



Cayman Islands



Special Report of The Auditor General



On the Affordable Housing Initiative

Cayman Islands Audit Office
August 2004 & Subsequent Event Update January 2005



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Audit Report

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Affordable Housing Initiative

Executive Summary

1.01 The Cayman Islands Audit Office is concerned with how the Affordable Housing Initiative was initiated and with the procurement of goods and services for the project. Our review looked at whether the Affordable Housing Initiative was executed in an economically viable way, and that the procurement of goods and services were in accordance with applicable laws and regulations, with due regards to value for money. Our objective and audit criteria were agreed with the Ministry of Community Services, Youth, Sports, & Gender Affairs (the Ministry) prior to the commencement of the audit.

1.02 There is a necessity for affordable homes to be provided to the low-income earners, which has been exacerbated by Hurricane Ivan on 12 September 2004. This issue of affordable homes will be in the forefront in the coming months and even over the next few years as the assessment of damaged homes is completed. The basis of this report was prepared prior to Hurricane Ivan and therefore some of the strategic directions of the Affordable Housing Initiative will change as a result of the damages sustained to the homes which were already completed. A brief update on the impact of Hurricane Ivan to the Affordable Housing Initiative has been provided in the body of the report at paragraphs 1.20 – 1.23.

1.03 In the future, we will examine the policies and procedures in regards to the allocation of these affordable homes and take a look at the changes in strategic direction of the Affordable Housing Initiative (AHI).

BACKGROUND

1.04 The Cayman Islands Government (the Government), through the Ministry has embarked on a housing scheme to meet the need of low-income earners. The first phase of the project is to consist of 200 housing units situated at four sites on



Grand Cayman, three of which have been identified as Windsor Park and Eastern Avenue in George Town, and West Bay. The location of the fourth site is anticipated to be at Fairbanks.

1.05 The units are available in two models – a two bedroom with a den and two baths, and a two bedroom with one bath; will range in size from 895 to 1017 square feet; and are likely to be priced at CI\$69,900 for the larger units and CI\$56,900 for the smaller ones. It is planned that 80 two bedrooms with one bath and 120 two bedrooms with a den will be constructed.

1.06 In August 2002 an Italian firm named Vetromeccaniche Investment Limited (Vetro) was contracted by Government to construct 200 houses for the AHL. These homes are to be pre-engineered and built from ISORGHE/ISOPIANO sandwich panels.

SUMMARY OF FINDINGS

WAS THERE A NEED FOR THE AFFORDABLE HOUSING INITIATIVE?

1.07 A Low Cost Housing Committee formed in May 2000 conducted a review of the housing situation in the Cayman Islands and presented a comprehensive report, which stated that there was a shortage of suitable housing for low income earners - earning less than CI\$17,400 annually and also for moderately low income earners - earning less than CI\$27,900 annually. We performed an analysis of statistics on the financial status of Caymanians, types of tenure and changes in the population size and demographics. Our findings were consistent with the assertions made by the Minister that there were a large percentage of Caymanians earning less than CI\$24,000 per annum. Our analysis also showed that in 1999 approximately half of the population resided in rental accommodation. We are satisfied that the Low Cost Housing Committee conducted a reasonable feasibility study, and adequate statistical data existed to support the need for an affordable housing initiative.



ALTERNATIVE OPTIONS – CONSTRUCTION

1.08 Preliminary alternative construction options were looked at by the Housing Development Corporation back in 2001, which were not readily comparable to each other. The only other documented analysis of alternative construction options observed was presented in the AHI business plan. This analysis indicated that the contractor (Vetro) and the type of construction chosen for the housing initiative was more favorable than the type of low cost construction method currently being provided by two of the local companies.

1.09 In our opinion a more in depth analysis of the available construction options for the affordable housing initiative should have been conducted. The comparison of construction cost presented in the AHI business plan was prepared subsequent to the contract being entered into with Vetro and therefore became meaningless as a decision making tool and serves more as a marketing tool. For the comparison to have been relevant, it should have been conducted prior to any contract being entered into and should take into account the impact of all factors such as, government waivers for all prospective contractors.

PROCUREMENT PROCEDURES

1.10 There was no evidence of an open bidding process for the construction of the affordable housing units. Although the business plan shows that the cost of construction for the firm being used was the lowest, the data used for comparison was not comparable, e.g. waivers applied to the construction cost for Vetro were not factored into the cost for the local companies. And, as stated above, the analysis was prepared subsequent to a contract being entered into with Vetro.

1.11 We also observed that there were departures from the Financial and Stores Regulations 1986 in the awarding of contracts to Vetro and to local firms for land filling operations. The manner in which these contracts were awarded was not done in a fair and equitable way. In our opinion, the departure from traditional tendering procedures and the hasty decision to enter into a contract with Vetro are not adequately justified and therefore unacceptable.



1.12 With regards to the land filling operations, our review of disbursements revealed cases of inconsistencies between rates being used for invoices being paid and the rates provided for the respective contracts. We also noted that payments of CI\$1.09 million were made for invoices submitted by companies carrying out filling operations, without the Ministry having a copy of the related contracts until after these payments were made. This may suggest the Ministry did not adequately monitor these payments.

BUILDING CODES AND STANDARDS

1.13 The contract for the construction of the 200 affordable houses was signed with Vetro without any significant input from the Planning Department's building control unit. Both the technology and materials being used by Vetro are new to the Cayman Islands, which thereby classified it as alternative materials and methods as outlined in the Cayman Islands Building Code. Submissions of technical specifications and sample materials should have been made to the Building Control Unit (BCU) for their assessment and approval. However, the first submission to the BCU was made in October 2002, two months after the contract had already been signed.

THE NATIONAL HOUSING AND COMMUNITY DEVELOPMENT TRUST

1.14 We are of the opinion that the creation of a National Housing and Community Development Trust (the "Trust") to address the overall housing and other social needs of the low-income earners of the Cayman Islands is justified. However, the timing of its establishment and the completion of the business plan is a matter of concern to us. It is our view that after the conceptualization of the initiative by the Minister, the Trust should have been set up with its initial task being to develop a strategic plan to address the mode and timing of construction, the sourcing of financing, and the overall management of the housing project. This would have provided decision makers with more comprehensive (and detailed) information and thereby a better means of assessing the financial feasibility of the project.

1.15 By sourcing financing for the project prior to the signing of contracts and the start of construction, there would have been no need for Government to advance funds towards the project. Additionally the timely establishment of the Trust would



have reduced the level of involvement of the Ministry, thus achieving the primary reason for creation of the Trust...having an independent body to carry out the plans and goals of the Affordable Housing Initiative.

COST ANALYSIS

1.16 In our opinion, the actual costs incurred as at 23rd June 2004 for some expenditures have exceeded the expected total costs to complete the project and are not consistent with the amounts originally projected. As the primary objective of the initiative is the provision of affordable housing, there is little scope for increasing the selling prices of the units in order to recover cost. Thus, if the total cost of the project exceeds the potential revenue from the sale of the units, Government would be required to provide a subsidy to cover the deficit.

1.17 The expected cost to complete the 200 houses in phase one of the AHI project is currently CI\$12.58 million. This is an increase of CI\$1.23 million (11.8%) from the amount presented by the Minister of Community Services to Cabinet in February 2003. These increases are primarily as a result of additional work and/or revisions that were required to bring the homes up to proper building code standards for various phases of the project. As at 23rd June 2004, CI\$8.83 million of expenditures relating to the project had been incurred.

PROJECT STATUS

1.18 The 200 units have not been completed by the dates presented in the contractual agreement with Vetro or the AHI business plan due to problems in acquiring the land at one of the original sites planned and delays in obtaining Planning and Building Control Unit approval for all of the homes being constructed.

1.19 As at mid-August 2004, all of the 69 units in West Bay and 9 units in Windsor Park had been handed over to the Trust. The Trust indicated that the additional 21 units at Windsor Park and the 33 at Eastern Avenue are substantially completed, and it is anticipated that all units from these three sites would be handed over to the Trust by mid-September 2004. Construction work on the remaining 68 units at Fairbanks, where clearing and filling work is currently on going, is expected to begin during



September 2004. The commencement of work on the 68 units at the Fairbanks site was delayed due to the original site identified becoming unavailable, and additional time being spent to locate a suitable alternative.

SUBSEQUENT EVENT - HURRICANE IVAN

1.20 On the 11th and 12th of September 2004 the Cayman Islands were hit by Hurricane Ivan, which caused damage to approximately 95% of the houses and buildings on Grand Cayman. A preliminary assessment conducted by the Planning Department indicated that for the residential housing sector, 10% were completely destroyed, 35% received major damage, 50% received minor damage and 5% no damage at all. The Department also highlighted that the districts hit hardest by the hurricane were those in the East, with West Bay seeming to be the area that fared the best comparatively.

1.21 Prior to the hurricane, 132 of the proposed 200 units were either fully or substantially completed. Of this amount, the Trust has confirmed that 80 remained standing; 61 in West bay, and 19 in Windsor Park. They claimed all 33 units at Eastern Avenue were destroyed. From our observation some of the remaining units, particularly those in Windsor Park will require varying degrees of repair before they can be inhabitable. Repairs required range from the replacement of broken windows to the replacement of some external walls and roofing sections. We believe there may be a few salvageable homes on the Eastern Avenue site.



(Eastern Avenue site)



(Windsor Park site)

1.22 The Trust has indicated that the units were insured. On the 6th January 2005, the Trust received notification of a settlement from their insurers in the total amount



of CI\$2.15 million. At the time of this report, CI\$1.23 million of this amount has been received by the Trust.

1.23 In addition to the units that were destroyed, the hurricane also damaged materials that were in storage for use in the construction of the remaining 68 units at the Fairbanks site. The materials were not insured and at the time of this report no inventory of the amount of material damaged had been conducted. Therefore it is not possible to determine the financial loss incurred. As can be seen in the pictures below the materials were strewn across the Fairbanks site.



AUDIT CRITERIA # 1 – THE PROJECT HAS BEEN PLANNED WITH DUE CARE, GIVING CONSIDERATION TO ECONOMICAL VIABILITY AND VALUE FOR MONEY.

NEEDS ANALYSIS

2.01 The Affordable Housing Initiative was conceptualised by the Minister of Community Services, Youth, Sports & Gender Affairs to address concerns that a large percentage of Caymanians were not in a financial position to acquire housing through the traditional commercial route. In a paper prepared by the Minister, he noted that the situation was raised in the 1999 census, which stated that 6,224 out of 10,630 working Caymanians earned less than \$24,000 annually. This equated to approximately 60% of the local working population, who relied heavily on rental accommodations and lived in substandard housing conditions.

2.02 In May 2000, a Low Cost Housing Committee (the “Committee”), which was formed by the then Ministry of Agriculture, Communications, Environment and Natural Resources, and approved by the Executive Council, presented a report that described the contributory factors and problems of low cost housing as well as outlining a six tiered approach to addressing these factors.

2.03 The Committee stated in its report that: “the issues associated with affordable, decent housing had been problematic for the Cayman Islands for many years. The explosive growth of the Islands, the immigration of unskilled expatriate labor, and the changing demographics of families had generated a shortage of suitable housing for low to middle income Caymanians and expatriates.”

2.04 The Committee also noted that: “various Government departments had taken small, incremental steps over the years to improve both the quality and quantity of affordable housing. Some of these programs had encouraged private enterprises to provide solutions, while others were conducted entirely by the Government. In either case, the programs did not fully achieve the intended results.”

2.05 We reviewed statistical data presented in the Cayman Islands 1999 population and housing census in order to assess the reasonableness of some of the assertions



made by the Minister of Community Services, Youth, Sports & Gender Affairs and the Low Cost Housing Committee of the need for an affordable housing initiative.

ANALYSIS OF FINANCIAL STATUS OF CAYMANIANS

2.06 The last census report released in 1999 indicated that for 1998 there were 25,095 residents in the Cayman Islands, 14,164 (56%) of them earned an average annual income of less than CI\$24,000, 6,735 (26%) earned between CI\$24,000 and CI\$41,900 and 4,196 (16%) earned more than CI\$42,000.

2.07 Of the 14,164 residents earning on average less than CI\$24,000 per year, 6,224 (43%) of them were Caymanians as seen in **Table 1** below.

Table 1: Average Income earned by Residents in 1998 ¹

Average Annual Income	Caymanian	Non-Caymanian	Total
Less than CI\$12,000	2,802	4,255	7,057
CI\$12,000 – CI\$ 23,900	3,422	3,685	7,107
CI\$24,000 – CI\$41,900	3,694	3,041	6,735
CI\$42,000 – CI\$71,900	1,506	1,235	2,741
More than CI\$72,000	662	793	1,455
Total	12,086	13,009	25,095

2.08 Based on the data presented, more than half of the residents were in a low to middle income bracket. We are of the opinion that the assertions made by the Minister and the Committee with regards to the financial status of the Cayman Islands population were reasonable.

ANALYSIS OF HOUSEHOLD BY TENURE

2.09 Data presented in the 1999 census report indicates that of 14,907 households in the Cayman Islands, 7,265 (48.7%) were living in rented units, 3,280 (22%) owned their properties outright and 3,383 (22.7%) owned their properties with a mortgage (see **Table 2**). The 7,265 households in rental units consisted of 15,108 persons of

¹ Source – 1999 Census Report



which 3,248 (21%) were Caymanians. The households that owned homes outright consisted of 9,946 persons, of these, 7,643 (77%) were Caymanians. Those with a mortgage consisted of 11,615 persons, 8,415 (72%) of which were Caymanians.

Table: 2 Type of Tenure by household in 1999¹

Type of Tenure	# Of Households	Percentage
Owned	3,280	22%
Mortgage	3,383	22.7%
Rented	7,265	48.7%
Rent Free	836	5.6%
Other	143	1.0%
Total	14,907	

2.10 The census does not provide any data that shows a direct correlation between person's income brackets and their respective tenures. This information would have given some indication of the percentage of low income earners who do, or do not own their homes.

2.11 The data however does confirm that in 1999 a large percentage of the Cayman Island's population resided in rented accommodations.

POPULATION GROWTH AND CHANGES IN THE DEMOGRAPHICS¹

2.12 Between 1989 and 1999, the resident population of the Cayman Islands grew from 25,355 to 39,020, an increase of 13,665 (55.4%). This growth in the size of the population consisted of an increase in the number of Caymanians of 3,623, and an increase in the number of non-Caymanians of 10,142. It is estimated that at this rate of growth, the overall population of the Cayman Islands would double by the year 2015.

Conclusion

2.13 It is our opinion, based on reviews of the 1999 census and the findings of the Low Cost Housing Committee, that there was a need for an affordable



¹ Source – 1999 Census Report

housing initiative, and adequate research and findings exists to support the necessity of the project.

Management Comments:

2.14 Management agrees with this conclusion.

ALTERNATIVE OPTIONS – CONSTRUCTION

2.15 Officials from the Ministry stated that discussions were held with local firms prior to seeking an international firm, but none of the local building solutions met the requirements of the affordable housing initiative. The Ministry relied on the work done by the previous Housing Development Corporation (HDC) who requested an expression for interest in this type of project from the various contractors. The HDC received two presentations from developers: Hadsphaltic Limited and R. Antonio Hawkins (and his Canadian Associates). Based on this information the Ministry felt that contracting Vetro was more financially feasible than contracting a local firm.

2.16 We observed that the Ministry did not tender the project out which, in our opinion, would have enabled local firms to provide submissions of construction costs for similar homes to be built. This would have presented a more valid comparison of construction costs between Vetro and the local firms. We were informed that this was a Government decision via the Minister responsible for Housing not to tender the project. One of the reasons suggested was private developers had little or no interest in this particular area of housing development as the return on their investment was minimal. To support this idea the Ministry indicated that we can see that there were no private sector initiatives to build low income housing, without Government intervention. However, in our opinion, the best evidence to support this statement would have been to tender out the project to see if there was any local private sector interest for this type of work.

2.17 It is interesting to note that the draft AHI business plan provides a comparison between the selling prices of the homes that are to be offered by the AHI and those currently provided by Frank Hall Homes and Cayman Pre-cast Homes, two local



contractors engaged in the construction of homes targeted towards the low to middle income bracket. These two companies appear to not have been involved in the initial discussions with the HDC or the Ministry. **Table 3** below shows a comparison of the selling prices that was used in the business plan.

Table 3: AHI Business Plan - Comparison between selling prices²

Models	Vetro	Cayman Pre-cast	Frank Hall Homes
2 bed/ 1 Bath	CI\$56,900	CI\$68,500	CI\$109,000 & CI\$112,000
3 bed/ 2 Bath	CI\$69,900	CI\$73,900 & CI\$84,900	CI\$136,000 & CI\$137,000
<p>I. Selling price for Vetro includes land acquisition. The homes are being built on Crown land valued at \$1,375,500 and is considered a waiver to the cost of the Vetro homes.</p> <p>II. Selling prices for Cayman pre-cast do not include land acquisition</p> <p>III. Selling prices for Frank Hall Homes include land acquisition and basic appliances.</p>			

2.18 In addition to this comparison, which presents the selling prices for homes constructed by Vetro as lower cost than the local contractors, the business plan also states that *“the Ministry sought the advice of an independent Chartered Surveyors valuation on the cost of similar housing units in order to compare prices. In their opinion (the Surveyors), a traditional timber framed unit would cost in the range of CI\$65,000 - CI\$70,000 per unit complete. On the other hand, a pre-cast concrete system built unit would cost in the range of CI\$55,000 – CI\$65,000...”*

2.19 Although the comparison indicates that using Vetro was the most cost efficient approach to take, we are of the opinion that a number of factors were not incorporated into the analysis that would have made the comparison more equitable. Two such significant factors are Government waivers and land value.



² Affordable Housing Initiative Business Plan

Government waivers

2.20 In order to reduce the cost of constructing the affordable homes, the Ministry applied for and was granted a number of waivers, including planning fees, customs duties, land & survey fees, and port authority fees. The total of these waivers as stated in the business plan was CI\$1,838,400.

Land Value

2.21 **Table 3** above highlights the selling prices of the affordable houses (constructed by Vetro) to be inclusive of land acquisition. However, the land being referred to in the business plan is crown land that has been vested in the AHI. The estimated book value of this land is CI\$1,375,500.

2.22 The suggested selling prices presented in the business plan is based on recovering projected cost of CI\$11,318,138 for the construction of the 200 units. This cost however is net of the waivers and land value noted above. The inclusion of these two factors would bring the total actual cost of the project to CI\$14,532,038.

2.23 We are not suggesting that by including these additional factors either of the local contractors presented in the comparison would have been deemed more favorable than Vetro. However, it is our opinion that all pertinent factors should have been assessed in determining which approach is the most cost efficient. As noted above, because of the absence of documented discussion between the Ministry and the local firms, it is not clear whether these local firms were informed of the specific requirements of the AHI, of the possible waivers that could have been provided if they were contracted to do the project nor the impact that these factors would have had on their projected cost for building the houses.

2.24 We also noted that the cost of constructing the houses by Vetro has increased due to various amendments that were made to the plans following reviews by the BCU. The Minister has stated that in order to recover the cost of constructing the units, the selling prices would have to be increased and/or a subsidy would be required from government to cover the variance between the actual and the projected



selling price. The estimated subsidy required, at the date of this report, is CI\$1,141,413. It must be pointed out that some phases of the project are still pending approval by the BCU, so there is the possibility that as the project progresses there could be further increases in the construction cost and the related subsidy.

ALTERNATIVE OPTIONS – CI PRECAST

2.25 We conducted a further evaluation of the alternative options that were available for the construction of the affordable homes by comparing in greater detail houses constructed by CI Precast with the units being constructed by Vetro. See **Table 4** below for comparison.

Table 4: Comparison – Vetro and CI Precast

Models	Vetro			Cayman Pre-cast		
	Price²	Sq Footage	Price/sq ft	Price³	Sq Footage	Price/sq ft
2 bed/ 1 Bath	CI\$56,900	895	CI\$63.57	CI\$74,900	907	CI\$82.57
3 bed/ 2 Bath	CI\$69,900	1,017	CI\$68.73	CI\$98,900	1,331	CI\$74.30

2.26 The comparison shows that the cost per square foot for CI Precast is more than that of Vetro by CI\$19.00 and CI\$5.57 for the 2 bedroom and 3 bedroom units respectively.

2.27 The price for units provided by CI Precast factors in the installation of central air-conditioning, washer, dryer, fridge, dishwasher and microwave, but not site preparation. Units constructed by Vetro are not air-conditioned, and the cost of the units presented in the AHI business plan does not include any major appliances, but does include site preparation costs.

2.28 The thickness of the external walls of units constructed by Vetro is 2.36 inches. The price per square foot for units constructed by CI Precast are for external walls with a thickness of 6 inches. Any reduction in the thickness of the wall of the



² Housing Trust Business Plan

³ CI Precast Home Buyers Guide

units constructed by CI Precast may result in a lower price per square foot depending upon their ability to have a different concrete casting method.

2.29 All of the core materials used in constructing the 200 units was supplied and imported by Vetro. The cost of this material was CI\$3.12 million, which is 25% of the total forecasted cost of the project. Whereas, 95% of the materials used in the construction of units by CI Precast are supplied by local businesses, which would increase local economic activity.

Conclusion

2.30 In our opinion the business plan was not adequate because a more in depth analysis of the available construction options for the Affordable Housing Initiative should have been conducted. In addition, the comparison of construction cost presented in the AHI business plan was prepared subsequent to the contract being entered into with Vetro and therefore became meaningless as a decision making tool and serves more as a marketing tool. For the comparison to have been relevant, it should have been conducted prior to any contract being entered into, and should take into account the impact of all factors, such as government waivers, for all prospective contractors.

2.31 This is further discussed under audit criteria two – goods and services have been procured in a manner compliant with applicable regulations.

Management Comments:

2.32 *It should be noted that the Business Plan was produced at the request of the Cabinet in July 2003 (see paragraph 2.50). This comprehensive management and financing plan was to have shown the management structure that would be put in place to deal with the financial arrangements relating to the overall costing, the development cost, revenue flows and unit costs of units to be sold. The plan was to have given a full picture of all aspects of the financial arrangements, to demonstrate how the accumulated sum of \$6 million advanced by the Government against this project would be recouped. In short Cabinet wanted to ensure that the Trust, once formed, could meet its financial obligations in regards to the funding provided by*



Government via an advance, which was subsequently paid off through a bond that was guaranteed by Government. At the time it was being presented, the Business Plan was not being used as a decision making tool, but was to be used to demonstrate to the Cabinet and potential investors that the Trust could service the proposed bond. The Business Plan was used to demonstrate to the Finance Committee that it was financially prudent to approve the Government Guarantee up to US\$29,000,000 (15th December 2003) for the Trust and was also useful in demonstrating to potential financiers to provide the bond for Phase One in the amount of US\$14,500,000. This bond was finalized on the 28th October 2004 at fixed rate of 5.238% for 20 years.

2.33 *The Ministry does however value your advice and in regards to the Business Plan will ensure that the Trust keeps this document updated on a regular basis. In fact, at present, the Trust is updating this document for Cabinet's review, to take into account recent developments after Hurricane Ivan.*

WE EXPECTED THE BUILDING CODES AND STANDARDS OF THE CAYMAN ISLANDS TO BE ADHERED TO

2.34 Section 101.3.1 of The Cayman Islands Building Code states that the code:

is hereby declared to be remedial and shall be construed to secure the beneficial interests and purposes thereof, which are public safety, health, and general welfare through structural strength, stability, sanitation, adequate ventilation, and safety to life and property from fire and other hazards attributed to the built environment including alteration, repair, removal, demolition, use and occupancy of buildings, structures or premises, and by regulating the installation and maintenance of all electrical, gas, mechanical and plumbing systems, which may be referred to as service systems.

2.35 The code also states in section 103.7 - Alternative materials and methods, that:

*the provisions of the technical codes are not intended to prevent the use of any material or method of construction not specifically prescribed by them, provided any such alternate has been reviewed by the building official. The building official shall approve any such alternate, provided the building official finds that the alternate for the purpose intended is at least the equivalent of that prescribed in the technical codes, in quality, strength, effectiveness, fire resistance, durability and safety. **The building official shall require that sufficient evidence or proof be***



submitted to substantiate any claim made regarding the alternate
[emphasis added].

2.36 Vetro used pre-engineered technology walls built from ISORGHE/ISOPIANO sandwich panels. The materials and the mode of construction being used by Vetro are considered as an “alternative material and methods” as specified by the Cayman Islands Building code. Therefore an approval from the Planning Department’s building official was required before they could be used in the Cayman Islands.

2.37 Vetro submitted technical specification reports and plans for the AHI to the Planning Department in October 2002, to be reviewed by the Building Control Unit (BCU). Following the review, correspondence was sent to the Low Cost Housing Committee from the BCU on 9th October 2002 advising that the technical specs and plans submitted were not in compliance with the Cayman Islands Building Code or construction document submittal requirements. The correspondence listed requirements that needed to be met prior to the issuance of a building permit and the start of construction. These requirements included:

- The installation of smoke detectors;
- The provision of mechanical ventilation for every toilet room if not provided with a 3 sq ft window;
- Provisions for the disabled in accordance with chapter 11 of the Cayman Islands Building Code;
- Submission of complete foundation plans and details for review;
- The need for each sleeping room to have at least one operable exterior window or exterior door approved for emergency egress;
- Details of the design live loads, wind and seismic loads used for the building.

2.38 Following the resubmission of the technical specs and plans, the BCU issued a second correspondence on 14th November 2002 stating that the details were still not in compliance with the Cayman Islands Building Code.

2.39 Resubmissions were again deemed non compliant by the BCU on 4th April 2003. In order to prevent further delay to the commencement of the project, an agreement was made between the Planning Department and the Ministry for a permit to be issued allowing the construction of only the concrete foundation platforms for the buildings pending the resolution of other items still under the scrutiny of the BCU.

2.40 An examination of the status of reviews conducted by BCU, showed that during the period 12th November 2002 thru 16th April 2003, ten reviews of plans for the Windsor Park phase of the Affordable Housing Initiative were conducted, all of which were disapproved. Eight similar reviews were conducted for the Eastern Avenue phase of the project during the period 5th August 2003 thru 5th January 2004, five of which were disapproved. For the West Bay phase of the project, twenty reviews were conducted between the 2nd February 2003 and the 10th February 2004, four of which were disapproved. As at the date of this report, amendments were still being made to the technical specs of the project in order to make the homes compliant with the Cayman Islands Building Code.

Impact

2.41 We are concerned that the contract for the construction of the 200 houses was signed without any significant input from the Planning Department's BCU. Both the technology and materials being used by Vetro are new to the Cayman Islands, which thereby classified it as alternative materials and methods as outlined in the Cayman Islands Building Code. Submissions of technical specifications and sample materials should have been made to the BCU for their assessment and approval. However the first submission to the BCU was made in October 2002, two months after the contract had already been signed.

2.42 The technical specifications submitted by the affordable housing project have been disapproved on numerous occasions due to various non-compliance factors ranging from inadequate fire detection devices to improper foundations. The process of correcting these factors has resulted in the start of the project being delayed and



additional cost being incurred. It must be stressed that approvals for all aspects of the project have not been issued by the BCU, as at the date of this report. Therefore there is the possibility that the overall cost of the project could increase further, as changes are made to bring it in full compliance.

Conclusion

2.43 In our opinion, signing a contract with Vetro without seeking an approval for the use of an alternative material and method from the Building Control Unit is a departure from the Cayman Islands Building Code. Considering that Vetro is an international firm whose technology has never been used in the Cayman Islands, it would have been prudent for the Ministry of Community Services to seek assistance from the Ministry of Planning's Building Control Unit, in determining whether the construction plans being proposed were in line with Cayman Islands Building standards before signing a contract.

2.44 By reversing this process and getting 'locked' into a contract first, the Ministry has exposed itself to cost overruns and time delays that could have possibly been prevented or reduced if the BCU had been involved in the initial stages of the project. Ideally, general specs for the Affordable Housing Initiative should have been developed, approved by the BCU, and provided to prospective contractors, and only those proposals meeting these specs short-listed for further consideration.

Management Comments:

2.45 *Although the first formal submission to BCU was made in October 2002, meetings were held between the suppliers of the material and BCU on the 22nd July 2002 and with the Director of Planning on the 7th August 2002. The construction contract was signed on the 23rd January 2003. Prior to signing the contracts, both (contracts) had been vetted by the Legal Department. The construction contract specifies that the construction must be in compliance with the Cayman Islands Planning, Building, Plumbing and Electrical Codes.*

OVERVIEW OF THE NATIONAL HOUSING AND COMMUNITY TRUST

2.46 On the 29th of September 2003, the National Housing and Community Development Trust (the “Trust”) was incorporated under the Companies Law (2003 Revision), as a Company Limited by Guarantee and not having a share capital.

2.47 The Trust was created so that there would be a wholly Government owned not for profit company, independent from the Ministry responsible for the execution of the Affordable Housing Initiative.

2.48 The Company’s memorandum of association outlined some of its major objectives as:

- The construction and maintenance of affordable housing communities;
- Obtaining external funding in order to repay initial advances made by the Government and to acquire additional land and material for the second phase of the housing initiative;
- To market and sell or lease the units, as well as provide financing for prospective owners.

2.49 The mission statement of the Trust is: “To construct and provide affordable homes in planned communities, offer easier financing opportunities, and provide a management system that adds security, value and ownership, that imparts a sense of pride in hard working Caymanians that earn less than twenty four thousand dollars per annum.”

REVIEW OF THE TRUST BUSINESS PLAN

2.50 In a Cabinet resolution dated 1st July 2003, it was requested that the Trust prepare a business plan that provided a comprehensive management and financial plan showing the management structure put in place to deal with the financial arrangements relating to the overall costing, the development cost, revenue flows and unit costs/cost of units to be sold. A draft version of the business plan, which was submitted to the Cabinet in January 2004, outlined the Trust’s critical success factors,



a market analysis summary for the housing initiative, a management summary and structure, and a financial plan.

TIMELINESS OF THE BUSINESS PLAN

2.51 As stated above, a draft version of the AHI Business Plan was submitted to Cabinet in January 2004. By this time contracts for the project had already been signed, construction of units had commenced, and the Government had advanced CI\$6.5 million towards the project. It must also be noted that the Minister of Community Services had submitted a paper to Cabinet, which gave an overview of the housing initiative and the projected cost. This paper however did not address some of the salient areas that were subsequently presented in the business plan.

2.52 The date of submission of this paper was also after the date that a CI\$5 million contract for the construction of units was signed.

2.53 Ideally the AHI business plan should have been compiled and approved by Cabinet prior to the commencement of the project. We believe that enough data existed to support the need for the development of the housing initiative, however the absence of a strategic plan that analyzes the financial and economical feasibility of the project heightens the risk of government incurring significant unrecoverable expenses. The utilization of the business plan as a decision-making tool, which is one of its key functions, is considerably reduced when most of the core decisions have been made prior to its completion.

Conclusion

2.54 We are of the opinion that the creation of a National Housing Trust to address the overall housing and other social needs of the low-income earners of the Cayman Islands is justified. However the timing of its establishment and the completion of the business plan is a matter of concern.

2.55 It is our view that after the conceptualization of the initiative by the Minister, the Trust should have been set up with its initial task being to develop a strategic plan to address the mode and timing of construction, the sourcing of

financing, and the overall management of the housing project. This would have provided decision makers with more comprehensive (and detailed) information and thereby a better means of assessing the financial feasibility of the project.

2.56 By sourcing financing for the project prior to the signing of contracts and the start of construction, there would have been no need for Government to advance funds towards the project. Additionally the timely establishment of the Trust would have reduced the level of involvement of the Ministry, thus achieving the primary reason for creation of the Trust: “...*having an independent body to carry out the plans and goals of the Affordable Housing Initiative.*”

Management Comments:

2.57 *The Ministry in late 2002, met with the Legal Department for advice on the administrative structure that was needed to provide social housing. However due to the heavy workload of the Legal Department, which at that time was working on some very crucial issues for the Ministry...this was not done until early in the new year 2003. Despite this heavy workload, the Legal Department was able to assist the Ministry with the legal documentation for the setting up of the National Housing Trust by the end of April 2003. Cabinet approved the formation of a government-owned company known as the National Housing Trust on the 28th April 2003 and its licence was issued on the 13th May 2003. At that time, the NHT was to act as a “social landlord” by keeping the stock of homes on behalf of Government until they could be sold to the home owner who would secure funding through the Cayman Islands Development Bank funds or some other financial institution for housing. However, after meeting with other government officials (including senior staff from the Portfolio of Finance and Cayman Islands Development Bank), the decision was taken for the NHT to be resubmitted for approval to Cabinet with a view of it being able to act as a lending institution in terms of providing the financing for the homes. In going this route, the Trust would be able to secure loans at more reasonable terms than the ones being offered at the Commercial Banks and the Cayman Islands Development Bank. The second time around took a bit longer to complete, due to*



having to get permission from the Monetary Authority for the Trust to operate as a lending institution. The National Housing and Community Development Trust was finally registered in its current form on the 29th September 2003.



AUDIT CRITERIA # 2 – GOODS AND SERVICES HAVE BEEN PROCURED IN A MANNER COMPLIANT WITH APPLICABLE REGULATIONS.

3.01 The Financial and Stores Regulations (1986) (FSRs) governs the purchase of goods, works and services by the Cayman Islands Government. The FSRs exist to ensure Government is receiving the best value for money and that goods, works and services are obtained openly and competitively so all potential suppliers have an equal opportunity to bid for public contracts, and the award of all such contracts are seen by the public to be fair and equitable. To this end, except for purchases not exceeding \$10,000, all goods, works and services required locally by the government will be obtained by contract after public tender.

3.02 According to section 8.4.1 tenders for Government supplies, works and services **will** be considered by specific tendering committees- the Central Tenders Committee (CTC) and the Department Tender Committee (DTC).

CONTRACTS WITH VETROMECCANICHE INVESTMENT LTD

3.03 On 23rd August 2002, the Ministry of Community Services, Youth, Sports and Gender Affairs (formerly the Ministry of Community Development, Women Affairs, Youth and Sports), signed a contract with Vetromeccaniche Investment Limited for the supply of materials for the construction of 200 pre-engineered houses for the Affordable Housing Initiative with a value of US\$3,710,102. A second contract with a value of US\$6,598,990 was signed between the same parties on 23rd January 2003 for the erection and completion of the two hundred houses. Neither of these two contracts was put out to competitive tender.

3.04 Following the signing, the contracts were ratified by Executive Council on the 27th of August 2002 and the 18th of February 2003 respectively.⁴

3.05 We expressed concerns that there was a departure from the tendering regulations outlined in the FSRs for such significant contracts and were informed by

⁴ Extract from minutes of Executive Council item No 2421 of meeting No 85/02 held on August 27th 2002.



Ministry officials that discussions were held with local contractors but no suitable solution to address the affordable housing requirements were found, therefore a non traditional approach was taken. The official also stated that representatives from the Ministry had made a number of visits to Jamaica and Cuba to examine the types of low cost housing techniques used, and to assess whether such forms of construction could be applied in the Cayman Islands.

3.06 The Ministry conducted three visits, the first to Jamaica from the 1st to the 3rd of March 2002, followed by two visits to Cuba from 9th to the 12th of May 2002, and 11th to the 15th of July 2002. During these visits, the form of technology used by Vetro in the construction of the low cost houses in Cuba was seen.

3.07 Following the visits the Ministry prepared a report summarizing the findings of the visit, extracts of which were presented by the Minister in a paper to the Executive Council. The report provided a brief overview of four types of low cost housing techniques reviewed in Jamaica and Cuba and deemed by the team to be appropriate for the AHI.

3.08 The report also stated that Vetro visited Grand Cayman from the 22nd - 27th of July to have a series of meetings with government officials, and a proposed work programme to ensure that they could have 100 houses erected by the end of December 2002. On 22nd August 2002, four weeks following the company's visit to Grand Cayman, the Government signed the first of two contracts with Vetro.

3.09 No documentation of discussions or negotiation meetings held with local or other international suppliers were available from the Ministry. One of the local construction companies presented in the AHI business plan has stated that they had no discussions or meetings with Government regarding the AHI, and although they had expressed an interest in the project, no responses were received.



Conclusion

3.10 In our opinion the Ministry did not handle the procurement of services to supply materials for the construction of 200 houses, the erection and completion of those houses in a fair and equitable manner.

3.11 We understand the Government's concern in regards to the pressing demand for affordable housing, and the desire to find innovative and economical ways to meet the demand.

3.12 However we would have expected the Government to develop a specification outline for the project, indicating such things as the desired cost range per unit, minimum square footage, and required amenities. Such an outline could have formed part of a public invitation to tender both locally and internationally. This would not only have generated competition and a wider scope of options, but also provided greater transparency in the selection process as opposed to the "hand picking" process employed. It is our opinion that the departure from traditional tendering procedures and the hasty decision to enter into a contract with Vetro are not adequately justified.

Management Comments:

3.13 *Back on the 21st February 2003, the Minister of Community Services wrote to the Auditor General explaining that the Executive Committee had ratified the approach to be taken and the Ministry is now ready to embark upon the procurement stage of the Affordable Housing Initiative. A project manager has been retained and is responsible for the procurement and execution of the assembly, erection and delivery of 200 houses under Phase One of the Initiative. The Ministry has embraced the concept of "value engineering" in order to achieve the procurement of these houses at the least possible cost and over the shortest possible time-frame and in so doing, will comply with Government's requirement for best value for money.*

3.14 *On the 20th June 2003, the Minister of Community Services also made a statement in the House in regards to the approach used by the Ministry in building the affordable houses and the issues revolving around this project.*



CONTRACT FOR SITE CLEAR, FILL AND COMPACT WORKS

3.15 On 17th January 2003, the Central Tenders Committee opened bids from six companies to provide site clearance, fill and compact works for three of the sites of the Affordable Housing Initiative project. Of the six bidders, Paul A. Bodden Heavy Equipment Services Ltd submitted the lowest bid of \$1.09 million, Scott Equipment Ltd submitted the highest bid of \$1.51 million and Caristef Ltd submitted the second highest bid of \$1.50 million.

3.16 Acting on the recommendation of the Project Manager for the AHI, the CTC awarded the contract to Paul A Bodden Heavy Equipment Services Ltd, subject to the acceptance letter from the Ministry and adjustments to the tender bid for works already carried out prior to and during the tendering process.

3.17 In a correspondence dated 1st February 2003 from the Project Manager of the AHI, Paul A. Bodden Heavy Equipment Ltd as well as the other companies that had submitted bids were informed that it was decided not to make an award for the site clear, fill and compact works as some of the sites identified for the initiative were under review and further value engineering of the initiative as a whole needed to be undertaken.

3.18 Following this retraction, two contracts between the Ministry and Caristef Construction Ltd were confirmed on 28th February 2003 and 8th August 2003 for site fill operations at two of the sites. Contracts were also confirmed with J&P Construction (Transport) Ltd and Quarry Product Limited on 11th April 2003 and 24th April 2003 respectively for site fill operations for the third site. Neither of the latter two companies had submitted bids to the tendering process conducted in January 2003.

3.19 The Project Manager for the AHI stated that based on a directive from the Minister of Community Services, verbal negotiations were held with Caristef Ltd with regards to carrying out the fill operations prior to entering the contracts. However, no negotiations were held with any of the other companies who had taken

part in the original tendering process. One reason cited for taking this approach and not conducting tendering procedures was the need to get this phase of the project completed in the most cost efficient and timely manner.

3.20 In our opinion this line of reasoning is not congruent with obtaining the best cost, as the principles of tendering would lead one to obtain the best value for money.

3.21 The project manager further stated that a decision was made to enter into a contract with J&P Construction, as they were already involved in the project providing transportation services to Caristef Ltd. and to extend the provision of their services to the AHI would have resulted in cost and time efficiencies.

3.22 The use of Quarry Product Limited (QPL) as a supplier of fill material was based on a previous agreement that existed between this company and the Government dating back to December 2000. By contracting with QPL under the terms of the previous agreement, it was possible for the AHI to source material at a reduced rate. All of the contracts discussed above were prepared and signed off by the Project Manager for the AHI, who used to work for QPL.

3.23 We are concerned that after a tender has been processed in accordance with the Financial and Stores Regulations by the Central Tenders Committee and a contract has been awarded, that it would be retracted for the reasons cited above. It is appreciated that the Government reserves the right not to accept the lowest or any bids submitted for public tenders, however the practice of withdrawing awards and conducting “selective” negotiations reduces the appearance of a fair and equitable system for obtaining government contracts, increases the opportunities of “kickbacks” and cost overruns, and in general is a departure from prescribed financial regulations. We do note that the Ministry did get legal representations indicating that “the letter from the Central Tenders Committee (“CTC”) dated January 21, 2003 makes it abundantly clear that there remained several conditions precedent to the execution of such a binding contract which contract has not therefore been executed.”



Overall Conclusion

3.24 In our opinion the process used in negotiating and awarding the contracts for the AHI project have been unacceptable.

Management Comments:

3.25 See previous comments made in paragraphs 2.32, 2.33, 2.45, 2.57, 3.13 and 3.14.

COST OVERRUN ON FILLING WORKS

3.26 Section 8 of the Financial and Stores Regulations provides guidance on addressing variances on contracts by stating that:

It is acceptable that the need to vary a contract may arise due to circumstances unforeseen at the time the contract was let. In the case of works contracts unpredictable site conditions or developments may require changes to the original plan. Any such variations must be authorized by variation orders, which should be serially numbered for each contract and which must be signed personally by the officer signing the original contract. Before signing a variation order, the officer must ensure that sufficient funds are available to meet any increased cost occasioned by the variation. Any variation order or the cumulative effect of a series of variation orders which result in an increase in the original contract price of more than 20% must be authorized by the Tender Committee which approved the tender for the contract.

Table 5: Billings for fill operation contracts

Company	Actual Billings⁵	Site⁶
Caristef Construction Limited	\$823,203	B&C
J&P Construction Limited	\$260,372	A
Quarry Product Limited	\$174,148	A
Other	\$39,113	
Total	\$1,296,836	

⁵ Extracted from Ministry of Community Services cost schedule for filling works as at June 23rd 2004

⁶ Site A – West Bay, Site B – Eastern Avenue, Site C – Windsor Park



Table 6: Comparison of actual billings to lowest tender bid for fill works

Site	Actual Billings	Lowest tender Bid ⁷	Variance
A	\$434,520	\$552,525	(\$118,005)
B & C	\$823,203	\$547,106	\$276,097
Other	\$39,113	NA	\$39,113
Total	\$1,296,836	\$1,099,631	\$197,205

Table 7: Comparison of Actual billings for fill works to budget

Actual Billings	Budget ⁸	Variance (\$)	Variance (%)
\$1,296,836	\$970,000	\$326,836	34%

3.27 The tables above show the amounts paid to each company for fill operations works as at June 2004, a comparison of the actual cost to the lowest tender bid and to the budgeted cost. The total actual cost as at this date was \$197,205 more than the amount submitted in the lowest tender bid (see details in **Table 6**) and \$326,836 more than the budgeted amount (see **Table 7**).

3.28 The cost overruns above were attributed to additional quantities of fill being required for some sites as well as variations in the cost of materials.

3.29 The Project Manager stated that due to the nature of the filling works, the costs overruns encountered are hard to predict. A factor such as the geographical composition of the sites cannot be accurately determined until filling works have commenced. Also as the contracts to supply material entered into with Caristef and Quarry Product Limited were not based on a fixed total cost, but estimated quantities and an agreed unit price per cubic yard of material supplied, any increases in the amount of material required resulted in an increased cost for Government.

3.30 The Project Manager also noted that similar overruns would have occurred even if a contract had been awarded to the lowest bidder from the tendering process, due to the fact that the contract price for a tender award would not have been fixed,

⁷ Extracted from Tender Bids Analysis prepared by AHI Project Manager

⁸ Extracted from Ministry of Community Services cost schedule for filling works as at June 23rd 2004



therefore any additional cost incurred beyond the amount agreed to in the contract, would have also been passed on to the Government.

Table 8: Comparison of estimated to actual quantities of filling material

Supplier	Site	Estimated Quantities required⁹ (cubic yard)	Actual Quantities supplied¹⁰ (cubic yard)	Variance (cubic yard)
Caristef	Eastern Avenue	5,000	7,492	2,492
Caristef	Windsor Park	10,000	23,306	13,306
QPL	West Bay	18,300	25,235	6,935
Total		33,300	56,033	22,733

3.31 Table 8 above shows that actual amounts of materials required for filling works is significantly higher than the amount estimated in the contracts. This trend is consistent with the variances noted between the actual cost incurred and the amounts budgeted, suggesting that not enough planning of this phase of the project was undertaken, resulting in overly optimistic estimates and in the end, cost overruns.

3.32 As outlined previously, the FSRs indicate that the Central Tenders Committee that approved the original contract should authorize any contract variance of 20% or more. For the filling works phase of the AHI, there was a variance between the budgeted amounts and the actual amount of 25%. However it must be reiterated that the CTC did not approve any of the contracts for filling works, therefore they did not authorize any related variance. Variance orders were requested from the Ministry, however as at the issuance date of this report, none were provided.

3.33 It is important that realistic and reliable financial forecasts are available prior to the commencement of any Government project to allow decision makers to make informed judgments. This becomes of greater importance for a project of this nature

⁹ Extracted from contracts for filling works

¹⁰ Analysis of fill material supplied prepared by AHI Project Manager



where the principles of value engineering are being employed in order to complete the affordable houses in the most efficient and economical manner.

3.34 In instances when there are significant variations to the cost of a contract, or, as in this case where the original estimated amount of material agreed to is exceeded, a new contract should be created if the scope of the works have significantly changed or an amendment or variance note (order) added to the existing contract to account for the increase.

3.35 It is noted that the Ministry has established a very aggressive time frame for the completion of the housing project, which at times resulted in the financial regulations not being complied with. In such instances alternative processes must be put in place to ensure that best procurement practices are adhered too, to help mitigate the potential risk of significant cost overruns or the occurrence of other abuses.

Management Comments:

3.36 *Management has indicated to us that: “the contracts entered into, were based on rates for specified fill material to be procured, delivered and compacted on each site - and did not provide for a specified fixed quantity as a material term. As each contract required each site to be filled to pre-determined elevations using materials conforming to specification, the amount of fill required to complete each site could thus vary according to site conditions. The nature of the 3 sites selected for the Affordable Housing Initiative reflect the extent of the variances between estimated fill requirements and actual fill volumes provided under Contract. The West Bay site was relatively easy to access and survey in order to estimate expected volumes, but the Eastern Avenue site manifested some undetected but nasty swamp and peat areas that had to be de-mucked and then filled- as did the Windsor Park site. In addition, some extremely difficult terrain was encountered at Windsor Park site- discovered after clearing operations had commenced- resulting in the Ministry having to create several “platforms” of differing elevation - each with retaining berms etc. The complexity of these operations was not apparent at the time of preparing budget estimates for this work...”*



DISBURSEMENTS

3.37 The Financial and Stores Regulations states that “the number of the contract must be quoted in every voucher for payments made in accordance with the contract, in addition to the actual authority for the expenditure. The payment vouchers must be certified by the officer administering the contract that the goods purchased have been duly received or the services properly performed or the works duly completed and that the payment is in all respects in accordance with the terms of the contract.”

RECONCILIATION OF DISBURSEMENTS MADE TO VETRO FOR MATERIALS

3.38 As part of the materials contract with Vetro, an advance payment of 20% (US\$742,020) of the total value of the contract was required prior to the first shipment (of materials). This payment was made in September 2002, and was followed by additional payments totaling CI\$2.497 million that were made through a letter of credit.

3.39 We reviewed all available invoices that were sent to the Ministry from Vetro regarding the supply of materials in order to ensure that supporting documentation existed for all disbursements made and that these records were being monitored and maintained in an appropriate manner.

3.40 From our review it was observed that on numerous occasions there were breaks in the continuity of the invoice numbering being used by Vetro, suggesting that there were missing invoices. In total we observed 112 invoice numbers that were not accounted for, with the most significant break being between invoice numbers 154 and 200, an omission of 46 invoice numbers. In addition to these breaks in the numerical sequencing of invoices, there was also an absence of reconciliation between the amounts being disbursed from the letter of credit and invoices received by the Ministry.

3.41 We observed that no reconciliations were being performed by the Ministry to ensure that invoices representing the advance payment of US \$742,020 were presented. A reconciliation performed by the Audit Office in March 2004 with



invoices provided by the Ministry indicated that there was a shortfall between the advance payment and the total value of invoices presented of approximately US\$270,000.

3.42 Investigations by the Ministry revealed that there were additional invoices filed in a different location that represented the variance. In order to address the issue of the “missing” invoices, the Ministry raised the matter with Vetro’s President, who provided confirmation that the omitted numbers were not used and there was no intention for them to be used in the future.

3.43 Not performing timely reconciliation of supporting documents to advance payments made for government contracts increases the risk that the value and amount of materials supplied or services rendered, is less than the amounts advanced.

3.44 Also, reviewing the numerical sequencing of invoices for a contract acts as an internal control tool for verifying the completeness of disbursements and prevents the duplication of invoices. Particularly in a case where payments are being made to Vetro by a third party (i.e. the bank via a letter of credit), it is expected that the break in invoice numbering sequence would raise concerns and require an immediate explanation from the supplier and the bank.

3.45 Although the matters above were subsequently resolved, we stress that for future phases of the Affordable Housing Initiative, measures should be put in place to ensure that timely reconciliation of disbursements and reviews of the completeness of invoices are conducted.

REVIEWING AND APPROVING INVOICES

3.46 An examination of invoices submitted to the Ministry for payment for filling works showed that the project manager upon receiving the invoices from the suppliers, reviewed them and ensured that the work being claimed was completed, then signed the invoices approving them for payment. Invoices were then forwarded to the Ministry with a cover letter prepared by the project manager, indicating the nature of the works carried out and the amount due.



3.47 It was noted that all invoices submitted to the Ministry during the period 10th February 2003 to 2nd February 2004 were paid by the Ministry. However copies of the related contracts outlining the terms and conditions and rates agreed to with the suppliers, were not received by the Ministry until 2nd February 2004. Management indicated to us that these contracts were sent, but they could not find them at that time. By February 2004, payments of CI\$1.09 million had already been disbursed. To us this suggests that there were no additional reviews of the rates being charged or the general terms and conditions of the contracts conducted by Ministry personnel other than the project manager. The Ministry informs us that they did query the Project Manager in regards to the rates being charged and were aware of the increase in fill from the initial estimate and had also informed Cabinet of these increases.

3.48 Although, the project manager has been given wide responsibility for the execution of the project and was aware of the terms of the contracts, the financial regulations requires that a certified true copy of each contract be retained in the department or office for reference and the original forwarded to the Accountant General. Particularly in this situation where the contracts were prepared and approved by the same officer that reviews and approves invoices for payment, it would have been prudent to have another senior officer conduct a second examination to ensure compliance with the terms of the contracts and the overall accuracy of claims prior to payment.

INCONSISTENCIES BETWEEN INVOICES AND CONTRACT DETAILS

3.49 We selected all available invoices for filling materials supplied to each of the sites and noted the following inconsistencies.

3.50 The contract for the Windsor Park site stated that for procuring material the rate per cubic yard was CI\$8.00 and for spreading and compacting material on site the rate per cubic yard was CI\$2.50. For the Eastern Avenue site contract, the rate was CI\$10.40, which included the cost of material and delivery charges (\$2.40 / cu yd.). However, the invoices submitted for works done at both sites showed three different types of material on it: shot rock, Cayman rock and crusher run with varying rates per cubic yard, as apposed to a general material rate as outlined



in the contracts. The rates used in the invoices ranged from CI\$9.50 to CI\$19.00 per cubic yard resulting in variances in the case of Windsor Park of CI\$1.50 to CI\$11.00 per cubic yard.

Table 9: Example of rate variance for material

Rate per contract	Rate per invoice	Rate Variance	Quantities	Variance
CI\$10.40 cu yd	CI\$18.00 cu yd	CI\$7.60 cu yd	5,676.72 cu yd	CI\$43,143

3.51 The table above shows the most significant variance that resulted from a rate higher than that agreed to in the contract being charged for material supplied by Caristef to the Eastern Avenue site on 29th January 2004. The only reason provided for this variance is the inability of Caristef to source material from its supplier.

3.52 There were similar high prices charged for material supplied in November 2003. At that time the higher rates were attributed to mechanical breakdowns that were experienced by the supplier resulting in obtaining material from alternate sources. The total cost variance related to these higher rates for the period October 2003 thru January 2004 was CI\$64,244.

3.53 It is necessary to point out that Quarry Product Limited, who also had a contract to supply material to the AHI project, was the supplier from whom Caristef was receiving material.

3.54 The rates being charged directly to the AHI project by Quarry Product Limited were based on a previous agreement between Government and Quarry Product Limited. Under this agreement, material is to be supplied to the Government at rates less than market, to offset an outstanding debt. These rates were lower than the rates being charged to the AHI by Caristef for material received from Quarry Product Limited. No explicit reason has been given explaining why it was necessary to contract with Caristef to supply, at a higher cost, material that was sourced from a supplier with whom a contract with the AHI already existed.



AUDIT CRITERIA # 3 – THE HOUSING TRUST / MINISTRY IS ADEQUATELY MONITORING THE PROJECT.

ACTUAL COSTS INCURRED ARE CONSISTENT WITH BUDGETED ESTIMATES AND ANY VARIANCES EXPLAINED

4.01 We expected that an analysis of the financial feasibility of the project would be prepared and that adequate procedures would be put in place by the Ministry to ensure that costs incurred are in line with the amounts presented in the forecast. In cases where cost overruns occur, or amendments to the project are anticipated, timely variance reports would be prepared, indicating the reason for the increased cost.

4.02 On 13th February 2003, a paper was presented to the Executive Council by the Minister of Community Services, which included a schedule of the projected revenue and cost associated with the project. Subsequent to this submission, amended forecast details were presented in an original and a revised version of the AHI business plans.

4.03 We performed a variance analysis comparing the actual cost incurred as at 23rd June 2004 with the projected costs presented in the Minister's paper that was submitted to EXCO, and the projected cost presented in the revised business plan of the Housing Trust dated 5th May 2004. This analysis showed that the total projected cost for the construction of 200 houses in phase one increased from CI\$11.36 million (the amount submitted to EXCO in February 2003) to CI\$12.58 million, the amount presented in the revised business plan of the AHI. This is an increase of CI\$1.22 million (10.7%).

4.04 As at 23rd June 2004 the actual cost incurred was CI\$8.8 million, which was CI\$2.5 million (22%) less than the amount projected in the paper submitted to EXCO, and CI\$3.7 million (30%) less than the amount forecasted in the revised business plan. We observed that the increase in the forecasted cost presented in the revised business plan was as a result of additional work and/or revisions that were required for various phases of the project. The most significant increases accounted for an



increase in projected cost of CI\$1.17 million (See details at **Financial Schedule 3**).

These were for:

- Unit construction cost;
- Filling and sub slabs;
- Roads, sidewalks and drains; and
- Project management salary.

4.05 We also observed some areas in which the projected cost decreased, totaling CI\$35,000, with the most significant decrease relating to engineering consultant cost, which decreased from CI\$20,000 to CI\$5,000.

4.06 It must be noted that construction was still on-going at the time of this report, therefore costs used in the analysis represent a percentage and not the total cost to complete the project.

Conclusion

4.07 In our opinion, the actual costs incurred as at 23rd June 2004 for some expenditures have exceeded the expected total costs to complete the project and are not consistent with the amounts originally projected. As the primary objective of the initiative is the provision of affordable housing, there is little scope for increasing the selling prices of the units in order to recover cost. As a result if the total cost of the project exceeds the potential revenue for the sale of the units, Government would be required to provide a subsidy to cover the deficit.

Management Comments:

4.08 The Ministry notes the opinion of the Auditor General “the actual costs incurred as at 23rd June 2004 for some expenditures have exceeded the expected total costs to complete the project and are not consistent with the amounts originally projected”. However, it should be noted that the Projected Cost in February 2003 for Phase 1 of the Affordable Housing Initiative was CI\$11,356,138 (excluding waivers and land costs). This figure was a rough estimate of the project, and was done prior to the clearing of the land at Windsor Park and being unaware of the difficult terrain of this site as stated in 3.36. At the initial stage of the project, the selling prices were



set at CI\$48,500 for the two bedroom and one bath and CI\$59,500 for 2 bedroom and den.

4.09 After being aware of these variances, the total cost of the project was revised by the Project Manager. These amended costs of the project were presented to Cabinet on the following dates:

<u>Date</u>	<u>Projected Cost (Excluding Waivers and Land Costs)</u>
October 2003	CI\$11,508,639
January 2004	CI\$11,508,939
May 2004	CI\$12,581,213

4.10 Cabinet accepted the revised figure of the project on the 11th May 2004. At this time Cabinet also gave approval for the selling price of the homes at CI\$69,600 for the two bedroom and den and CI\$56,900 for the two bedroom units. At that time, prior to Hurricane Ivan, it was not anticipated that there would be a deficit for the project (see pages 22 and 23 of the revised Business Plan dated May 2004). In the aftermath of Hurricane Ivan the NHCDT [Trust] is currently finalizing its projections for costing to complete this phase of the Affordable Housing Initiative. If there is a need for a Government subsidy this would not be a departure from Government's policy as Government has seen it fit to subsidize existing homeowners with a household income of CI\$40,000 or under by a grant up to CI\$15,000 per unit.

Financial Schedule 1: Original Projected Cost¹¹ vs. Actual Cost¹²

Details	June 2004 Actual Cost (CI\$)	February 2003 Projected Cost (CI\$)	Variance (CI\$) <i>(Over)/Under</i>	Variance (%)
Materials Supply	3,119,327	3,116,486	(2,841)	-0.09%
Units Construction	3,383,584	5,543,152	2,159,568	39%
	6,502,911	8,659,638	2,156,727	
Filling of sites	1,321,604	995,000	(326,604)	-33%
Water Supply & Sewerage	397,381	625,000	227,619	36%
Roads, Kerbs, S/walks & Drains	213,266	460,000	246,734	54%
Site Electrical Reticulation	0	20,000	20,000	100%
Landscaping / Fencing	14,110	260,000	245,890	95%
	1,946,361	2,360,000	413,639	
Site Utilities	14,164	28,000	13,836	49%
PM Staff Salaries	151,802	102,000	(49,802)	-49%
Survey & Strata Establishment	82,830	78,000	(4,830)	-6%
Engineering Consultants / Tests	0	20,000	20,000	100%
Local Trucking Costs (Container	13,428	7,000	(6,428)	-92%
Contractors' Storage Facilities	73,271	72,500	(771)	-1%
LOC Bank Costs	35,697	29,000	(6,697)	-23%
Misc / Office Supplies etc.	4,615	0	(4,615)	0%
	375,807	336,500	(39,307)	
Grand Total	8,825,080	11,356,138	2,531,058	22%

¹¹ Projected cost as per paper submitted to EXCO on February 13th 2003

¹² Actual cost as at June 23rd 2004.



Financial Schedule 2: Current Projected Cost¹³ vs. Actual Cost

Details	June 2004 Actual Cost (CIS)	May 2004 Projected Cost (CIS)	Variance (CIS) <i>(Over)/Under</i>	Variance (%)
Materials Supply	3,119,327	3,116,486	(2,841)	-0.09%
Units Construction	3,383,584	5,628,152	2,244,568	40%
	6,502,911	8,744,638	2,241,727	
Site Clear & Fill (incl subslabs)	1,321,604	1,650,000	328,396	20%
Water Supply & Sewerage	397,381	615,500	218,119	35%
Roads, Kerbs, S/walks & Drains	213,266	812,275	599,009	74%
Site Electrical Reticulation	0	53,000	53,000	100%
Landscaping / Fencing	14,110	250,000	235,890	94%
	1,946,361	3,380,775	1,434,414	
Site Utilities	14,164	28,000	13,836	49%
PM Staff Salaries	151,802	180,000	28,198	16%
Survey & Strata Establishment	82,830	110,000	27,170	25%
Engineering Consultants / Tests	0	5,000	5,000	100%
Local Trucking Costs (Container	13,428	15,000	1,572	10%
Contractors' Storage Facilities	73,271	72,500	(771)	-1%
LOC Bank Costs	35,697	35,700	3	0.01%
Misc / Office Supplies etc.	4,615	9,600	4,985	52%
	375,807	455,800	79,993	
Grand Total	8,825,080	12,581,213	3,756,133	30%

¹³ Projected cost as per the Housing Trust's Business Plan dated 5th May 2004



Financial Schedule 3: Analysis of Changes in Projected Cost

Details	Original Projected Cost (CI\$)	Current Projected Cost (CI\$)	Variance (Over)/Under (CI\$)
Units Construction	5,543,152	5,628,152	(85,000)
Site Clear & Fill	995,000	1,650,000	(655,000)
Roads, Kerbs, S/walks & Drains	460,000	812,275	(352,275)
PM Staff Salaries	102,000	180,000	(78,000)
	7,100,152	8,270,427	(1,170,275)

COMPLETION OF UNITS IS CONSISTENT WITH PROJECTED TIMING

4.11 Phase one of the Affordable Housing Initiative consists of 200 units at four locations on Grand Cayman. The commencement date of construction as stipulated in the agreement with Vetro was 17th March 2003, with the total period for the execution of works being 14 months from the commencement date, i.e. 17th May 2004. The expected completion date of phase one of the project presented in the business plan of the Housing Trust is June 2004.

Table 10: Locations and number of units proposed

Location	# of Units Proposed
Windsor Park	30
Eastern Avenue	33
Fairbanks	68
West Bay	69
Total	200

4.12 As at mid-August 2004, all of the 69 units in West Bay and 9 units in Windsor Park had been handed over to the Trust. The Trust indicated that the additional 21 units at Windsor Park and the 33 at Eastern Avenue are substantially completed and it is anticipated that all units from these three sites would be handed over to the Trust by



mid-September 2004. Construction work on the remaining 68 units at Fairbanks where clearing and filling work is currently on going is expected to begin during September 2004. The commencement of work on the 68 units at the Fairbanks site was delayed due to the original site identified becoming unavailable, and additional time being spent to locate a suitable alternative.

Conclusion

4.13 The 200 units have not been completed by the dates presented in the contractual agreement with Vetro or the AHI business plan due to problems in acquiring the land at one of the original sites planned and delays in obtaining Planning and Building Control Unit approval for all of the homes being constructed.

4.14 Revenues earned from the sales of the units is to be used for the repayment of funds received by the Housing Trust to finance the project. The timing of the completion and sale of the units directly impacts the Housing Trust's ability to meet its repayment obligations for the financing received.

Management Comments:

4.15 *It is debatable whether "... delays in obtaining Planning and Building Control Unit approval for all of the homes being constructed..." was a primary reason for delays incurred in completing the initial Affordable Housing Initiative Phase of 200 homes (although it may be one of many factors). More salient factors may have been the apparent inability of Vetromeccaniche Invest to maintain a reasonable rate of production progress as anticipated by their own Construction Completion Schedule in addition to delays being incurred as a result of extraordinary fill requirements having to have been undertaken.*

4.16 *The Trust is actively working on strategies to ensure that it meets its repayment obligations in regards to the bond, by:*

- *Repairing the damaged units as quickly as possible, and*
- *the redevelopment of the Eastern Avenue Site by increasing the density of the site, via multi-storey apartments, rather than single storey apartments.*



4.17 The Trust will try to achieve the above, by using its existing funds and keeping in mind its repayment obligations.

ACKNOWLEDGEMENTS

4.18 In closing, I wish to acknowledge and thank all those who assisted and cooperated with my Office during the course of our work, especially the senior management of the Ministry of Community Services, Youth, Sports, and Gender Affairs. I would also like to acknowledge the efforts of my own staff in the production of this report.



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21 January 2005

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