

FINAL REPORT BY THE ASSURANCE TEAM

ON

THE MATERIAL PROJECT INFORMATION PROVIDED

BY

THE MINISTRY OF WORKS AND SUPPLY - BUILDINGS

DEPARTMENT

ON

THE REHABILITATION OF OLD AND CONSTRUCTION OF

NEW STRUCTURES AT MULUNGUSHI UNIVERSITY

KABWE

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List of Acronyms

AT	Assurance Team
BoQ's	Bill of Quantities
CoST	Construction Sector Transparency Initiative
DFID	Department for International Development-UK
EFA	Education for All
GRZ	Government of the Republic of Zambia
MoE	Ministry of Education
MPI	Material Project Information
MSG	Multi Stakeholder Group
MWS	Ministry of Works and Supply
NCB	National Competitive Bidding
NCC	National Council for Construction
NIF	National Implementation Framework
PEs	Procuring Entities
QCBS	Quality and Cost Based Selection
ZMK	Zambian Kwacha
ZPPA	Zambia Public Procurement Authority

1. EXECUTIVE SUMMARY

- 1.1. The Construction Sector Transparency Initiative (CoST) is a multi-stakeholder initiative aimed at increasing transparency and accountability in the construction sector through improved disclosure of material project information.
- 1.2. CoST is being piloted in seven countries; Ethiopia, Malawi, Philippines, Tanzania, United Kingdom, Vietnam and Zambia and is supported by the Department for International Development (DfID) of the United Kingdom.
- 1.3. In Zambia, four institutions involved in infrastructure development and maintenance; Ministry of Education, Ministry of Health, Buildings Department under the Ministry of Works and Supply and Road Development Agency, were selected for the pilot study.
- 1.4. The rehabilitation of old and the construction of new structures at Mulungushi University was one of the projects selected under the Ministry of Education.
- 1.5. The Ministry of Education (MoE) is upgrading the Mulungushi University by rehabilitating the former Mulungushi Rock of Authority and former President's and Citizenship College structures and the construction of new structures to expand and improve the quality of University Education in Zambia in general and Kabwe in particular.
- 1.6. The Mulungushi University is located 26 kilometres north of Kabwe, the first mining town in Zambia, and the headquarters of the Railway Systems of Zambia, just off the main Trunk Road T1 linking the Copperbelt and other northern provinces to Lusaka and other provinces to the south. This is therefore a suitable location for a University within the country.
- 1.7. The decision to rehabilitate the Mulungushi University followed the conversion of this institution into Zambia's third public University from a College, thus easing the demand for higher education placed on the other two public Universities, the University of Zambia (UNZA) and the Copperbelt University (CBU).
- 1.8. The Ministry of Works and Supply (MWS) generally follows the Public Procurement Act of 2008, in the award of contracts for consultants and contractors except where funding is provided by a Cooperating Partner or Multilateral lending

institution which requires adherence to its procurement procedures such as the World Bank, African Development Bank and the European Union. Further, MWS operates procedures for contract management to ensure cost quality of work and time are in accordance with the contract. MWS has made full and accurate disclosure of documents showing the procedures it used for the award of the contracts for this project.

1.9. The appointment of consultants was in-house.

1.10. The appointment of the contractor followed open bidding procedures which ensure value competition and transparency.

1.11. The contracts with the consultants and contractors are based on the FIDIC standard contract documents which are widely used in the construction industry.

1.12. During construction of works, monthly site meetings are held with the aim of monitoring progress, quality of work, costs and resolving potential threats to the successful completion of the project. Technical meetings, confined to the construction team, are adhoc. They are more frequent and are usually held every fortnight, sometime weekly if and when the situation demands. Monthly site meeting are critical to the efficient and effective management of the contract in accordance with the form of contract used and MWS procedures and the success of the project.

2. INTRODUCTION

2.1 Construction Sector Transparency Initiative (CoST)

- 2.1.1 The Construction Sector Transparency Initiative (CoST) is a multi-stakeholder initiative aimed at increasing transparency and accountability in the construction sector. CoST intends to ensure that national governments, affected stakeholders, and the wider public get what they pay for in public construction projects, by increasing transparency in the construction sector. It is expected that greater transparency, through greater disclosure of project information, will yield benefits to government, industry, civil society, and ordinary citizens.
- 2.1.2 It is, however, recognised that the disclosure of this information may not be sufficient on its own to achieve greater accountability. This is because some of the information is likely to be complex and not easily intelligible to the general public. For example, there are many reasons for time and cost overruns on construction projects that may be quite legitimate and not necessarily an indication of poor governance of the procurement process.
- 2.1.3 CoST is being piloted in seven countries; Ethiopia, Malawi, Philippines, Tanzania, United Kingdom, Vietnam and Zambia and is supported by the Department for International Development (DFID) UK.
- 2.1.4 In Zambia, the National Council for Construction, on behalf of the Construction Sector Transparency Initiative (CoST) Zambia Multi Stakeholder Group (MSG) contracted an Assurance Team (AT) in May 2010, to undertake assurance services on selected public construction projects ranging from roads to health and school infrastructure to ensure that the information released is both accurate and in a form that can easily be understood by stakeholders.
- 2.1.5 A total of 17 projects have been selected for the pilot and the construction and rehabilitation works at Mulungushi University are part of the project.
- 2.1.6 The Assurance Team comprises four specialists in construction, working together to obtain, verify and assess material project information and provide reports. This report has been prepared by the Assurance Team in accordance with its Terms of Reference and gives the activities undertaken and its opinion on the material project information (MPI) released by the MWS Buildings Department on the construction and rehabilitation works at Mulungushi University.

2.2 Objectives of the study

- 2.2.1 The Zambian pilot has four objectives:

- to learn lessons to help in the development of CoST
- to learn lessons on improving transparency through the disclosure of project information
- to gain an improved understanding of construction project costs amongst public sector clients
- to learn and share lessons on the management and control of publicly-funded construction projects.

2.2.2 The Assurance Team has been contracted to carry out the following tasks on the project:

- Collect the material project information;
- Verify the accuracy of the material project information;
- Report on the extent and accuracy of the information which has been released;
- Analyse the material project information and make informed judgements about the cost and quality of the project;
- Report on the findings regarding the cost and quality of the project and highlight any outstanding issues of concern.

2.3 Project description and location

2.3.1 The scope of works includes renovations and construction of new infrastructure as follows:

Renovation works

- Renovation of 12 No Blocks of former Mulungushi Rock of Authority Delegates quarters into Student Hostels; and,
- Alterations and extensions to existing Dining Hall, and associated external works and Kitchen.

Construction works

- Construction of three storey Library, and single storey Lecture Theatres; and,
- Construction of four 3 storey hostels.

2.3.2 The Mulungushi University is located 26 kilometres North of Kabwe, or about 160 kilometres from Lusaka, just off the main Trunk Road T1.

2.4 Approach to Pilot Study

2.4.1 The approach taken by the Team generally involved:

- (i) Holding an initial meeting with the procuring entity to introduce the objectives of the study and submit the list of information (MPI) the entity was expected to disclose;
- (ii) Agreeing and identify the contact person on behalf of the procuring entity to provide the MPI and the timeframe for providing the information;
- (iii) Receiving and analysing the initial information disclosed;
- (iv) Seeking clarifications and further information where this was deemed necessary; and
- (v) Undertaking a site visit to get an appreciation of the project and obtain clarifications, confirmations etc from the contractor and/or supervisor on issues not clear to the Team.

2.4.2 The findings were then compiled into this report.

3 ACTIVITIES UNDERTAKEN ON THE PROJECT

3.1 Meeting with Stakeholders

- 3.1.1 The Assurance Team and the MSG Zambia Coordinator had a meeting with the Management Team at the MWS. The Meeting was used to introduce the Assurance Team and to discuss the material project information that needed to be disclosed. The MWS appointed a Senior Architect, A Quantity Surveyor and the Manager, Procurement to be the contact persons for any information required for all the selected projects.
- 3.1.2 A more detailed meeting was held with the Manager, Procurement at which meeting it was agreed that the MWS would email whatever information it had in electronic form and hard copies where electronic means were not available. A template showing a schedule of the material project information which the MWS needed to disclose was given to the Manager, Procurement.
- 3.1.3 A follow up meeting on the rehabilitation of old and construction of new structures at Mulungushi University was held with the University Management Team in order to gain a better understanding of the procedures followed by the University and the MWS in the development and execution of projects.

3.2 Collection and Analysis of Data

- 3.2.1 The material project information disclosed is given in Appendix I, while the documents, which were disclosed to the Assurance Team are listed in Appendix II.
- 3.2.2 The Team analysed the data as and when provided by the MWS.
- 3.2.3 Obtaining the necessary documents proved to be more difficult than initially envisaged. This was largely due to the way in which the documentation is being managed.

3.3 Site Visits

- 3.3.1 After the initial set of information was released, the Team undertook a site visit in June 2010 to get an appreciation of the project and also to discuss issues which were not clear in the documents and/or information disclosed.
- 3.3.2 The team also used the site visits to collect additional/missing information and carrying out a qualitative visual inspection of the works.

4 DATA VERIFICATION

4.1 Project Identification and Budgeting

4.1.1 The MoE under which the Mulungushi University falls, has developed a strategy, The National Implementation Framework, 2008 to 2010 (NIF), whose objective is to operationalised the Fifth National development Plan (FNDP) with particular reference to the Government Policy of Education For All (EFA).

4.1.2 The underlying principles of EFA objectives in Zambia are:

- (i) *Access*: which emphasised Government's commitment to universal provision of opportunities for a defined minimum level of education;
- (ii) *Equity*: which emphasised the need to ensure that the distribution and utilisation of opportunities in education would be fairly targeted in order to reach the disadvantaged groups in society;
- (iii) *Learning achievement*: which emphasised the need to focus on well-defined learning achievements as a major outcome of the education process? This principle is linked with *relevance*, *effectiveness* and *efficiency* which, together, help to define quality in the education process.

4.1.3 One of the NIF Strategic Priorities, Strategic Priority 1, is Access Considerations. Government proposes to achieve the EFA targets in terms of increased enrollment through the provision of additional educational facilities/schools and the expansion of existing ones. This entails an effective infrastructure development that facilitates, in an equitable manner, the construction, rehabilitation and maintenance of the education sector's physical assets.

4.1.4 The NIF strategic priorities form the four pillars of access, quality, efficiency and quality and each educational sub-sector has clear objectives and priorities during the FNDP. In the University education sub-sector, the provision of more classrooms and the training of Lecturers are the key investment areas.

4.1.5 Mulungushi University is one of the areas which qualified for the rehabilitation of old and construction of new structures.

4.1.6 The budget for the rehabilitation of old and construction of new structures at Mulungushi University as defined in this report was K90billion.

4.2 Procurement and Guidelines

4.2.1 General Guidelines

4.2.1.1 Procurement in the MoE is governed by the Public Procurement Act, 2008. In accordance with this Act, the MoE is supposed to prepare its Annual Procurement Plan based on the approved Annual Work Plan.

4.2.1.2 The approved Annual Procurement Plan shows the procurement method and budget for all projects to be undertaken by the Ministry. In accordance with the Public Procurement Act, 2008, the procurement method is generally determined by the estimated value of the procurement.

4.2.2 Procurement of Consulting Services

4.2.2.1 The Ministry of Education, through the School Infrastructure Section, has the capacity to undertake the design and supervision of most of its projects as it has architects, engineers, quantity surveyors etc.

4.2.2.2 The decision whether or not to undertake a project internally is largely determined by work schedules of the relevant specialists.

4.2.2.3 The initial design of the rehabilitation of old and construction of new structures at Mulungushi University was however undertaken by MWS Buildings Department.

4.2.3 Procurement of Works Contractors

4.2.3.1 The procurement of works contractors is undertaken in accordance with the Public Procurement Act, 2008. The method of procurement is based on the estimated cost of a project. The estimated cost for the rehabilitation of old and construction of new structures at Mulungushi University dictated that procurement of the contractor should be by open bidding (National Competitive Bidding).

4.3 Procurement process

4.3.1 Design and Supervision

- 4.3.1.1 Project design was undertaken by the Buildings Department and is based on the Standard Method of Measurement Ver. 7.
- 4.3.1.2 The supervision of the works is being undertaken by the Buildings Department. The department has a lot of experience in the supervision of works.
- 4.3.1.3 Being an in-house undertaking, Expressions of Interest to supervise the rehabilitation of old and construction of new structures at Mulungushi University were not invited. The terms of reference were just passed on from the MWS by Government and therefore participation was not open to all natural and legal persons of the States signatory to the Cotonou Agreement (EU Member States and ACP States).

4.3.2 Works

- 4.3.2.1 From the disclosed documents, the date when the tender for the rehabilitation of old and reconstruction of new structures at Mulungushi University was launched was verified to be April, 2008, it is clear that the tender was open to firms that were registered in Zambia with the National Council for Construction (NCC) in Category B and C, in Grade 1, 2 or 3, and had a Tax Clearance Certificate with the Zambia Revenue Authority. The invitation for bids was done in accordance with the Zambia National Tender Board Act.
- 4.3.3.2 There was only one (01) bid tendered, Hua Jiang Investments Limited, and the reasons for this has not been disclosed
- 4.3.3.3 The bid was evaluated in accordance with the solicitation document and Hua Jiang Investments was determined to be the most preferred but not necessarily the lowest evaluated bidder.
- 4.3.3.4 Despite there being only one (01) bid tendered, we are satisfied that the documents disclosed describe fully and accurately the appointment of HUA Jiang Investments as contractor for the rehabilitation of old and construction of new structures at Mulungushi University.

4.4 Project Execution

4.4.1 Design and Supervision

4.4.1.1 The design of the rehabilitation of new and construction of new works at Mulungushi University was in house done by the MWS Buildings Department.

4.4.1.2 The works are also being supervised by MWS Buildings Department.

5 DATA ANALYSIS

5.1 Project Design and Supervision

- 5.1.1 The design of the works at Mulungushi University was undertaken by the Buildings Department and is based on the Standard Method of Measurement Ver. 7.
- 5.1.2 The Library building was initially designed to be two 2 storeys high, but after commencement of works, a variation was made with the addition of another floor.
- 5.1.3 In order to ensure that the contract cost remains within the contract amount, the MWS supervises the project. Data made available shows that the Chief Executive Officer and Director of the Buildings Department is the supervisor for the project and because of the complexity of the works, a site agent from MWS Buildings Department has been attached to the project.
- 5.1.4 The contract shows that payments for consulting service, supervision, are made in-house:

5.2 Works Contract

- 5.2.1 It was observed that, the award of contract followed a competitive procurement process. The number of bids received was disclosed.
- 5.2.2 Due to the funding arrangements, three contracts were signed for the works:
 - MoE/FRA/007/07 Renovation of 12 No Blocks of former Mulungushi Rock of Authority Delegates quarters into Student Hostels at ZMK6,732,838,125.00
 - 44/2008 Construction of three storey Library, and single storey Lecture Theatres, and alterations and extensions to existing Dining Hall, at ZMK 20,847,185,224.00
 - Construction of four 3 storey hostels and associated external works and Kitchen at ZMK 63,400,000,000.00MoE/FRA/007/07
- 5.2.3 From the information disclosed, the cost estimate for the Library and Lecture theatre done by the MWS and was ZMK19,000,000,000, while that of the bidder was ZMK22,487,773,900.10, a difference of ZMK 3,487,773,900.
- 5.2.4 The cost estimate and contract price indicated a difference of 18%. The contractor had to be negotiated downwards to ZMK 20,847,185,224.00.
- 5.2.5 The site visit undertaken on 24th June 2010 confirmed that the contractor had achieved various levels of completion as follows: 98% on the conversion of 12

Nos. Block of former Mulungushi Rock of authority delegate quarters into student hostels; 65% on the Construction of the Library and Lecture theatre; and, 60% on the construction of the 3 storey hostels and associated works.

5.2.6 A number of incidences occurred which resulted in variation orders leading to extension of time and cost variations.

- Variation Order No. 1: The price for rehabilitating Student Hostels increased by almost ZMK 800 million from ZMK6,732,838,125.00 in 2008 to ZMK7,532,588,100.00 in 2009 due to late release of funds by Government.
- Variation Order No. 2: To change from 2 storey Library structure to 3 storeys led to change in price from ZMK20,847,185,224.00 in 2008 to ZMK 24,532,414,918.00, a difference of almost ZMK3.7 billion

5.2.7 As at 18th September 2010, ZMK9,772,454,360.09 had been certified for the Library and Lecture theatre, it was not disclosed whether this had been paid.

5.2.8 On the basis of the information disclosed and visual inspection, we are satisfied with the progress and quality of the project.

5.3 Issues of concern

5.3.1 There was only one bidder and reasons for this were not fully disclosed

5.3.2 Only the Lecture Theatre and Library buildings have a contract time frame of 80 weeks, the rest of the projects do not have a contract time-frame. This could lead to the contractor concentrating on meeting the time frame on some structures while neglecting others.

5.3.3 Funding has been inconsistent on this project, and this has a tendency to delay progress and lead to price fluctuations.

APPENDIX I: MATERIAL PROJECT INFORMATION

Project Name: REHABILITATION OF OLD AND CONSTRUCTION OF NEW STRUCTURES AT MULUNGUSHI UNIVERSITY

1	<i>Project Identification</i>	
	Project Specification	Rehabilitation of old and construction of New structures at Mulungushi University.
	Purpose	To expand and improve the quality of University Education in Zambia in General and Kabwe in particular.
	Location	26 kilometers North of Kabwe, Central Province
	Intended Beneficiaries	The general public, local and International Students Researchers and Academicians; the Political, Commercial, Industrial and Technical aspects of the Zambian economy
	Specification	N/A
2	Feasibility Study	N/A
	<i>Funding</i>	
	Financing Agreement	MWS, MoE
	Budget	Not Available for the whole works (ZMK19billion for Library and Lecture Theatre)
3	Engineer's Estimate	Not Available for the whole works ZMK19billion for Library and Lecture Theatre)
	<i>Tender Process for the Contract for Project Design</i>	
	Tender procedure	In-house
	Number expressing interest	01
	Number shortlisted	01
	Number submitting tender	01

4	<i>Tender Process for the Contract for Project Supervision</i>	
	Number expressing interest	In-house Consultancy
	Number shortlisted	N/A
	Number submitting tender	N/A
	Number submitting tender	N/A
5	<i>Tender Process for the Main Contract of Works</i>	
	Tender procedure	NCB
	Number expressing interest	01
	Number shortlisted	01
	Number submitting tender	01
	List of tenderers	(i) Hua Jiang Investments Limited
	Tender evaluation report	Available
6	<i>Details of the Contract Award: Project Design</i>	
	Name of main consultant	MWS Buildings Department
7	<i>Details of the Contract Award: Project Supervision</i>	
	Name of main consultant	MWS
8	<i>Details of Contract Award: Main Contract for Works</i>	
	Name of main contractor	Hua Jiang Investments
	Contract price	ZMK90,332,838,125.00
	Contract scope of work	Renovation of former Mulungushi Rock of Authority Delegates quarters into Student Hostels-12 No. Construction of three storey Library- 1No; Construction of Lecture Theatre- 1 No Alterations and extensions to existing Dining Hall and Kitchen-1No; Construction of four 3 storey hostels-4Nos;
	Contract programme	80 weeks for 3 storey Library Building, the rest have no time frame.
9	<i>Execution of the Contract: Project Supervision</i>	

	Significant Changes to Contract Price, Programme, Scope with Reasons	Change from 2 storey Library structure to 3 storey; to accommodate more students
10	<i>Execution of Contract: Main Contract for Works</i>	
	Individual changes to Contract which affect the price and reason for those changes	<ul style="list-style-type: none"> Change from 2 storey Library structure to 3 storey , meant to accommodate 500 students instead of the original 300-this led to a change in price to ZMK24,532,414,918.00 from 20,847,185,224.00.
	Individual changes to the contract which affect the programme and reasons for those changes	<ul style="list-style-type: none"> As above
	Details of any re-award of main contract	<ul style="list-style-type: none"> None
11	<i>Post Contract Completion Details: Main Contract for Works</i>	
	Actual Contract Price	On-going works.
	Total Payments made	Not disclosed.
	Actual contract scope of work	On-going works.
	Actual contract programme	On-going works.
	Project Evaluation Reports (on-going and on completion)	On completion.

APPENDIX II: SCHEDULE OF DOCUMENTS DISCLOSED

Item No.	DESCRIPTION	DATE DISCLOSED
1	Bidding document	September 2010
2	Evaluation report (works)	September 2010
3	Contract agreement (works)	September 2010

APPENDIX III SCHEDULE OF CONTACT CHANGES

Not disclosed

APPENDIX IV: PHOTO GALLERY



Plate 1 Library under construction at Mulungushi University



Plate 2 Dining hall under construction at Mulungushi University