of the payment of JA\$8M for crops purportedly damaged during the construction of the Christiana Development Road.**
10. **We found that the RMF was unable to identify works amounting to JA\$23.2M, which the NWA certified as being satisfactorily completed.**
11. **The NWA submitted to CHEC the bridge structures (parts & materials) acquired under the Mabey Johnson Bridge Programme for the construction of the bridges under JDIP.** Despite our request, the Agency failed to provide schedules of the bridge structures made available to CHEC for the construction of the bridges. As a result, we were unable to determine how the provision of the bridge structures influenced the negotiation of the project price.



12. **Despite our request, the NWA failed to provide us with information relating to the amount and value of contracts, paid from JDIP funds, awarded prior to the implementation of the JDIP.**

## **Recommendations**

1. The MTW must be mindful of its fiduciary responsibility to ensure that Government and by extension taxpayers obtain value for every dollar spent. In that regard, it has a responsibility to use the competitive procurement method, which aims to achieve value for money and maintain transparency and fairness in the process. In cases where it is prudent to use the sole source methodology in the awarding of contracts, the MTW should ensure strict adherence to the GOJ procurement guidelines.
2. Going forward, where sub-contractors are required, the MTW should consider including as a condition of the contract the requirement for the employment of only NCC registered contractors, as sub-contractors, which will ensure the engagement of qualified and competent sub-contractors.
3. MTW/NWA should immediately implement a formal system for the negotiation of contract prices for all remaining JDIP projects. For example, the NWA should constitute a committee to conduct the negotiations and the minutes of meetings, along with all related documents, retained for audit purposes.
4. The NWA should ensure full compliance with the Contractors Levy Act. The NWA should recover from CHEC, and remit to Tax Administration of Jamaica the US\$24,000 in relation to the refurbishing of its Corporate Offices.
5. NWA should aggressively enforce its quality assurance standards to ensure the achievement of its mission to build and maintain a reliable, safe and efficient main road network and flood control system.
6. The NWA should institute a capital project planning process that ensures all the resources necessary for the successful implementation of projects are in place. In addition, the NWA should implement appropriate systems to facilitate the appropriate monitoring, controlling and reporting of all project activities.

## Part One Introduction

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- 1.1 We conducted an audit of the management of the Jamaica Development Infrastructure Programme (JDIP) to determine whether the Ministry of Transport and Works and the National Works Agency have employed appropriate systems to facilitate the efficient and effective management of the Programme.

### Audit Scope and Methodology

- 1.2 Our audit was planned and conducted in accordance with the Government Auditing Standards issued by the International Organization of Supreme Audit Institutions (INTOSAI). The planning process involved gaining a thorough understanding of JDIP and conducting an issue analysis to determine whether:
1. the Ministry is effectively managing the obligations under the contract
  2. there are mechanisms in place to ensure transparency in the selection of projects, Contractor and Sub-contractors; and
  3. there is an effective quality assurance system in place to ensure that value for money is obtained for projects undertaken.
- 1.3 Our assessment is based on the review of internal and external documents, interviews with senior officers and staff of the Ministry of Transport and Works, The National Works Agency (NWA) and the Road Maintenance Fund (RMF).

### Background

#### EXIM Bank of China US\$400 Million Preferential Buyer's Credit (PBC) Loan Facility

- 1.4 In June 2009, the Chinese Embassy informed the Ministry of Foreign Affairs and Foreign Trade that the EXIM Bank of China has launched a US\$10 billion Preferential Buyer's Credit (PBC) programme. In addition, the Embassy enclosed copies of the PBC application, which outlined the general terms and conditions of the credit, and the related documents required to access the PBC facility. The Embassy indicated that the Ministry of Foreign Affairs and Foreign Trade forward the documents to the Ministry of Finance and the Public Service.
- 1.5 The PBC application states, *"the borrower may be the Ministry of Finance of the borrowing country or any organisation designated by Ministry of Finance of the borrowing country and accepted by the Export-Import Bank of China."* Further, it explains, *"If the loan is borrowed by Ministry of Finance of the borrowing country, no guarantee is required. If the loan is*

*borrowed by any organisation designated by Ministry of Finance of the borrowing country accepted by the Export-Import Bank of China, a guarantee from Ministry of Finance of the borrowing country is needed.”*

1.6 In response to the invitation by the Chinese Embassy, the MTW, through its Executive Agency, NWA, developed a five year island wide US\$400 million Infrastructure Programme to carry out major infrastructure upgrades and rehabilitation works for main and parochial roads.

1.7 The NWA states the main objectives<sup>1</sup> of JDIP as follows:

- increased driver comfort along all roads – main and parochial;
- improved road safety;
- increase capacity of roads to handle vehicular volume;
- improved traffic management in town/city centres;
- rehabilitation of approximately 300km of parochial roads;
- rehabilitation of approximately 270km of main roads; and
- more effective periodic maintenance of road infrastructure.

1.8 The MTW then prepared a draft Cabinet Submission, dated July 22, 2009, for the proposed US\$400 million programme and solicited the comments of the Ministry of Finance and the Public Service. The draft Submission, sought Cabinet approval for the following:

- I. The US\$400 million Infrastructure Programme of the Ministry of Transport and Works to be implemented by the National Works Agency over four years.*
- II. The financing in the amount of US\$340M for the Infrastructure Programme through the Preferential Buyer’s Credit Facility being offered by the Government of China through the China EXIM Bank*
- III. The Ministry of Transport and Works to have discussion with the Ministry of Finance and the Public Service concerning the repayment of the US\$340M loan from the China EXIM Bank from the dedicated income of the Road Maintenance Fund to be derived from the fuel cess. The Submission outline details of the proposed US\$400M Programme as follows:*

- |                                         |          |
|-----------------------------------------|----------|
| • Repairs to the main road network      | US\$ 60M |
| • Repairs to the parochial road network | US\$ 50M |

<sup>1</sup> Source: <http://www.nwa.gov.jm/content/jdip.aspx>

- *Upgrading of the nation's road infrastructure*

US\$290M

**US\$400M**

1.9 The Ministry of Finance and Planning in its response dated August 17, 2009, states:

*"The Ministry of Finance and the Public Service supports the proposal to fund the repayment as it seems feasible based on the information presented, and on the assumption that there is no adverse change in the variables relating to the exchange rate and fuel tax collections. Also, the proposed flows from the Fuel Cess appear adequate to cover the financing of the loan, as well as cover the GOJ's counterpart funding for the projects. Additionally, in light of the liquidity challenges faced by the government and the generous loan terms proffered, it is recommended that GOJ access the US\$340M offered by the China Ex-Im Bank.*

*Notwithstanding the above, the Ministry of transport and Works should note and appropriately address the issues, as decisions are required regarding the following:*

- *the arrangements for the utilization of the fuel tax beyond year three (3);*
- *the allocation of this level of resources to one (1) project of the MTW capital B budget given the current economic framework; and*
- *Alternative financial arrangements to sustain the repayment obligations if the current level of collections falls below the projected targets."*

1.10 Cabinet approved the Programme via Decision #33/09 dated August 17, 2009. Consequently, the Ministry of Foreign Affairs and Foreign Trade submitted the preferential buyer's credit application to the Embassy of the People's Republic of China on August 20, 2009. In addition, the Minister of Finance and the Public Service by letter dated September 9, 2009 advised the China Exim Bank of the Cabinet's approval and confirmed Parliamentary guarantee for the loan. The letter also states, *"This loan is to be borrowed by the Road Maintenance Fund, a Government Agency that is the recipient of a dedicated fuel cess which has been approved by the Parliament of Jamaica."*

1.11 The US\$340 million Buyer Credit Loan Agreement was subsequently, signed by the Minister of Foreign Affairs and Foreign Trade and the President of the Export-Import Bank of China on February 3, 2010, 85% of the US\$400 million Infrastructure Programme. The remaining 15 per cent (US\$60 million) is to be provided by Jamaican Government through the RMF. **Figure 1** shows the main conditions of the agreement.

**Figure 1 Main conditions of the agreement**

Features	%	Cost US\$M	Conditions
<b>Contract Amount</b>	<b>100</b>	<b>400</b>	
EXIM Bank of China Loan Amount	85	340	
GOJ/RMF Pari Passu Contribution	15	60	
Interest	3		
Grace Period			60 months
Repayment			15 years
Lender			The Export-Import Bank of China
Borrower			Road Maintenance Fund
Guarantor			Government of Jamaica (GoJ)
Contractor			China Harbour Engineering Company Limited

- 1.12 The MTW entered into a formal contract with China Harbour Engineering Company (CHEC) on August 20, 2009, for US\$400M for the execution of work under JDIP. The contract document identifies the MTW as the Employer, CHEC as the Contractor and NWA as the Executing Agency. The NWA is responsible to implement and manage the Programme to ensure the completion of works in accordance with the agreed terms and conditions of the contract.
- 1.13 We gleaned from an undated document entitled “Notes to the Minister of Transport Works and the Permanent Secretary” that, in December 2008, the Commercial Counsellor at the Chinese Embassy in Kingston introduced CHEC to the Ministry of Transport and Works. It further states that part of the due diligence exercise undertaken on CHEC was conducted during a visit to China by a delegation headed by the Minister of Transport and Works, accompanied by the Permanent Secretary, the Managing Director of National Road Operating and Construction Company (NROCC) and the Chief Executive Officer of the NWA. Meetings were held with the Chinese Vice Minister of Transport and Works, their Vice Minister of Commerce and the President of China EXIM Bank. “All three persons spoke highly of CHEC and recommended them as a contractor they would support for any infrastructure programme or project”.
- 1.14 **Figure 2** outlines the proposed work plan for the Programme, which should span a period of five (5) years commencing February 2010 and ending in 2015:

**Figure 2 Proposed Implementation/Work Plan Over Five Years**

<b>Programme Summary</b>	<b>Year 1 (US\$'000)</b>	<b>Year 2 (US\$'000)</b>	<b>Year 3 (US\$'000)</b>	<b>Year 4/5 (US\$'000)</b>	<b>Total</b>
Bridges	11,000	25,000	15,000	15,000	66,000
Design, Planning, Project and Traffic Management	-	15,000	10,000	8,000	33,000
Main Roads, Development Roads and Retaining Wall	19,000	45,000	60,000	62,000	186,000
Parochial and Housing Scheme Roads	15,000	35,000	35,000	15,000	100,000
River Training	5,000	-	-	-	5,000
Traffic Management	2,000	-	-	-	2,000
Design, Mobilization, Project Management Institutional Strengthening	8,000	-	-	-	8,000
	<b>60,000</b>	<b>120,000</b>	<b>120,000</b>	<b>100,000</b>	<b>400,000</b>

## Part Two Selection of Contractor, Sub-contractors and Projects

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### **PBC Facility Allows for the Selection of the Main Contractor Using Competitive Tender Process**

- 2.1 In a letter dated July 23, 2009, the NWA indicated to the MTW that at least a conditional contract with a Chinese Contractor was needed for the submission of the PBC application to the EXIM Bank of China. As such, the NWA recommended that a conditional contract be entered with CHEC, subject to the financing being provided by the EXIM Bank, and indicated CHEC's willingness to sign such a contract. Consequently, the MTW submitted a signed Conditional Contract dated July 23, 2009 to CHEC for their signature. CHEC initialled the contract and returned same to the MTW by way of letter dated August 18, 2009. Two days later, both parties signed the formal contract on August 20, 2009.
- 2.2 However, we found that the loan agreement application for the Preferential Buyer's Credit facility with the China EXIM Bank allowed for the engagement of a Chinese contractor by competitive tender. Condition #5 of the Preferential Buyer's Credit facility states, *"Chinese enterprises be selected as contractor/exporter"*. However, the introductory paragraph of the PBC application states *"During the time when the contract is being negotiated between the foreign Owner and the Chinese Contractor, the Borrower intending to utilize the Preferential Buyer's Credit shall submit to the Export and Import Bank of China this application for Preferential Buyer's Credit arrangement."*
- 2.3 Further, Part 4 of the PBC application requires the applicant to indicate the status of selection process for the Contractor by stating whether bids were prepared, deadline for submission and opening date for bids. In addition, an undated document from the Embassy of the People's Republic of China states, *"According to China's principles on providing preferential export buyer's credit, the Jamaican Government is entitled to decide on its own to select the contractor from competent Chinese enterprise."* The Permanent Secretary, MTW in a letter dated July 19, 2011 to the Contractor General confirmed that there was no provision in the PBC agreement, which imposes, as a pre-condition, the engagement of CHEC as the main Contractor.

### **NWA opted to utilize the sole sourcing Procurement methodology in the selection of main contractor**

- 2.4 We found that the MTW opted to utilise the sole source procurement methodology in the selection of CHEC as the main contractor for the JDIP Project, which may have deprived the Government of the ability to achieve value for money and maintain transparency and fairness in the process.

- 2.5 NWA informed the National Contracts Commission of its decision to use the sole source procurement methodology to award the JDIP contract. We observed that the NCC, in its response dated January 20, 2010, was concerned that *“a contract of this size (US\$400M) should be entered into without competition in order to ensure that value for money was being obtained. The NWA, in letter dated July 13, 2010 invited the PIOJ to review and offer their comments on the proposed JDIP programme. The Planning Institute of Jamaica (PIOJ) in its comments, dated July 14, 2009, indicated that, “In light of the sole sourcing of the contractor, the MTW needs to ensure that due diligence is conducted and that the GOJ procurement guidelines are not breached.”*
- 2.6 The NWA, in a note dated August 11, 2011, states that *“Due diligence was done by MTW via visit to Beijing in 2009 and meetings held with state officials and China EXIM Bank. The Jamaica group toured the Port of Shanghai and viewed an impressive 32km, 6-lane bridge which was built by CHEC. The quality of the works was excellent and the project came in on time, and this gave support to CHEC as a first rate engineering company.”* The note further states, *“Because of the constraint of time (7 weeks for Cabinet approval, contract drawn, reviewed and signed, etc) CHEC was the only Chinese company on which due diligence checks were made at that time.”*

### **Sub-Contractors Were Selected From NCC Approved List in the Category of General Road Works**

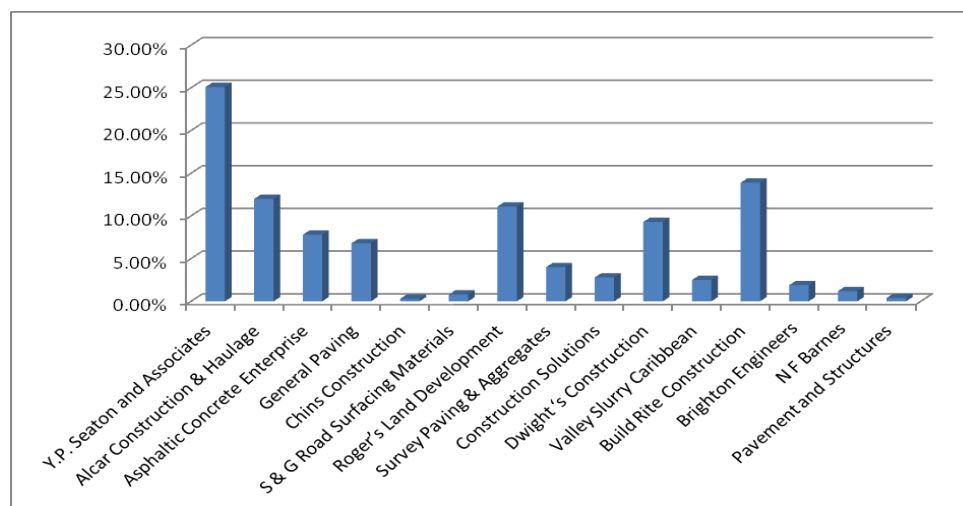
- 2.7 We observed that CHEC sub-contracted works, for the sum of JA\$12.3 billion, as at July 2011, to 15 NCC registered contractors. There was an agreement between NWA and CHEC to select Sub-contractors from Grade 1 contractors on the NCC list in the category of General Road Works. **Figure 3** shows the allocation of works among the sub-contractors, of which six were not listed as Grade 1 contractors in the category of General Road Works.
- 2.8 [Appendix 1](#) shows details of the works awarded to the 15 sub-contractors. We asked the sub-contractors to confirm the accuracy of the information provided by NWA. They were asked to respond by October 21, 2011. However, only five have responded to our request at the date of this report.



**Figure 3 Summary of Allocation of Contracts to Sub-contractors**

No.	Sub-contractors	Grades	Project Cost Between NWA & CHEC (JA\$)	Sub-contract Price Between CHEC & Sub-contractor (JA\$)
1	Y.P. Seaton and Associates	1	3,889,743,498.95	3,104,957,098.58
2	Alcar Construction & Haulage	1	1,872,586,302.85	1,485,394,824.83
3	Asphaltic Concrete Enterprise	2	1,211,049,327.53	965,029,993.68
4	General Paving	2	1,102,683,021.39	842,775,746.17
5	Chins Construction	2	50,727,806.00	39,993,462.19
6	S & G Road Surfacing Materials	2 <sup>2</sup>	67,952,777.00	94,297,310.00
7	Roger's Land Development	1	1,760,787,748.87	1,376,711,870.02
8	Survey Paving & Aggregates	1	703,223,531.55	490,139,370.87
9	Construction Solutions	1	504,267,944.30	347,508,792.78
10	Dwight 's Construction	1	1,448,517,868.53	1,152,122,621.30
11	Valley Slurry Caribbean	3	407,728,864.10	311,854,528.13
12	Build Rite Construction	1	2,468,001,194.96	1,720,820,108.87
13	Brighton Engineers	3	312,435,978.64	236,334,726.38
14	N F Barnes	1	178,184,702.70	143,154,607.05
15	Pavement and Structures	1	44,240,945.50	48,538,945.49
	<b>TOTAL</b>		<b>16,022,131,512.87</b>	<b>12,359,634,006.34</b>

**Percentage Allocation of Works to Sub-contractors**



## NWA could not substantiate the Process Used for the Selection of JDIP Projects

2.9 The NWA reported that, prior to JDIP, in carrying out its mandate to plan, build and maintain a reliable, safe and efficient main road network and flood control system, projects were selected based on continuous evaluation of road condition surveys, socio-economic factors, population density, access to essential services and agricultural interest. The NWA used information from the assessment to prepare the Agency's annual routine and periodic

<sup>2</sup> Road Maintenance

maintenance work plan for main roads and road structures (drains, culverts and retaining walls).

- 2.10 Meanwhile, the Planning and Research Division of the NWA identified and proposed for consideration a list of major projects deemed necessary, based on an economic assessment and analysis of results of a road condition survey. **Figure 4** The NWA's annual work plan would then be submitted to the MTW for the Permanent Secretary's approval and the Minister's no objection. Following which, the NWA submits the approved work plan to the RMF for review and funding. The major projects were funded from the Ministry's capital budgets.
- 2.11 In relation to projects under JDIP, the NWA advised that in addition to the established criteria noted at paragraph 2.7, the selection process was also informed by the National Transport policy, the Road Sector Master Plan, Vision 2030 and stakeholders<sup>3</sup> participation, among other considerations for both major projects and main roads. The NWA also informed that the prioritisation of municipal and housing scheme roads was undertaken through consultation with the Local Government Department/local authorities. Thereafter, the Master List was submitted to the MTW for the Permanent Secretary's approval and the Minister's No Objection. However, NWA failed to provide documents to substantiate the aforementioned selection process for JDIP projects.
- 2.12 NWA reported that the list of approved projects constituted the *Master list of projects to be executed under JDIP*. There was no consultation between the NWA/MTW and the RMF in the finalisation of the master list. **Figure 4** comprises the twenty major priority roads:

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<sup>3</sup> Parish and Municipal council, Police and Ministry of Education

**Figure 4 Major Roads Identified for Consideration**

	Projects	Description	Length (Km)	Priority Rank
1	Alexandria to Brown's Town	Rehabilitate existing 2 lane roadway	14.8	2
2	Annotto Bay Bypass	Construct New 2 lane roadway	4.5	2
3	Barbican Road	Road Widening (From 2 to 4 lanes)	1.1	1
4	Christiana Development Road	Construct New 2 lane roadway	1.0	1
5	Constant Spring Road	Road Widening (From 2 to 4 lanes)	4.0	1
6	Fern Gully	Rehabilitation of existing roadway	-	-
7	Ferris Cross to Mackfield	Rehabilitate existing 2 lane roadway	12.5	1
8	Hagley Park Road	Road Widening (From 2 to 4 lanes)	3.3	1
9	Mandela Highway	Widening and raising of highway	4.0	1
10	Marcus Garvey Drive	Road Widening (From 4 to 6 lanes)	2.5	1
11	Middle Quarters to New Market	Rehabilitate existing 2 lane roadway	14.0	2
12	Morant Bay to Cedar Valley	Rehabilitate existing 2 lane roadway	-	-
13	North Coast Highway – Segment 3	Completion of safety features	-	1
14	Ocho Rios Development Road	Road Widening (From 2 to 4 lanes)	1.3	3
15	Port Antonio to Duckenfield	Rehabilitate existing 2 lane roadway	61	1
16	Port Maria Bypass	Construct New 2 lane roadway	9.0	2
17	Porus Bypass	Construct New 2 lane roadway	9.2	3
18	Red Hills Road	Widening of several intersections		1
19	Spanish Town Road	Road Widening (From 2 to 4 lanes)	4.0	2
20	Vernamfield Link Road	Construct New 2 lane roadway		-
21	Bridge Programme	Rehabilitation of selected bridges		1

**Source:** Auditor General's Department compilation of NWA data

- 2.13 **Figure 5** shows that between June 2010 and February 2011, NWA has issued seven Work Orders for road works, amounting to JA\$19B and US\$45M, for the commencement of projects selected for implementation.

**Figure 5: Value of Work Order Issued Between June 2010 and February 2011 for JDIP Projects**

Work Order	Work Order Sum JA\$	Work Order Sum US\$	Effective Date
No. 1	569,537,263.68	-	June 16, 2010
No. 2	-	28,301,740.00	February 28, 2011
No. 3	3,603,183,981.68	-	September 28, 2010
No. 4	5,243,739,321.57	-	November 3, 2010
No. 5	6,769,309,142.80	5,806,585.84	November 22, 2010
No. 7	-	10,986,969.67	February 28, 2011
No. 8	2,965,776,638.88	-	February 18, 2011
	<b>19,151,546,348.61</b>	<b>45,095,295.51</b>	

**Source:** Auditor General's Department compilation of NWA data

## Part Three Stakeholders Responsibility

### Professional Service Agreement between NWA and CHEC

- 3.1 We found that NWA entered into an agreement with CHEC, in which the NWA would provide professional services to CHEC at a contract price of US\$3 million. The agreement defines 'Professional Services' as *"the provision of services by the Agency to the Contractor in connection with surveying and design works under JDIP."* The contract did not quantify the amount of surveying or design works to be executed by the NWA and the specific project on which these works would be performed.
- 3.2 The NWA, in a memorandum dated September 8, 2011, stated that the professional services rendered to CHEC involved preliminary designs and investigations for major projects, namely; Rio Grande Bridge, Christiana Development Road, Mandela Highway, Westmoreland Bridge, and Constant Spring Road. In addition, the provision of pedometrics surveys and sketch plan designs for road rehabilitation projects. However, NWA did not provide evidence of the actual work undertaken, despite written request.
- 3.3 The agreement further stated that CHEC would undertake refurbishing works at the NWA Corporate Office at a cost of US\$1.2 million. This amount would be deducted from the professional service contract price of US\$3 million, while, the balance of US\$1.8 million should be paid to the NWA in three equal instalments on the 15<sup>th</sup> day of February, March and April 2011.
- 3.4 Further, the contract specified that CHEC paid the US\$1.8 million in the Jamaican equivalent using the weighted average selling rate as published by the Bank of Jamaica (BOJ) as of the close of the business day preceding the date of payment. However, we found, as shown in **Figure 6**, that CHEC did not apply the contractual exchange rates resulting in a short payment of approximately JA\$3.3 million.

**Figure 6 Short Payment of Professional Service Fees**

Date of Payment	(US\$)	BOJ Rates (as per Contractual Date)	JA\$ Equivalent	Rate Used	JA\$ Equivalent	Difference (JA\$)
Feb 24, 2011	600,000	85.807	51,503,220	83	49,800,000	1,703,220
Mar 25, 2011	600,000	85.766	51,511,800	85	51,000,000	511,800
Apr 27, 2011	600,000	85.924	51,481,920	84	50,400,000	1,081,920
	<b>1,800,000</b>		<b>154,496,940</b>		<b>151,200,000</b>	<b>3,296,940.00</b>

- 3.5 The NWA's decision to award CHEC a contract for US\$1.2M or approximately JA\$102M to refurbish its corporate offices was in breach of the GoJ Procurement guidelines, which states that entities should obtain pre approval from the NCC for all sole sourcing contracts in excess of JA\$3M. The decision may have also deprived NWA of the economic gains of competitive tender. There was also no evidence that the required contractors levy of approximately US\$24,000 or JA\$2,040,000.00 was deducted, from the US\$1.2M paid to CHEC, and remitted to the Tax Administration of Jamaica in accordance with Sections 3 and 4 of the Contractors Levy Act.

### **Management Fee Being Paid From Special Consumption Tax (SCT)**

- 3.6 We found that RMF used revenue obtained from the Special Consumption Tax on fuel to pay NWA management fee for the implementation of JDIP. As at the date of the report, the NWA was entitled to US\$6,401,095 for management fee, which represents 5 per cent of the aggregate value (US\$128,021,915.87) of work submitted on five interim payment certificates. Of this amount, we observed that the NWA received approximately US\$3.6M.

### **The NWA Does Not Have a Formal Mechanism for Negotiating Bill of Quantities for Projects**

- 3.7 Appendix 5.2 requires the Contractor and the Ministry to negotiate the bill of quantities for individual projects under JDIP after the signing of the main Contract. Further, Clause 1.1.3 (amended) states in part, *"the Engineer shall negotiate the cost of each project with the contractor and submit the said cost to the Employer for approval. Once approved, each project will be configured as part of the contract by specific work orders as authorised by the contractor."* The contract named the Chief Executive Officer of the National Works Agency as the Engineer for the JDIP Programme.
- 3.8 NWA informed us that engineers' estimates, for individual JDIP Projects, were prepared using prevailing market prices obtained from surveys it conducted. The NWA used the related engineer's estimates to inform the negotiations of individual contracts awarded to CHEC.
- 3.9 However, the NWA failed to provide 19 of the 25 engineer's estimates we requested to determine whether the contract prices were fair and reasonable. In addition, the NWA did not provide documents to reflect the negotiation process used to determine the individual contract prices. Thus, we were unable to assess the transparency of the process.

### **Bridge Structure Acquired Under Mabey Johnson Bridge Programme Used in the Construction of Bridges Under the JDIP**

- 3.10 NWA informed us that it made available to CHEC bridge structure acquired under the Mabey Johnson Bridge Programme for the construction of the Bridges under the JDIP. Despite our request, the Agency failed to provide us with a schedule of related bridge

structures and costs. Consequently, we were unable to determine how such provisions influenced the contract prices for the construction of the related bridges.

### **JDIP Funds Used to Settle Outstanding obligations for Contracts Awarded Prior to the Programme**

3.11 We were informed that contracts awarded prior to the implementation of JDIP, were being paid for from the Programme's funds. Despite our request, the NWA failed to provide us with a schedule of these contracts and the associated costs.

### **RMF Unable to Identify Works Valued JA\$23.2 Million Claimed to Have been Done by NWA**

3.12 We found that the RMF was unable to physically identify works amounting to JA\$23M, which the NWA certified as being satisfactorily completed. RMF explained that the discrepancy was identified during its attempt to verify the works itemised on interim payment certificates submitted by the NWA. The inspection exercise was conducted by engineers from the RMF and representatives from the NWA. **Figure 7** shows the work unidentified by the RMF.

**Figure 7 Work Not Verified by RMF**

Works	CERTIFICATE #3 \$	CERTIFICATE #4 \$	CERTIFICATE # 5 \$	Total	Comments
RW-002:	-	-	3,115,632.51	3,115,632.51	Manhole Covers not raised, JPS pole not moved
RW-004	-	-	1,923,354.00	1,923,354.00	Base Slab not constructed
RW-008	-	98,141.21	-	98,141.21	Short Measurements
RW-012	-	700,000.00	-	700,000.00	Short Measurements (oiling)
RW-015	1,699,365.53	-	-	1,699,365.53	Short Measurements
RW-017	2,620,874.87	-	-	2,620,874.87	Pavement Measurement Short
RW-018	750,000.00	-	-	750,000.00	Unable to verify worksite
RW-021	-	-	565,574.40	565,574.40	Preparation of Road Formation (short)
RW-022	714,237.99	-	218,258.25	932,496.24	Short Measurement on base and earth work; Cert. 3 Asphalt Overlay ( short) Cert. 4
RW-027	100,428.18	-	-	100,428.18	Short Measurement on base and earth work
RW-031	-	294,430.71	1,401,935.43	1,696,366.14	Short Measurements (Side Walk Construction) Cert. 4 Kerb & Side walk measurement (short) Cert.5
RW-033	580,509.91	-	-	580,509.91	Base work and Formation(Short Measurement)
RW-039	2,942,750.14	-	-	2,942,750.14	Side Walk Kerb Gutter and Drains( short measurement)
IWP-003	1,336,664.50	4,236,000.00	-	5,572,664.50	Pavement ( short measurement) Cert. 3 Patching ( Unable to verify) Cert 4
<b>Total</b>	<b>10,842,972.33</b>	<b>5,230,430.71</b>	<b>7,224,754.59</b>	<b>23,298,157.63</b>	

**Source:** Auditor General's Department compilation of data provided by RMF

## Part Four Quality Assurance

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4.1 The National Works Agency has a Quality Assurance Directorate, which comprises two Quality Assurance arms; namely, Quality Assurance Unit (QAU) and Material Testing and Evaluation Unit (MTEU). The main function of the Directorate is to ensure that procedures are in place to achieve the desired outcome of projects based on agreed criteria. The Quality Assurance Unit monitors the work-in-progress of all major and special projects island wide. The Unit consists of four (4) Quality Assurance Officers assigned to each of the four regions, North Eastern, Western, Central and the Kingston Metropolitan Region (KMR). The NWA allots a maximum of 800-kilometre per month mileage to each Officer to conduct monitoring activities. The quarterly quality assurance Key Performance Indicators (KPI), for the period January to March 2011 requires the Quality Assurance Officers in the respective regions to:

**KPI 2:** monitor all active projects (in their respective region) and report on works examined to reflect quality and compliance;

**KPI 3:** conduct an audit on at least one project during the quarter and submit report(s) as per agreed deadline; and

**KPI 6:** conduct project surveillance inspections in the region, on specified elements of active projects and prepare reports.

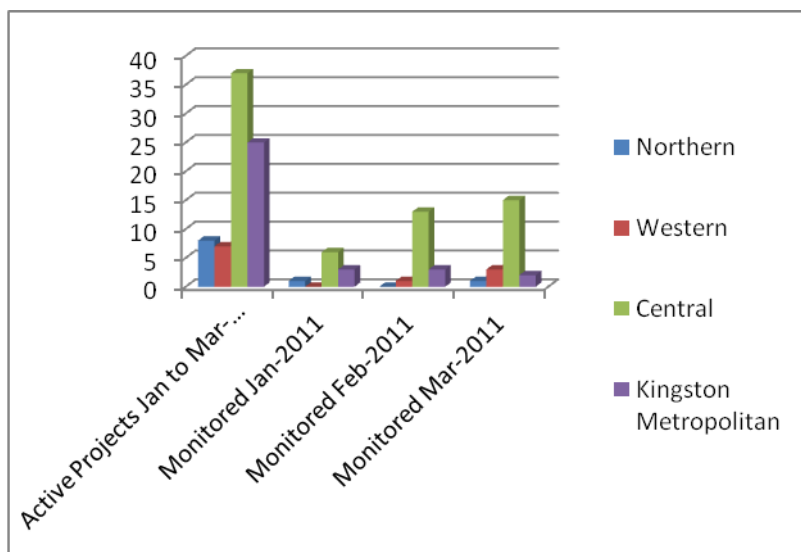
### **NWA Fails to Meet Key Performance Indicators (KPI) for the Monitoring, Surveillance and Audit of JDIP Projects**

4.2 We found that the quality assurance mechanism employed by the NWA for monitoring active projects under JDIP did not meet the KPIs targets. We analysed the monthly reports for January, February and March 2011 and found that the NWA only conducted monitoring activities on 13, 22 and 27 per cent of the active projects respectively. Further, we observed that the NWA conducted no monitoring activities for at least eight active projects in St. Ann, Manchester and St. Andrew in that quarter. **(Figure 8)** In addition, the NWA failed to provide copies of project audits conducted within the four regions since the start of JDIP in 2010.

**Figure 8 Analysis of Monitoring of Active Projects under JDIP**

REGIONS	Active Projects in Quarter	Monitored Jan-2011	Monitored Feb-2011	Monitored Mar-2011
<b>Northern</b>	<b>8</b>	<b>1 (12.5%)</b>	<b>- (0%)</b>	<b>1 (12.5%)</b>
St. Ann	2	-	-	-
St. Mary	2	1	-	-
Portland	4	-	-	1
<b>Western</b>	<b>7</b>	<b>- (0%)</b>	<b>1 (14%)</b>	<b>3 (43%)</b>
Trelawny	6	-	-	3
St. James	1	-	1	-
<b>Central</b>	<b>37</b>	<b>6 (16%)</b>	<b>13 (35%)</b>	<b>15 (40%)</b>
St. Elizabeth	8	-	4	4
Manchester	3	-	-	-
Clarendon	26	6	9	11
<b>Kingston Metropolitan</b>	<b>25</b>	<b>3 (12%)</b>	<b>3 (12%)</b>	<b>2 (8%)</b>
Kingston	14	1	-	-
St. Andrew	3	-	-	-
St. Catherine	7	1	2	1
St. Thomas	1	1	1	1
<b>Total</b>	<b>77</b>	<b>10 (13%)</b>	<b>17 (22%)</b>	<b>21 (27%)</b>

**Source:** Auditor General's Department analysis of NWA data ([Appendix 2](#))



**Source:** Auditor General's Department Graphical Expression of the NWA's Monitoring Activities

### **Late Submission of Documents and lack of Review Threatened Quality Assurance**

- 4.3 Clause 14.1 of the contract states, *"Within 28 days after commencement of works, the Contractor shall submit to the Engineer for his review and consent a programme showing the order of procedure and the estimated time to be spent on each section of the works including Temporary Works."* The contract further states *"Following review and consent by the Engineer, the Contractor shall at frequent interval compare the progress of the works*



*with the programme and shall whenever required to do so submit a revised and up-to-date programme to the Engineer.” The related Appendix enclosed in the contract document states that the “period of submission of Programme, Safety, Traffic, Labour plans and Risk Management i.e. quality control and environmental protection Plans and cash flow projections shall be submitted within 28 days after the date of Commencement.”*

- 4.4 We found that the contractor was tardy in the submission of the requisite documents to the NWA. For example, the NWA was unable to present 21 of the 35 documents requested for seven of its active projects as shown in **Figures 9**. Further, the NWA does not employ a system to indicate the dates it received the relevant documents. However, after a review of some of the documents presented for the Queens-borough Bridge, we noted that the dates on the documents were up to four months after the commencement date, October 25, 2010. **(Figure 10)** We saw no evidence to indicate that the NWA made any effort to ensure that the contractor faithfully comply with these conditions of the related contract. The NWA was also unable to provide evidence of its review of the relevant documents.

**Figure 9 Requested Documents not Provided**

Projects	Work Programme	Quality Control	Health & Safety	Traffic Control	Environmental Protection
Christiana Development	Not Provided	Not Provided	Not Provided	Not Provided	Not Provided
Queens Borough Bridge	Seen	Seen	Seen	Not Provided	Seen
Rio Grande Bride	Not Provided	Seen	Not Provided	Not Provided	Not Provided
Queen’s Drive (St. James)	Seen	Seen	Not Provided	Seen	Seen
Newport West (Kingston)	Seen	Seen	Seen	Seen	Not Provided
Springfield, St. Elizabeth	Not Provided	Seen	Not Provided	Not Provided	Not Provided
Salt River Road	Not Provided	Seen	Not Provided	Not Provided	Not Provided

**Figure 10 BW001 - Queens Borough Bridge Project: Commencement Date - Oct. 25, 2010**

Documents/ Plans	Date Documents Received	Remarks	Period Late
Work Programme	Not Specified	Document Dated March 5, 2011	4mths
Method Statement	Not Specified	Document dated Dec. 28, 2010	2mths
Quality Control & Testing Plan	Not Specified	Document Dated Dec. 16, 2010	2mths
Health & Safety Plan	December 13, 2010	Document dated Dec. 5, 2010	1mth
Traffic Control Plan	Mar. 03, 2011	-	4mths
Environmental Protection Plan	Not Specified	Document Dated Dec. 23, 2010.	2mths
Labour Employment and Mgt Plan	Not Specified	Document Dated Dec 28, 2010	2mths
Cash Flow Projection	Not Specified	-	-

- 4.5 Further, we observed that the NWA was not consistently reviewing these documents to ensure better monitoring of projects under the programme. In that, the Contractor, as per contractual obligations, is required to submit for review Quality Control and Testing Plans for each project. The NWA was tardy in conducting the required review of the plans submitted. The NWA did not provide evidence of its reviews for eight of the 12 projects audited. Further, the NWA did not provide quality control plan for the Christiana

Development Project. **(Figure 11)** The contractor's failure to provide critical tests results to verify that the works met the requisite quality control criteria were the highlight of two Project Surveillance Inspection Reports for the quarters ending December 2010 and March 2011. **(Figure 12)**

**Figure 11** Review of Quality Control and Testing Plan for JDIP Projects

Projects	Quality Control Plan Submitted	NWA Review Notes
Christiana Development	Not Provided	Not Provided
Fern Gully Development	Seen	April 12, 2011
Rio Grande Bridge	Seen	December 2010
Cassia Park Bridge	Seen	April 12, 2011
Queens-borough Bridge	Seen	April 12, 2011
Queen's Drive (St. James)	Seen	Not Provided
Newport West (Kingston)	Seen	Not Provided
Down Town parade	Seen	Not Provided
Springfield, St. Elizabeth	Seen	Not Provided
Salt River Road	Seen	Not Provided
Seaview – Queensbury and Belvedere – Queensbury, St. Elizabeth	Seen	Not Provided
Sunset Crescent (Four Path, Clarendon)	Seen	Not Provided

**Figure 12** Major Concerns Highlighted in Project Surveillance Inspection Report

QUARTER ENDING MARCH 2011	
<b>Project:</b> Mocho-Springfield, St. Elizabeth JDIP Road Rehabilitation works	
1.	No Quality Control/Assurance Plan was seen for work being executed
2.	No test results were seen for concrete kerb blocks and marl base material ( <i>Densities, Sieve Analysis, CBR &amp; Proctor</i> ) used on the project
3.	No project programme detailing critical paths and milestones during the project, as required by the contract, was seen on file. ( <i>Letter dated Nov 22, 2010 from supervising officer to the sub-contractors regarding the submission of work programme for the monitoring of works.</i> )
4.	The letter requesting within 28 days, Method Statement, QC, Safety, Traffic Control and Environmental Protection Plan was seen, however, none was seen on file.
<b>Project:</b> Queen's Drive, Montego Bay, St. James (Road Rehabilitation)	
1.	No asphalt concrete core test results were seen, also, the adequacy of test frequency of asphalt concrete laid could not be determined
<b>Project:</b> Sunset Crescent (Four Path), Clarendon (Road Rehabilitation)	
1.	No test results were seen on the project file for concrete and asphalt works completed.
<b>Project:</b> Queensbury and Belvedere – Queensbury, St. Elizabeth (Road Rehabilitation)	
IV.	No Quality Control/Assurance Plan was seen for the works being executed
V.	Test results were seen for the Field Density; however, two areas were out of specification on the Belvedere – Queensbury section (94.2% and 93.9%) which is below the minimum 95% compaction requirement.
VI.	No test results were seen on the project file for marl and concrete works completed
QUARTER ENDING DECEMBER 2010	
<b>Project:</b> Black River Hospital Sea Wall Critical Retaining Wall Programme.	
1.	There was no Quality Control/Assurance plan seen for the works being executed
<b>Project:</b> Gordon Hill-Kentish, Point Hill-Rennal & Bamboo-Worthy Park, St Catherine	
1.	Test results were inadequate as only one (1) concrete strength result was available for each of the three (3) locations

**Source:** NWA Quarterly Project Surveillance Inspection Reports

## Part Five Major Projects

### Five Major Projects Being Undertaken during Year One of JDIP

- 5.1 The NWA selected five major projects to be undertaken during year one (2010-11) of JDIP. The construction of the Christiana Development Road in the parish of Manchester, improvement and rehabilitation of the drainage system and road condition in the Fern Gully, St. Ann and the construction of 3 bridges, Rio Grande, Portland, Cassia Park and Queens-borough, St. Andrew, to provide safe and reliable access to and from adjoining communities.

### Christiana Development Road Project

- 5.2 The Christiana Development Road Project involves the construction of a 1-kilometre 2-lane urban carriageway, along with hard shoulder on both sides and the appropriate drainage infrastructure and traffic signals. This, at a contract cost of US\$10.3 million. The stated purpose of the project is to reduce congestion in the town of Christiana while improving travel time along the Manchester to Trelawny main road. The main Contractor, CHEC is executing the work under the project, which commenced March 2011 and has a scheduled completion date of March 2012. The project cost incurred as at July 2011 amounted to JA\$481M. The project was 52 per cent completed at that date.

**Picture 1** A section of the Christiana Development Road Project



### Poor Planning Results in Several Changes to the Design and Scope of the Road

- 5.3 We observed that the NWA has not ensured that proper planning preceded the commencement of construction works on the Christiana Development Road. In that, five months after the commencement of works, the NWA was uncertain as to the area of lands required for the construction of the road.

- 5.4 We observed that the NWA in September 2010, pending the final design, accepted the preliminary drawings prepared by the Contractor. Subsequently, MTW sought and obtained Cabinet's approval, Decision no. 38/10 dated December 6, 2010, for the acquisition of 14 parcels of land (approximately 24,300 m<sup>2</sup>, at an appraised value JA\$56.1 million) required for the construction of the road. However, one month after the December 6, 2010 Cabinet Decision, the NWA in a letter dated January 6, 2011, noted that the National Land Agency (NLA) has identified an additional 12 parcels of land requiring purchase, occasioned by the final design alignment. With this, the NWA requested that the MTW seek approval for the purchase of additional lands. However, the NLA recommended, *"Cabinet should be asked to approve acquisition of parcels of lands along the entire route of the new road"* to prevent delays. The NLA also suggested, *"in view of the urgency of the situation, that Cabinet Approval is sought, pending the valuations being completed. This will allow us to gazette the additional properties and start the process."*
- 5.5 With this, Cabinet by Decision No. 6/11 dated February 14, 2011 approved the acquisition of lands along the entire corridor from Apple Tree Plaza to Jimbo's Gymnasium along the main road from Chudleigh to Coleyville. The appraised value of the additional 12 parcels totalled JA\$22.8 million.
- 5.6 Further, we observed that NWA failed to identify obvious physical structures, in the path of the new road, during the design phase of the project. Obvious physical structures, which include a gate, a section of a wall and road and a section of the Christiana High School fence, six residential houses and a grave, which were within the scope of the work, were discovered during the construction phase. All of which, except the grave, had to be demolished and relocated at a cost of US\$301,436.22. **(Figure 13)** The remains of the grave cost JA\$265,000 to exhume and re-inter.
- Figure 13 Physical Structures Haphazardly Discovered**
- | Details                                    | Date of Request for Approval | Costs (US\$)      |
|--------------------------------------------|------------------------------|-------------------|
| Relocation of Abattoir (Animal Market)     | January 14, 2011             | 283,440.12        |
| Relocation of Christiana High School Fence | January 18, 2011             | 5,953.30          |
| Relocation of k0+140 Gate/Section of wall  | February 22, 2011            | 2,942.49          |
| Demolition of six (6) Residential Houses   | June 24, 2011                | 12,042.80         |
| <b>TOTAL:</b>                              |                              | <b>301,436.22</b> |
- 5.7 We obtained correspondence in which the Contractor admitted, *"Although the project is small, only 1 km long, the geological conditions make this project very complex. Based on site conditions during construction unforeseen and geotechnical issues improvements on the design are made."* The NWA also admitted to making several changes to the road layout after the final design.
- 5.8 We also observed that the NWA by letter and site instructions requested CHEC to pay sums totalling JA\$20,517,591, to various individuals and companies for goods and services

indicated in **Figure 14**. However, NWA did not provide the related supporting documents, including the competency of the assessor, to allow for the authentication of the payment of JA\$8,081,100.00 for the purportedly damaged crops.

**Figure 14 Miscellaneous Payments for Christiana Development Project**

No.	Correspondence	Description	Amount (J\$)
1	Letter from CEO to CHEC dated 2011 March 15	Crop Damage # 1 Payments	2,144,550.00
2	Site Instruction No. 10b	Relocation of JPS Poles	3,773,991.71
3	Site Instruction No. 11	Crop Damage # 2 Payments	4,122,300.00
4	Site Instruction No. 13	Payments for land acquisition	7,972,500.00
5	Site Instruction No. 14	Crop Damage # 3 Payments	1,814,250.00
6	Site Instruction No. 16	Relocation of Private Poles	305,000.00
7	Site Instruction No. 17	Payment to Lyn's Funeral Home	265,000.00
8	Site Instruction No. 18	Payment for relocation costs	120,000.00
			20,517,591.71

#### **JDIP Loan Funds Used to Acquire Lands for Road Construction**

- 5.9 The MTW by way of Cabinet Submission dated November 10, 2010 and February 11, 2011, sought and obtained Cabinet's approval for the acquisition of lands for the Christiana Development Road Project. The approval states that deposit required during the current Financial Year (2010-11) should be obtained from the RMF and the additional funds should be provided in the 2011-12 Budget.
- 5.10 The NWA, in a letter dated July 12, 2011 to the MTW states, *"By virtue of the fact that a provision was never made in the Budget for these purposes, all lands acquired under the captioned project thus far have been acquired through the Jamaica Development Infrastructure Programme."* The letter further noted that Work Order # 007, dated February 28, 2011 issued to CHEC, includes US\$650,000 for land acquisition and that *"all payments involving land acquisitions have been advanced by CHEC and subsequently recovered through its submission and payment of certificates."* We observed that the NWA, in two letters dated May 3, and July 4, 2011, informed CHEC to arrange payments, as a matter of urgency, to four land owners for the sum of JA\$8,197,500. The aggregate appraised value for lands required for the road construction amounts to JA\$78.9 million.
- 5.11 In a letter to the Ministry of Finance and the Public Service dated July 25, 2011, the NWA noted *"In the submission of the 2011/12 Estimates of Expenditure, the NWA inadvertently omitted the amount required for the acquisition of the Christiana lands and this error was not picked up by the MTW, consequently, the amount of \$84.6M approved by Cabinet, will be included in the submission of the Ministry's supplementary budget to cover this cost."*

- 5.12 At the date of the report, the NWA has finalized the purchase of five of the 26 parcels of land identified for the road construction. While, it acquired 14 parcels using the compulsory acquisition method. ([Appendix 3](#))

### **Fern Gully Restoration and Rehabilitation Project**

- 5.13 The Fern Gully Restoration and Rehabilitation Project involves the construction of storm water drains, the placement of concrete driving surface and the rehabilitation of sections of the existing asphalt pavement. The stated objective of the project is “to substantially reduce the possibility of flooding in Ocho Rios, St. Ann as a result of storm water runoff from Fern Gully and its environs.” The project involves the construction of 1.60 kilometre of rigid pavement along the existing Fern Gully route together with the associated drainage works, the construction of reinforced concrete storm water drain, box culverts pedestrian sidewalks, protected handrails and the rehabilitation of the existing asphalt concrete roadways. The contract which commenced April 2010, and slated for completion April 2012 was priced at JA\$680,108,955.62. The project was sub contracted to Y.P. Seaton and Associates Limited. The project cost incurred as at July 2011 was not provided, despite requested. The project was 15 per cent completed at that date.

### **Rio Grande Bridge Project**

- 5.14 The Rio Grande Bridge Project involves the construction of a 210-meter, 2-lane composite bridge on a new alignment, downstream of the existing bridge at a cost of US\$28,801,740. The stated objective of the project is “to provide a safe and reliable access across the Rio Grande River.
- 5.15 According to the NWA Monthly Progress Report – May 2011, the bridge will guarantee access to and from Port Antonio for residents, businesses and visitors. There is approximately 500m of approach road to be constructed. The road template will have two 3.65m driving lane with 1.5m wide shoulders. The new pavement structural section will consist of a hot-mix asphalt concrete layer placed upon a new base and embankment shoulders, and will have a design life of 20 years. The composite bridge was designed to accommodate the 50 years return flood event. China Harbour Engineering Company Limited will undertake all the works on this project. The contract which commenced October 1, 2010 and slated for completion July 30, 2012 was priced at US\$28,801,740.00. The project cost incurred as at July 2011 amounted to JA\$15.1M. The project was 37 per cent completed at that date.

### **Cassia Park Bridge Project**

- 5.16 The proposed work on the Cassia Park Bridge Project comprise a plate of girder superstructure, supported by reinforced concrete abutments, with a 2-lane roadway, sidewalks railing and approaches spanning approximately 38 meters between abutments. The work also includes repairs to the existing concrete waterway. The intended purpose of

the project is to improve the safety and efficiency of the traffic in the Cassia Park Community and environs. The contract which commenced April 2010, and slated for completion April 2012 was priced at JA\$183,767,834.51. The project was sub contracted to Y.P. Seaton and Associates Limited. The project cost incurred as at July 2011 amounted to JA\$28.8M. The project was 15 per cent completed at that date.

### **Queens-borough Bridge Project**

- 5.17 The proposed work on the Queens-borough Bridge comprises a plate of girder superstructure, supported by reinforced concrete abutments, with a 2-lane roadway, sidewalks railing and approaches spanning approximately 30 meters between abutments. The work also includes repairs to the existing concrete waterway. The project intends to improve the safety and efficiency of traffic transit in the Queens-borough community and environs. The contract which commenced April 2010, and slated for completion April 2012 was priced at JA\$154,299,077.24. The project was sub contracted to Y.P. Seaton and Associates Limited. The project cost incurred as at July 2011 amounted to JA\$29M. The project was 18.90 per cent completed at that date.

## Appendices

### Appendix 1 Detail of JDIP Projects Awarded to Sub-Contractors

JDIP Summary of Works Sub-contracted to Local Contractors (Details: Tables 1 -15)

	Sub-contractors	Project Cost Between NWA & CHEC (JA\$)	Sub-contract Price Between CHEC & Sub-contractor (JA\$)	Expenditure as at July 2011
1	Y.P. Seaton and Associates	3,889,743,498.95	3,104,957,098.58	712,686,276.27
2	Alcar Construction & Haulage	1,872,586,302.85	1,485,394,824.83	826,185,933.94
3	Asphaltic Concrete Enterprise	1,211,049,327.53	965,029,993.68	561,881,694.46
4	General Paving	1,102,683,021.39	842,775,746.17	314,138,910.13
5	Chins Construction	50,727,806.00	39,993,462.19	29,163,780.00
6	S & G Road Surfacing Materials	67,952,777.00	94,297,310.00	66,128,519.00
7	Roger's Land Development	1,760,787,748.87	1,376,711,870.02	872,832,631.26
8	Survey Paving & Aggregates	703,223,531.55	490,139,370.87	289,834,687.00
9	Construction Solutions	504,267,944.30	347,508,792.78	394,277,176.86
10	Dwight 's Construction	1,448,517,868.53	1,152,122,621.30	834,437,062.35
11	Valley Slurry Caribbean	407,728,864.10	311,854,528.13	300,658,096.69
12	Build Rite Construction	2,468,001,194.96	1,720,820,108.87	1,690,471,917.09
13	Brighton Engineers	312,435,978.64	236,334,726.38	89,258,544.63
14	N F Barnes	178,184,702.70	143,154,607.05	159,973,742.70
15	Pavement and Structures	44,240,945.50	48,538,945.49	44,240,945.50
	<b>TOTAL</b>	<b>16,022,131,512.87</b>	<b>12,359,634,006.34</b>	<b>7,186,169,917.88</b>

**Table 1 Works Sub-contracted to Y.P Seaton & Associates**

Projects Title	Start Date	Est. End Date	Cost of Project <sup>4</sup>	Price of Project <sup>5</sup>	Expenditure as at July 2011	% Complete
RW-005 New Port West - 1 <sup>st</sup> Street	Nov-10	Nov-11	94,280,931.60	71,888,045.00	33,262,911.60	85%
RW-005 New Port West- 2 <sup>nd</sup> Street	Nov-10	Nov-11	94,195,395.60	71,816,765.00	33,177,375.60	75%
RW-005 New Port West-Link Rd. (6 <sup>th</sup> & 7 <sup>th</sup> Ave.)	Nov-10	Nov-11	12,890,222.40	9,837,982.00	12,890,222.40	95%
RW-005 New Port West Bustamante- 6 <sup>th</sup> Ave.	Nov-10	Nov-11	21,685,660.80	16,514,422.00	7,650,520.80	98%
RW-005 New Port West – Drainage	Nov-10	Nov-11	56,352,912.70	35,973,814.00	43,907,098.30	80%
RW-005 New Port West - Eight Avenue	Nov-10	Nov-11	9,740,676.00	5,968,754.00	6,019,644.00	75%
RW009-Fairview Community Roads	May-11	May-12	180,000,000.00	147,990,899.38	32,675,399.00	15%
RW020 Hope Bay- Coopers Hill, Portland	Jan-11	Dec-11	394,267,427.00	336,802,805.96	37,057,249.00	8%
RW022-Bangor Ridge-Manhoe, Portland	Jan-11	Dec-11	73,654,038.34	63,437,242.33	10,531,304.00	12%
RW022-Mt. Pleasant (PC)Portland	Jan-11	Dec-11	23,297,787.11	19,394,070.80	23,334,389	95%
RW022 Smithfield Road Portland	Jan-11	Dec-11	13,653,694.08	10,799,919.46	-	0%
Friendship Road (Portland) <sup>6</sup>	Jan-11	Dec-11	19,480,277.64		15,887,771	98%
CW-003 Border Cuffy Gully (St. Mary)	Oct-10	Dec-11	52,544,975.49	43,069,545.55	50,621,022.44	100%

<sup>4</sup> Contract cost between NWA and CHEC

<sup>5</sup> Contract price between CHEC and Sub-contractor

<sup>6</sup> Replaced RW022 Smithfield Road, Portland



RW-004 John's Hall (St. James)	Nov-10	Nov-11	445,877,949.00	384,026,081.51	145,204,343	30%
RW-037 Dumfries-Canaan (St. James)	Feb-11	Feb-12	137,177,256.00	108,368,791.47	41,066,243.26	50%
Springmount-Sunderland (St. James)	Feb-11	Feb-12	88,806,878.75	72,452,307.14	10,718,688.53	35%
Granville -Retirement (St. James)	Feb-11	Feb-12	215,801,644.59	164,584,647.52	33,239,858.72	50%
Norwood -Ironshore (St. James)	Feb-11	Feb-12	256,861,465.37	190,078,049.51	50,941,861.21	25%
Rosemount Crescent (St. James)	Feb-11	Feb-12	41,731,159.18	33,017,062.31	1,930,745.34	50%
Hatfield (PC)-St. James	Feb-11	Feb-12	10,002,143.60	7,929,314.88	1,000,027.02	40%
King Street-(Green Pond)-St James	Feb-11	Feb-12	206,314,793.08	147,694,964.72	14,120,573.65	35%
Palmyra-Cornwall-ST. James	Feb-11	Feb-12	67,806,515.19	54,511,804.20	30,780,521.57	70%
RW-006 Karlston Glades	Jan-11	Jan-12	355,143,828.06	295,134,096.83	76,668,506.83	55%
Cassia Park Bridge	Apr-11	Apr-12	183,767,834.51	151,267,432.06	28,851,550.02	16%
Queens-Borough Bridge	Apr-11	Apr-12	154,299,077.24	126,955,995.65	29,162,525.6	19%
Fern Gully Rehabilitation	Apr-11	Apr-12	680,108,955.62	535,442,285.30		15%
<b>Grand Total</b>			<b>3,889,743,498.95</b>	<b>3,104,957,098.58</b>	<b>712,686,276.27</b>	

**Table 2 Works Sub-Contracted to Alcar Construction & Haulage**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
CW006Highfield Drive, Ensom City (Culvert)	Jan-11	Nov-11	10,900,713.95	8,966,295.04	10,900,713.95	100%
RW013 Featherbed Lane, Upper-Lower Homestead, Highfield Drive, Ensome City	Jan-11	Nov-11	63,987,331.65	51,464,629.33	9,542,558.71	65%
RW013 Tulloch-Zion Hill Bridge	Jan-11	Dec-11	271,483,384.63	205,098,988.37	201,764,163.47	73%
RW013 Ewarton-Worthy Park	Jan-11	Dec-11	561,424,842.95	465,881,047.25	195,977,746.69	55%
RW-042 Albion –Llandewey	Nov-10	May-12	454,014,725.08	351,604,800.99	355,126,861.25	75%
RW-042 Unity-Toms River (St. Thomas)	Apr-11		204,903,085.20	161,604,800.99	8,140,209.08	5%
RW-34 Bath-Barretts Gap	Feb-11	Jan-12	92,995,312.34	73,127,193.49	9,936,698.24	30%
RW-34 Morant Crossing-White Hall	Feb-11	Jan-12	165,942,867.89	130,713,029.68	24,907,381.22	28%
RW-34 Friendship Wilmington (Stewart Mt. Rd)	Mar-11	Jan-12	46,934,039.16	36,934,039.69	9,889,601.33	25%
<b>Grand Total</b>			<b>1,872,586,302.85</b>	<b>1,485,394,824.83</b>	<b>826,185,933.94</b>	

**Table 3 Works Sub-contracted to Asphaltic Concrete Enterprise**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW-017 Orange Street (Kingston)	Dec-10	Nov-10	136,181,324.66	108,176,675.52	90,105,312.03	98%
RW-017 West Parade (Kingston)	Dec-10	Nov-10	45,480,149.69	36,245,879.04	22,112,965.43	86%
RW-017 East Parade (Kingston)	Dec-10	Nov-10	33,106,588.77	27,574,294.08	19,608,659.77	80%
RW-017 North Parade (Kingston)	Dec-10	Nov-10	70,346,716.66	56,277,372.48	44,380,335.65	92%
RW-017 South Parade (Kingston)	Dec-10	Nov-10	58,322,640.10	46,475,712.00	22,311,306.11	68%
RW027 Bay Farm Road	Jan-11	Dec-11	180,837,584.00	142,349,202.16	0	10%
RW-27 Paddington Drive (St. Andrew)	Mar-11		36,437,763.68	28,712,464.73	16,254,239.71	95%
RW-27 Chevy Chase (St. Andrew)	Feb-11	Mar-11	21,461,921.73	18,432,015.58	17,987,095.14	99%
RW-27 Barbican Road (St. Andrew)	Mar-11		118,123,587.43	92,995,517.61	52,390,112.87	60%
RW-27 Meadowland Drive (St. Andrew)	Feb-11	Mar-11	29,725,248.94	23,757,847.47	28,044,125.49	98%
RW-27 Maynard Road (St. Andrew)	Feb-11	Mar-11	20,596,149.77	14,406,018.73	16,998,352.83	98%
RW-33 Lloyds-Lowe mountain (St. Thomas)	Feb-11	Mar-12	148,023,563.53	101,274,955.30	75,410,756.60	40%
RW-33 Springfield (St. Thomas)	Feb-11	Mar-12	16,688,277.57	13,105,857.91	13,518,658.96	90%
RW-035 Martha Brae-Peru (Trelawny)	Jan-11	Dec-11	69,794,239	69,912,299.62	16,718,263	35%
RW-035 Martha Brae-Kinloss (Trelawny)	Jan-11	Dec-11	88,676,005	54,969,409.45	4,678,437.87	20%
RW-035 Clarks Town Hyde (Trelawny)	Jan-11	Jan-12	32,034,065	25,150,970.00	16,149,571	60%
IWP001B-kingston, St. Andrew, & St. Cath.	Oct-10	Mar-11	105,213,502	105,213,502	105,213,502.00	100%
<b>Grand Total</b>			<b>1,211,049,327.53</b>	<b>965,029,993.68</b>	<b>561,881,694.46</b>	

**Table 4 Works Sub-contracted to General Paving**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW031 Port Royal Street (Kingston)	Jan-11	Dec-11	107,731,470.71	84,824,533.99	48,068,899.64	70%
RW031 Water Lane & Pechon Street (Kingston)	Jan-11	Dec-11	73,030,658.12	57,220,170.52	23,382,798.70	85%
RW031 Upper King Street (Kingston)	Jan-11	Dec-11	51,483,281.14	40,577,748.13	-	0%
RW031 Ocean Boulevard (Kingston)	Jan-11	Dec-11	55,687,147.55	43,886,493.64	-	0%
RW031 Church Street (Kingston)	Jan-11	Dec-11	51,660,173.30	40,727,923.90	-	0%
RW031 West Queen Street (Kingston)	Jan-11	Dec-11	31,167,735.78	24,481,167.22	14,200,860.44	90%
RW031 Haywood Street (Kingston)	Jan-11	Dec-11	28,285,080.40	22,226,779.34	12,381,941.18	85%
RW031 Harbour Street (Kingston)	Jan-11	Dec-11	45,082,669.16	35,363,375.74	3,539,047.19	82%
RW031 Temple Meade (St. Andrew)	Mar-11	Dec-11	33,470,768.25	28,054,859.80	32,120,768.24	90%
RW031 Farrington Crescent (St. Andrew)	Mar-11	Dec-11	10,920,672.11	8,646,815.09	32,120,768.24	90%
Rock Hall (Portland)	Mar-11	Dec-11	24,403,577.28	19,209,057.54	1,137,750.00	65%
Cuffy's Head-West End (Phase 1) (Portland)	Mar-11	Dec-11	12,687,123.08	5,963,409.71	7,550,870.00	95%
Cuffy's Head West End (Phase 11) (Portland)	Mar-11	Dec-11	12,511,669.93	9,848,090.33	2,829,764.00	100%
Vinery (Portland)	Mar-11	Dec-11	11,686,204.51	1,570,409.47	9,698,375.00	100%
Swift River-Shirley Castle (Portland)	Mar-11	Dec-11	2,342,387.50	2,350,000	2,342,388.00	100%
Buff Bay- Whitehall (Portland)	Mar-11	Dec-11	3,91,008.12	2,671,974.38	3,082,735.00	95%
Tranquility- Bangor Ridge (Portland)	Mar-11	Dec-11	9,400,368.03	7,399,271.14	2,694,116.00	90%
Fairfield Primary School (Portland) Overlay	April-11		9,271,977.28	7,296,422.64	-	95%
School House Corner- Swift River (Culvert)	Jan-11	Dec-11	3,225,180.04	2,350,000	3,225,180.00	100%
Chepstowe to Peters Hill (Restoration)	Jan-11	Dec-11	7,094,943.36	5,585,093.89	3,829,451.00	100%
Churh Hill Corner-Muir Park (Portland)	Jan-11	Dec-11	1,803,418.95	1,421,939.93	1,534,472.00	100%
CW-008 Lime Hall Ramdum Rubble Wall	Dec-12	May-11	17,487,852	14,376,421.07	11,258,799.00	80%
CW-008 Milford Box Culvert (St. Ann) Culvert	Mar-11		82,244,513	67,447,213.93	-	7%
Rw-014 White River-Newstead Bridge ( St. Ann)	Mar-11		87,714,477.31	86,892,602.49	5,669,839.41	30%
Rw-014 Home Castle-Thicketts ( St. Ann)	Mar-11		17,436,699.79	9,771,807.40	6,080,010.59	100%
Rw-014 Knapdale- sturge Town ( St. Ann)	Mar-11		86,456,977.82	34,929,942.09	-	10%
Rw-014 Culloden- Knibb Street (St. Ann)	Nov-11	Jun-11	100,677,389	81,778,482.77	35,905,595.00	68%
Rw-014 Fullerton Park-Thatchwalk (St. Ann)	Nov-11	Jun-11	56,381,564	45,356,240.02	-	5%
Rw-014 Great Pond Roads	May-11		19,852,560.49		-	40%
IWP001A-St. Ann, Portland, St. Mary	Oct-11	Mar-11	51,484,481.50	50,547,500.00	51,484,481.50	100%
<b>Grand Total</b>			<b>1,102,683,021.39</b>	<b>842,775,746.17</b>	<b>314,138,910.13</b>	

**Table 5 Works Sub- contracted to Chins Construction**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW-030 Mannings Hill/Whitehall St. Andrew	Jan-11	Dec-11	50,727,806	39,993,462.19	29,163,780.00	99%
<b>Grand Total</b>			<b>50,727,806</b>	<b>39,993,462.19</b>	<b>29,163,780.00</b>	

**Table 6 Works Sub-contracted to S & G Road Surfacing Materials**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
IWP002- St. Ann, Clarendon, Manchester, St. Elizabeth, Trelawny, Westmoreland	Oct-10	May-11	67,952,777	94,297,310	66,128,519.00	100%.
<b>Total</b>			<b>67,952,777</b>	<b>94,297,310</b>	<b>66,128,519.00</b>	

**Table 7 Works Sub-contracted to Roger's Land Development**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
CW-005 Goulbourne Road, Random Wall	Oct-10	Jun-11	47,064,763.68	41,472,181.52	36,721,,440.00	100%
RW-029 Goulbourne Road, St. Andrew	Jan-11	Dec-11	92,680,989	73,003,782.46	33,886,372.00	82%
CW-002 Mount Horeb, Random Wall	Oct-10	Mar-11	36,552,815.70	30,850,508.75	12,722,642.50	55%

CW-002 Papine-Hardware Gap, Random Rubble Wall	Oct-10	Mar-11	30,717,090.00	22,329,297.00	25,268,949.53	90%
CW-002 Redlight-Hardware Gap , Random Rubble Wall (MP 18, 19-20)	Oct-10	Mar-11	19,689,830.27	18,210,517.49	18,610,793.89	94%
CW-005 Jacks Hill Road Random Rubble Wall	Oct-10	May-11	76,037,659.13	46,064,881.17	43,143,647.13	58%
CW-005 Persimmon Avenue Gully, Random Rubble Wall	Oct-10	May-11	63,551,863.44	57,200,374.00	15,377,686.00	35%
CW-007 Hall Delight ( St. Andrew)	Oct-10	May-11	65,346,683.17	58,150,876.89	51,822,709.57	70%
CW-007 Redlight- Hardware Gap , (MP14-15)	Oct-10	May-11	37,533,479.50	14,844,747.98	35,605,985.65	95%
CW-007 Redlight- Hardware Gap, Random Rubble Wall (MP 16-17)	Oct-10	May-11	60,519,654.92	39,505,270.68	56,053,374.92	95%
CW-007 Cavaliers ( St. Andrew) Random Rubble Wall	Oct-10	May-11	70,787,313.96	53,814,023.86	38,257,769.94	80%
CW-007 Redlight- Hardware, Random Rubble Wall (Damage at up Younder)	Oct-10	May-11	18,351,080.65	17,503,508.00	10,571,532.00	60%
CW-007 Papine-Redlight (St. Andrew) Random Wall	Oct-10	May-11	56,184,096.64	45,273,419.68	36,604,696.52	64%
RW-029 Shooters Hill (St. Andrew)	Feb-11	Jan-12	56,897,797.56	44,617,597.93	56,160,297.56	100%
RW-029 Lunar Drive (St. Andrew)	Feb-11	Jan-12	34,231,755.62	27,024,962.88	13,819,239.34	70%
RW019 Riversdale –Peer Tree Grove (St. Cath.)	Feb-11	Dec-11	198,448,919.58	159,446,126.11	27,701,905.58	40%
RW019 Old Troja Road (St. Catherine)		Dec-11	48,027,606.98	38,634,272.56	0	0%
RW036 New Hope-Lodge (Trelawny)	Jan-11	Jan-12	24,567,722.87	19,411,454.10	2,360,993.00	16%
RW036 Waite- a – bit-Joe Hut	Jan-11	Jan-12	43,563,360.65	34,398,917.69	11,069,690	24%
RW036 Warsop Thompson Town	Jan-11	Jan-12	113,762,104.09	89,574,412.44	0	15%
RW-025 Punches- Cattaboo (St. Elizabeth)	Feb-11	Feb-12	37,239,672.97	32,964,754.94	21,749,897.97	61%
RW-025 Craige –Bailey Ground (St. Elizabeth)	Jan-11	Feb-12	29,998,348.59	21,085,953.51	24,721,794.82	99%
RW-025 Barberry Hall- Cherry Gardens (St. Elizabeth)	Jan-11	Feb-12	22,064,084.37	17,394,966.87	11,816,934.37	53%
RW-025 Bellevue–Queensberry (St. Elizabeth)	Jan-11	Feb-12	48,216,861.30	39,300,326.36	27,986,549.07	100%
RW-025 Leeds–Smothland-Mt Ploymount (St. Elizabeth)	Feb-11	Feb-12	47,590,382.44	36,901,474.50	46,088,010.61	98%
RW-025 Seaview-Queensburry (St. Elizabeth)	Jan-11	Feb-12	34,531,178.95	28,052,166.80	13,338,850.93	42%
RW-025 Caris Brook-Dry Harbour (St. Elizabeth)	Feb-11	Feb-12	39,427,018.17	29,802,254.35	14,821,753.00	63%
RW-025 Arlington-Ghetto (St. Elizabeth)	Feb-11	Feb-12	20,768,405.00	16,375,305.73	10,564,460.88	66.5%
RW-025 Crane Road–Parotte (St. Elizabeth)	Feb-11	Feb-12	59,464,042.97	46,827,567.11	17,822,678.23	44%
RW-008 Mocho-Springfield (St. Elizabeth)	Nov-10	Nov-11	166,739,221.86	125,217,372.45	152,555,181.88	98%
CW-005 Black River Hospital Seawall (St. Elizabeth)	Nov-10	Nov-11	26,869,724.50	24,031,078.50	26,869,724.50	100%
RW-025 Newell-Bethany/Hounslow (St. Elizabeth)	Feb-11	Feb-12	33,362,220.34	27,427,515.71	15,458,509.87	49 %
<b>Grand Total</b>			<b>1,760,787,748.87</b>	<b>1,376,711,870.02</b>	<b>872,832,631.26</b>	

**Table 8 Works Sub-contracted to Surrey Paving & Aggregates**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW-043 Shortwood Road (St. Andrew)			202,263,712.47	159,243,887.33	-	-
RW-043 Belgrade Heights (St. Andrew)			53,309,393.94	41,687,880.21	-	-
RW028 Hope Road JC St. (Andrew)			64,747,066.14	51,007,219.20	-	-
RW023 Buff bay Valley (Portland)	Jan-11	Dec-11	80,972,351.72	63,766,234.13	-	50%
IWP004 Patching - St Andrew, St. Catherine, Hanover, Clarendon, St. James, Trelawny	Oct-10	Mar-11	128,780,450.00	91,891,250.00	126,305,500.00	100%
RW-002 Queens Drive –St. James	Sep-10	SEP-11	173,150,557.28	82,542,900.00	163,529,187.00	99%
<b>Grand Total</b>			<b>703,223,531.55</b>	<b>490,139,370.87</b>	<b>289,834,687.00</b>	

**Table 9 Sub-contracted to Construction Solutions**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW015 Sinclair Drive (St. Catherine)	Jan-11	Jul-11	32,469,545.22	26,146,718.80	31,820,154.32	98%
RW015 Lucky Valley Pen (St. Catherine)	Jan-11	Jul-11	95,374,273.27	53,495,210.49	95,374,273.27	100%
RW015 Mc Vickers Road (St. Catherine)	Jan-11	Nov-11	47,462,072.09	31,063,226.11	41,253,065.09	98%
RW015 Commadore St. (Catherine)	Jan-11	Jul-11	16,923,006.70	13,860,264.41	15,080,747.70	100%
McCooks Pen (St. Catherine)	Feb-11	Aug-11	43,264,632.62	33,913,257.72	38,252,757.62	100%
Nightingale Grove (St. Catherine)	Feb-11	Jun-11	37,037,220.63	27,123,322	37,037,220.63	100%
RW018-Settlement (St. Catherine)	Feb-11	Aug-11	43,383,605.20	27,979,650.12	30,058,129.70	85%
Aenon Town-Mckoy RW 015 (Clarendon)	Jan-11		110,868,741.76	85,688,019.75	52,734,031.32	63%
Brandon Hill- Cock Shop Top Hill (Clarendon)	Jan-11		77,484,846.81	48,239,123.38	52,666,797.21	96%
<b>Grand Total</b>			<b>504,267,944.30</b>	<b>347,508,792.78</b>	<b>394,277,176.86</b>	

**Table 10 Summary of Works Sub-contracted to Dwight's Construction Limited**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW012 Derry Hazzart (St. Mary)	Jan-11	Dec-11	323,798,978	266,422,521.27	241,945,876.09	85%
RW012 Blackstonage Halifax Bridge (St. Mary)	Jan-11	Dec-11	184,846,577	150,256,006.69	135,030,973.77	85%
RW012 Top Valley Bush (St. Mary)	Jan-11	Dec-11	50,419,695	42,023,826.54	27,007,952.12	70%
RW012 Halifax Bridge Lucky Hill (St. Mary)	Jan-11	Dec-11	134,538,419	109,191,870.87	64,383,562.80	40%
RW012 Barracks River (St. Mary)	Jan-11	Dec-11	270,148,465	217,023,934.98	130,491,332.22	40%
RW012 Wellington (St. Mary)	Jan-11	Dec-11	132,875,792	104,953,926.88	88,608,115.93	95%
RW012 Lindon Housing Scheme (St. Mary)	Jan-11	Dec-11	27,448,483	22,101,248.22	-	15%
RW012 Gully Road (St. Mary)	Jan-11	Dec-11	43,373,251	17,298,121.16	35,555,550.70	55%
RW012 Free Hill - Geddes Town (St. Mary)	Jan-11	Dec-11	234,227,772.55	188,181,725.46	88,894,060.85	55%
RW012 St. Mary, Mount Alto (St. Mary)	Feb-11	Dec-12	18,679,104	11,990,264.91	10,557,308.66	100%
RW012 Back Street - Hunstown (St. Mary)	Jan-11	Dec-11	28,161,331.80	22,679,174.32	11,962,329.21	95%
<b>Grand Total</b>			<b>1,448,517,868</b>	<b>1,152,122,621.30</b>	<b>834,437,062.35</b>	

**Table 11 Works Sub-contracted to Valley Slurry Caribbean Limited**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW001 Havendale Community, Micro Surfacing	Oct-10	Sept-11	164,265,520.86	138,571,664	151,675,781.34	97%
RW001 Roehampton Drive& Close-Micro Surfacing	Oct-10	Sept-11	22,925,968.20	28,589,784.50	15,177,640.80	90%
RW001 Oliver Road -Micro Surfacing	Oct-10	Sept-11	25,139,978.96	27,364,132.47	23,203,478.96	90%
RW001 Upper Waterloo Road-Micro Surfacing	Oct-10	Sept-11	15,975,733.08	17,661,197.16	12,151,676.59	100%
RW001 Devon Skull Point, Manchester Micro Surfacing	Oct-10	Sept-11	171,715,219	92,667,750	91,659,943.00	97%
RW001 Dump-Highgate Manchester Micro Surfacing	Oct-10	Sep-11	7,706,444	7,000,000	6,789,576.00	100%
<b>Grant Total</b>			<b>407,728,864.10</b>	<b>311,854,528</b>	<b>300,658,096.69</b>	

**Table 12 Works Sub-contracted to Build Rite Construction Company Limited**

Project Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
RW021 Rocky Park (Manchester)	Mar-11		42,012,252.16	18,561,046.07	29,567,805.47	65%
RW021 Retreat Road (Manchester)	Mar-11		15,464,115.26	9,699,259.24	7,596,632.04	65%
RW021 Chudleigh Housing Scheme (Manchester)	Mar-11		68,065,287.32	53,270,030.53	35,953,929.12	65%
RW021 Lower Christiana (Manchester)	Mar-11		60,200,867.16	39,629,533.34	11,179,409.25	40%
RW021 Bruntie (Manchester)	Mar-11		161,478,400.72	114,050,014.72	139,643,547.46	80%
RW021 Top Hill Grove Place (Manchester)			42,213,031.23	33,252,814.07	17,960,985.07	63%

RW021 Land settlement Loop (Manchester)	Mar-11		34,495,688.15	19,358,517.20	18,927,539.58	90%
RW021 Wildman Street (Manchester)			21,438,606.62	17,030,867.29	13,300,902.14	62%
RW021Webb Road (Manchester)			37,266,175.69	20,620,492.10	30,243,623.39	100%
RW010 Gravel Hill -Ritches (Clarendon)			27,080,629.50	19,623,773.93	20,639,468.09	100%
RW010 Whiteshop -Dykes Hill	Jan-11	Mar-11	39,928,925.82	33,314,827.53	31,759,684.31	100%
RW010 Smith Ville- Efforts (Clarendon)	Jan-11	Jul-11	83,888,464.30	94,405,512.35	66,293,526.73	80%
RW010 Chatteau-Rock River (Clarendon)	Jan-11	No-11	206,717,507.07	166,122,179.98	116,604,895.41	70%
RW010 Rock River -Mitchell Hill (Clarendon)	Jan-11	Mar-11	37,075,806.29	28,691,286.88	16,028,917.45	32%
RW010 Rock River Lower Chapelton (Clarendon)	Jan-11	Oct-11	155,051,388.10	111,257,130.97	112,252,927.82	76%
RW010 Bell Gate -Mocho Roads Low Ground,	Jan-11	Mar-11	6,332,288.78	5,679,714.60	1,461,318.99	34%
RW010 Bell Gate -Mocho Roads Boredox Hill,	Jan-11	Mar-11	9,670,036.37	6,409,434.21	7,992,283.67	69%
RW010 Bell Gate- Mocho Roads Pleasant Hill	Jan-11	Mar-11	12,126,986.00	7,378,042.30	10,476,136.56	100%
RW010 Bell Gate -Mocho Roads Dry Hill	Jan-11	Mar-11	21,751,760.83	9,758,759.82	16,973,919.72	65%
RW010 Bell Gate -Mocho Roads New Ground,	Jan-11	Apr=11	19,956,479.88	14,267,507.56	19,339,788.67	100%
RW010 Bell Gate -Mocho Roads Pumpkin-Reckford	Jan-11	Nov-11	207,848,761.54	96,686,738.09	100,232,778.62	62%
RW010 Bell Gate -Mocho Roads Sangsters Heights	Jan-11	Jun-11	82,665,486.23	53,566,358.97	75,863,659.43	87%
RW010 Bell Gate -Mocho Roads Salt River Lancet	Dec-10	Oct-11	349,827,641.36	216,346,938.67	311,031,672.48	81%
RW010 Bell Gate -Mocho Roads Portland Cottage	Feb-11	Apr-11	38,721,567.48	32,573,599.11	33,966,103.08	100%
RW010 Bell Gate -Mocho Roads Banks (Clarendon)	Jan-11	May-11	58,097,261.69	49,334,390.44	42,002,987.41	69%
RW010 Bell Gate -Mocho Roads Sunset Crescent	Jan-11	Mar-11	39,935,247.63	29,324,258.53	38,609,164.28	99%
RW010 Bell Gate -Mocho Roads Juno Crescent	Jan-11	May-11	83,416,201.94	44,427,606.13	76,114,894.63	99%
RW010 Bell Gate -Mocho Roads Glenmuir H/S	Dec-10	Feb-11	56,702,000.34	45,567,666.45	33,335,749.35	80%
RW010 Bell Gate -Mocho Roads North Street	Jan-11	Apr-11	19,397,855.54	17,678,546.83	18,570,387.14	100%
Bell Gate -Mocho Roads Guinep Tree-Jacob Hut (May Pen Road)	Dec-10	May-11	175,540,972.99	135,195,642.98	146,487,746.49	99%
Bell Gate -Mocho Roads RW010 Church Valley	Jan-11	Apr-11	18,869,717.89	15,053,955.10	16,836,368.93	80%
RW010Bell Gate- Mocho Roads Top Bucknor Road	Jan-11	May-11	49,368,266.70	29,370,825.79	27,450,657.41	52%
RW010 Bell Gate -Mocho Roads Cedar Stewarton	Jan-11	Apr-11	54,296,773.67	30,016,870.99	45,772,506.90	88%
RW044 Jacob Hut- Pleasant Valley	Jun-11	Jun-12	131,098,742.71	103,295,966.10	-	4%
<b>Grand Total</b>			<b>2,468,001,194.96</b>	<b>1,720,820,108.87</b>	<b>1,690,471,917.09</b>	

**Table 13 Works Sub-contracted to Brighton Engineers**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
CW001 Garden Hill Rennal Brown Town (St. Cath.)	Jan-11	Nov-11	89,258,544.63	56,934,333.50	89,258,544.63	100%
RW026 Dark Hole To Brick Hut (St. Cath.)	Ma-11	Mar-12	162,815,632.16	130,843,351.99	-	70%
BW026 Byles to Dover (St. Cath.)	Mar-11	Mar-12	60,361,801.85	48,557,040.89	-	70%
<b>Grand Total</b>			<b>312,435,978.64</b>	<b>236,334,726.38</b>	<b>89,258,544.63</b>	

**Table 14 Works Sub-contracted to N F Barnes**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
CW-004 Alligator Church Rio Grande Valley St. Mary Portland	Oct--10	Dec-11	178,184,702.70	143,154,607.05	159,973,742.70	95%
<b>Grant Total</b>			<b>178,184,702.70</b>	<b>143,154,607.05</b>	<b>159,973,742.70</b>	

**Table 15 Works Sub-contracted to Pavement & Structures**

Projects Title	Start Date	Est. End Date	Cost of Project	Price of Project	Expenditure as at July 2011	% Complete
IWP003-St. Andrew, Portland	Jan-11	Mar-11	44,240,945.50	48,538,945.49	44,240,945.50	100%
<b>Grant Total</b>			<b>44,240,945.50</b>	<b>48,538,945.49</b>	<b>44,240,945.50</b>	

## Appendix 2 Analysis of Monthly Quality Surveillance and Inspection Reports

No.	Projects by Region/Parish	Commencement Date	Estimated Completion Date	Jan 2011	Feb 2011	March 2011
No.	<b>Northern</b>					
	<b>St. Ann-Road Rehabilitation</b>					
1	RW-014 -Culloden - Knibb Street	Nov 2010	June 2011	-	-	-
2	RW-014 - Fullerton Park	Nov 2010	June 2011	-	-	-
	<b>St. Mary-Road Rehabilitation</b>					
1	CW-004 Alligator Church, Rio Grande Valley	Oct 2010	Dec 2011	-	-	-
2	CW-003 Border - Cuffy Gully	Oct 2010	Dec 2011	✓	-	-
	<b>Portland-Road Rehabilitation</b>					
1	RW020 Hope Bay - Coopers Hill	Jan-11	Dec-11	-	-	-
2	RW022 Bangor Ridge - Mahoe (Silver Hill)- Mt pleasant, Smith Field Road,	Jan-11	Dec-11	-	-	✓
3	Friendship Road	Jan-11	Dec-11	-	-	-
4	RW023 Buff Bay Valley	Jan-11	Dec-11	-	-	-
	<b>Western</b>					
	<b>Trelawny-Road Rehabilitation</b>					
1	RW-035 Martha Brae-Peru	Jan-11	Dec-11	-	-	✓
2	RW-035 Martha Brae-Kinloss	Jan-11	Dec-11	-	-	✓
3	RW-035 Clarks Town – Hyde	Jan -11	Dec-11	-	-	✓
4	RW036 New Hope – Lodge	Jan-11	Jan-12	-	-	-
5	RW036 Wait-a-Bit - Joe Hut	Jan-11	Jan-12	-	-	-
6	RW036 Warsop - Thompson Town	Jan-11	Jan-12	-	-	-
	<b>St. James-Road Rehabilitation</b>					
1	RW-003 John's Hall	Nov-10	Nov-11	-	✓	-
	<b>Central</b>					
	<b>St. Elizabeth-Road Rehabilitation</b>					
1	RW-025 Craige - Bailey Ground	Jan-11	Feb-12	-	✓	-
2	RW-025 Barbary Hall - Cherry Gardens	Jan-11	Feb-12	-	-	✓
3	RW-025 Bellevue – Queensbury	Jan-11	Feb-12	-	✓	✓
4	RW-025 Seaview – Queensbury	Jan-11	Feb-12	-	✓	✓
5	RW-025 Crane Road - Parrotte	Feb-11	Feb-12	-	✓	✓
6	RW – 008 Mocho – Springfield	Nov-10	Nov-11	-	-	-
7	CW-005 Black River Hospital Seawall	Nov-10	Nov-11	-	-	-
8	RW-025 Newell - Bethany / Hounslow	Feb-11	Feb-12	-	-	✓
	<b>Manchester – Road Rehabilitation</b>					
1	Top Hill Grove Place RW 021	-	-	-	-	-
2	Wildman Street RW 021	-	-	-	-	-
3	Webb Road RW 021	-	-	-	-	-
	<b>Clarendon– Road Rehabilitation</b>					

No.	Projects by Region/Parish	Commencement Date	Estimated Completion Date	Jan 2011	Feb 2011	March 2011
1	Whiteshop - Dykes Hill RW 010	Jan-11	Mar-11	-	✓	✓
2	Gravel Hill - Ritches RW 010			-	-	-
3	Smithville - Effort RW 010	Jan-11	Jul-11	✓	✓	✓
4	Chatteau - Rock River RW 010	Jan-11	11-Nov	-	-	✓
5	Rock River - Mitchell Hill	Jan-11	11-Mar	✓	-	-
6	Rock River - Lower Chapelton RW 010	Jan-11	11-Oct	✓	✓	✓
7	Bell Gate - Mocho Roads			-	✓	-
8	Low Ground RW 010	Jan-11	11-Mar	-	-	✓
9	Boredaux Hill RW 010	Jan-11	11-Mar	-	-	-
10	Pleasant Hill RW 010	Jan-11	11-Mar	-	-	-
11	Dry Hill RW 010	Jan-11	11-Mar	-	-	-
12	New Ground RW 010	Jan-11	11-Apr	-	-	-
13	Pumpkin - Reckford RW 010	Jan-11	11-Nov	✓	-	✓
14	Sangsters Heights RW 010	Jan-11	11-Jun	-	✓	✓
15	Aenon Town - McKoy RW 015	Jan-11	-	-	-	✓
16	Brandon Hill - Cock Shop - Top Hill RW 015	Jan-11	-	-	-	-
17	Salt River - Lancet RW 010	Dec-10	11-Oct	✓	-	-
18	Banks RW 010	Jan-11	11-May	-	✓	-
19	Sunset Crescent RW 010	Jan-11	11-Mar	-	✓	✓
20	Juno Crescent RW 010	Jan-11	11-May	✓	-	✓
21	Glenmuir Housing Scheme RW 010	Dec-10	11-Feb	-	✓	-
22	North Street RW 010	Jan-11	11-Apr	-	✓	✓
23	Guinep Tree - Jacob Hut (May Pen Roads) RW 010	Dec-10	11-May	-	-	-
24	Church Valley RW 010	Jan-11	11-Apr	-	-	-
25	Top Bucknor Road RW 010	Jan-11	11-May	-	-	-
26	Cedars - Stewarton RW 010	Jan-11	11-Apr	-	-	-
<b>Kingston Metropolitan Region</b>						
<b>Kingston</b>						
1	RW-005 New Port West-Port Bustamante	Nov-10	Nov-11	✓	-	-
2	RW-017 Orange St.	Dec-10	Nov-11	-	-	-
3	RW-017 West parade	Dec-10	Nov-11	-	-	-
4	RW-017 East Parade	Dec-10	Nov-11	-	-	-
5	RW-017 North Parade	Dec-10	Nov-11	-	-	-
6	RW-017 South Parade	Dec-10	Nov-11	-	-	-
7	RW-031 Port Royal Street	Jan-11	Dec-11	-	-	-
8	RW-031 Water Lane & Pechon Street	Jan-11	Dec-11	-	-	-
9	RW-031 Upper King Street	Jan-11	Dec-11	-	-	-
10	RW-031 Ocean Boulevard	Jan-11	Dec-11	-	-	-
11	RW-031 Church Street	Jan-11	Dec-11	-	-	-



No.	Projects by Region/Parish	Commencement Date	Estimated Completion Date	Jan 2011	Feb 2011	March 2011
12	RW-031 West Queen Street	Jan-11	Dec-11	-	-	-
13	RW-031 Haywood Street	Jan-11	Dec-11	-	-	-
14	RW-031 Harbour Street	Jan-11	Dec-11	-	-	-
	<b>St. Andrew – Road Rehabilitation</b>					
1	RW-030 Mannings Hill/Whitehall (PC Roads)	Jan-11	Dec-11	-	-	-
2	RW027 Bay Farm Road	Jan-11	Dec-11	-	-	-
3	RW-029 Shooters Hill	Feb-11	Jan-12		-	-
	<b>St. Catherine– Road Rehabilitation</b>					
1	RW-015 Sinclair Drive	Jan-11	July 2011	-	-	-
2	RW015 Lucky Valley Pen	Jan-11	July 2011	-	-	-
3	RW015 McVickers Road	Jan-11	Nov-11	-	-	-
4	RW015 Commadore	Jan-11	Jul-11	-	-	-
5	CW001 Garden Hill Rennal Browns Town	Jan-11	Nov-11	-	-	-
6	CW006 Highfield Drive, Ensom City	Jan-11	Jul-11	-	-	-
7	RW013 Featherbed Lane (Upper - Lower Homestead) Highfield Drive, Ensom City	Jan-11	Nov-11	-	-	-
8	RW013 Tulloch - Zion Hill Bridge	Jan-11	Dec-11	-	✓	-
9	RW013 Ewarton - Worthy Park	Jan-11	Dec-11	-	✓	✓
10	RW019 Old Troja Road		Dec-11	-	-	-
	<b>St. Thomas– Road Rehabilitation</b>					
1	RW-042 Albion – Llandewey	Nov-10	May-12	✓	✓	✓

### Appendix 3 Status of Land Acquisition for Christiana Development Road

Valuation Number	Status	Appraised Value (\$)	Agreed Sale Price	Variance
104 04 007 001	Negotiation ongoing	8,000,000	-	-
104 04 006 017	Compulsory	12,000,000	-	-
104 04 006 018	Negotiation ongoing	3,000,000	-	-
104 04 006 018	Signed	8,000,000	9,000,000	-1,000,000
104 04 006 024	Signed	200,000	550,000	-350,000
104 04 008 025	Compulsory	3,500,000	4,000,000	-1,500,000
104 04 008 028 <sup>7</sup>	Compulsory	600,000	-	-
104 04 007 032	Negotiation ongoing	5,000,000	-	-
104 04 007 034	Compulsory	1,500,000	-	-
104 04 006 035	Negotiation ongoing	3,500,000	-	-
104 04 006 038	Compulsory	3,000,000	3,000,000	-
104 04 008 043	Compulsory	1,500,000	-	-
104 04 008 052 <sup>8</sup>	Compulsory	1,800,000	5,000,000	-3,200,000
104 04 007 058	Compulsory	4,500,000	-	-
<b>TOTAL</b>		<b>56,100,000</b>		
104 04 006 019	Signed	500,000	1,200,000	-700,000
104 04 006 020	Unsigned	100,000	75,000	25,000
104 04 007 019	Negotiation ongoing	6,000,000	-	-
104 04 008 019	Compulsory	400,000	-	-
104 04 008 028	Compulsory	4,500,000	-	-
104 04 006 031	Signed	1,000,000	450,000	550,000
104 04 006 032	Signed	1,000,000	450,000	550,000
104 04 008 033	Negotiation ongoing	1,500,000	-	-
104 04 006 040	Compulsory	1,000,000	-	-
104 04 008 045	Compulsory	500,000	-	-
104 04 008 052	Negotiation ongoing	4,000,000	-	-
104 04 007 070	Compulsory	1,800,000	-	-
104 04 008 074	Compulsory	200,000	-	-
<b>TOTAL</b>		<b>22,800,000</b>		
<b>Grand Total</b>		<b>78,900,000</b>		

<sup>7</sup> Additional portion of land was acquired in second Cabinet submission

<sup>8</sup> Ibid