



UNIVERSITY OF GHANA
West Africa Centre for Crop
Improvement (WACCI)



PROCUREMENT AUDIT REPORT

For the Period August, 2016 to July, 2018

WORLD BANK AFRICAN CENTRE OF EXCELLENCE (ACE) PROJECT

Submitted By

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List of Abbreviations

ACE – African Centre of Excellence
CIPS – Chartered Institute of Procurement and Supply
CPS – Country Procurement Systems
DI – Direct Invitation
EMP – Environmental Management Plan
GHS – New Ghana Cedis
GPN – General Procurement Notice
ICC – International Chamber of Commerce
INCOTERMS - International Rules for the Interpretation of the Trade Terms
MCIPS – Member of Chartered Institute of Procurement and Supply
NCT – National Competitive Tendering
PPB - Public Procurement Board
PB – Performance Bond
PDMSD – Physical Development and Municipal Services Directorate
PG – Performance Guarantee
PQ – Price Quotation
PU – Procurement Unit
SBD's - Standard Bidding Documents
SPN – Specific Procurement Notice
STD – Standard Tender Documents
TOR – Terms of Reference
UCS – Use of Country Systems
UoG – University of Ghana
WACCI - West African Centre for Crop Improvement
WB – World Bank
PPA – Public Procurement Authority

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Date: 4th September 2019

P.O. Box 531 • Wa, Upper West Region • Ghana • Tel. 0240269339/0269262307

The Head
Procurement Unit
University of Ghana
Post Office Box LG 52
Legon, Accra
Ghana

Dear Sir/Madam,

LETTER OF TRANSMITTAL:

CONSULTANCY SERVICES FOR PROCUREMENT AUDIT OF THE TWO (2) ACES WORLD BANK PROJECTS - WACCI AND WACCBIP (IFT No. UG/RFP/ACE/01/2019)

With reference to your request for the provision of Consultancy Services for Procurement Audit – Consultant to carry out the Procurement Audit of the 2 ACES (WACCI) from August, 2016 to July, 2018 for the University of Ghana and in accordance with the consultancy contract agreement between Messrs Suleman Abdul - Razak (Procurement Specialist Consultant) and the University of Ghana (Client); find herein the procurement audit report for your attention please.

This report outlines the methodology used for conducting the procurement audit, the examination of general procurement documentations, procurement performance assessment and rating, procurement risk assessment and rating and detailed examination of specific procurement contracts within the period 1st August, 2016 to 31st July, 2018. It also highlights the key findings and recommendations after the Procurement Audit Assignment.

We remain,

Yours sincerely,



S. Abdul - Razak (Team Leader)
Procurement Specialist and Quantity Surveyor
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Messrs Suleman Abdul – Razak
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Date: 4th September 2019

P.O. Box 531 • Wa, Upper West Region • Ghana • Tel. 0240269339/0269262307

The Head
Procurement Unit
University of Ghana
Post Office Box LG 52
Legon, Accra
Ghana

Dear Sir/Madam,

CONFLICT OF INTEREST DISCLOSURE

CONSULTANCY SERVICES FOR PROCUREMENT AUDIT OF THE TWO (2) ACES WORLD BANK PROJECTS - WACCI AND WACCBIP (IFT No. UG/RFP/ACE/01/2019)

We the undersigned executing the assignment - Consultancy Services for the Engagement of Procurement Audit Consultant for Procurement Audit of 2 ACES for the University of Ghana African Centre of Excellence (ACE) World Bank Project in Ghana, hereby affirm as follows:

1. That we are not associated, nor have been associated in the past, directly or indirectly, with the supervising Consultant/employer/procurement agent of client (as defined accordingly) or any other entity that has prepared the design, specifications, and other documents for purposes of procurement contracts at the Centre;
2. That, none of our proposed team members/agents/subsidiaries/sub-consultants are associated, nor have been associated in the past, directly or indirectly, with the supervising Consultant/employer/procurement agent of client (as defined accordingly) or any other entity that has prepared the design, specifications, and other documents for purposes of procurement contracts at the Centre; and
3. That, we have not contacted the employer/procurement agent of client during the expression of interest/proposal period.

We understand that a firm that has been engaged by the Employer to provide consulting services for the preparation or supervisions of the Architectural and Engineering Services

assignment, and any of its affiliates, shall not be eligible to express interest for the Procurement Audit assignment.

Furthermore, we understand that consultants shall not have a conflict of interest, and that consultants found to be in conflict of interest shall be disqualified. Consultants shall be considered to have a conflict of interest with one or more parties in this procurement process, if they:

- a. Have controlling shareholders in common; or
- b. Receive or have received any direct or indirect subsidy from any of them; or
- c. Have the same legal representative for purposes of this assignment; or
- d. Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on another Tender, or influence the decision of the Procurement Unit regarding this assignment.

We remain,

Yours sincerely,



S. Abdul - Razak (Team Leader)
MGhIS, MFIG, MAAQS, Assoc.RICS,
(Procurement Specialist and Quantity Surveyor)

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STATEMENT OF DECLARATION

We have evaluated the stated procurement contracts in accordance with instructions and terms of reference given to us, and are satisfied that, from the records and explanations given by the University of Ghana African Centre of Excellence - West Africa Centre of Crop Improvement (WACCI), this procurement Audit Report represents a true and fair view of the procurement contracts audited and provides a reasonable basis for our opinion.

The procurement audit was conducted for the period August, 2016 to July, 2018 procurement plan year for the ACE's Centre (copy of procurement plan attached as appendix 1).

In our professional judgment as Procurement and Contracts Management Specialists, sufficient and appropriate procurement audit procedures have been conducted and evidence gathered to support the accuracy of the conclusion provided and contained in this report. The procurement audit conclusion is based on a comparison of the conditions, as they existed at the time, against pre-established procurement audit criteria that were submitted in our technical proposal for the assignment agreed upon by the client. The conclusion is applicable only to the procurement entity examined - WACCI.

The evidence was gathered in compliance with Ghana's Public Procurement Law (Act 663 as amended) and the World Bank policies, guidelines and standards on procurement of goods, works, non-consulting services and consulting services.

RESPECTIVE RESPONSIBILITIES OF PARTIES

This procurement audit report is the responsibility of the University of Ghana African Centre of Excellence - WACCI.

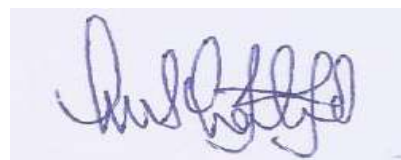
Our responsibility is to express an independent opinion on the evaluated procurement contracts based on and limited to records and explanations provided and made available to us by the African Centre of Excellence Centre - WACCI.



.....
Suleman Abdul-Razak

Procurement Specialist

Dated: September 9, 2019



.....
Diyaudeen M. Khalid

Procurement Specialist

Dated: September 9, 2019

0 EXECUTIVE SUMMARY

0.1 Introduction

The West African Centre for Crop Improvement (WACCI) at the University of Ghana was established to contribute towards the apparent shortage of plant breeders in West and Central Africa. The World Bank African Centre of Excellence (ACE) funding for the Centre will provide the springboard for transforming WACCI into sustainable African Centre of Excellence for training plant breeders, Seed Scientists and Technologists.

0.2 Aim of Procurement Audit Assignment

To review and comment on the processes and procedures engaged by the Centre in the implementation of Procurement activities and functions.

0.3 Methodology of Assignment

The assignment commenced with an Entry Conference at the Centre with the Procurement Unit. General documentations of the Centre (Credit Agreements, Performance and Financing Contract, Revised Implementation Plans, Environmental, Health and Safety Management Plans, Procurement Plans) were studied and evaluated for compliance.

Review of specific procurement contract files together with field visits, stores visits, physical examination and inspection of procurement contracts was done.

0.4 Sampling of Contracts for Audits and Audit Tools

0.4.1 Sampling Technique

Sampling of the contracts audited was done through Simple Random Sampling of procurement contracts based on a Simple Stratified (Cluster) Sampling Technique. This was used to arrive at 30% sample of the procurement contracts.

0.4.2 Population

The table below (table 1) provides the total procurement contract packages to be used for sampling.

Table 1 Population of Contract Packages

				Procurement Method						Type of Procurement			
ID	Total No. of Procurement Packages	30% sample	Sample Size	NCT	RFQ	ICT	SS	RT	DI	GD S	WKS	CS	NCS
WACCI	18	5.4	6	8	8	0	0	2	0	18	0	0	0
WACCI-Rev	21	6.3	7	10	8	0	0	2	1	18	2	1	0
Sample size-30%			30%	3	2.4	0	0	0.6	0.3	5.4	0.6	0.3	0
Selected Sample for Audit			7	3	3	0	0	0	1	5	1	1	0

0.4.3 Consideration

The sample was representative but considered among other things; various category of procurement (Goods, works, non-consultancy services and consultancy services), size of procurement, procurement audit period (August, 2016 to July, 2018), method of procurement (NCT, PQ, SS, RT, DI etc) and status (on-going and completed).

0.4.4 Type of Procurement Contracts

A total of seven (7) procurement contract packages with a total value of GHS 11,218,280.79 were sampled and audited. They included five (5) goods procurement contracts valued at GHS 3,424,244.99 (30.52%), One (1) works procurement contract valued at GHS 7,438,178.00 (66.30%) and one Consulting Services procurement contract valued at GHS 355,857.80 (1.17%). See table 2 below

Table 2 Type of Procurement Contracts

ID	Type of Procurement Contract	Total Value	Percentage (%)
1	Goods	3,424,244.99	30.52
2	Works	7,438,178.00	66.30
3	Consulting Services	355,857.80	3.17
4	Total	11,218,280.79	100.00

The seven (7) contract packages comprised of a total of nineteen (19) Lots of Procurement Contracts.

0.4.5 Frequent usage of procurement methods

National Competitive Tendering (NCT) was the dominant method of procurement used by the Centre (12no Lots – 63%), price quotation method (6no.) representing 32% and Direct Invitation Tendering (Quality Cost Based Selection) for consultants (1no.) representing 5%.

Figure 1 below illustrates the predominant usage of procurement methods by the Centre for the contracts audited.

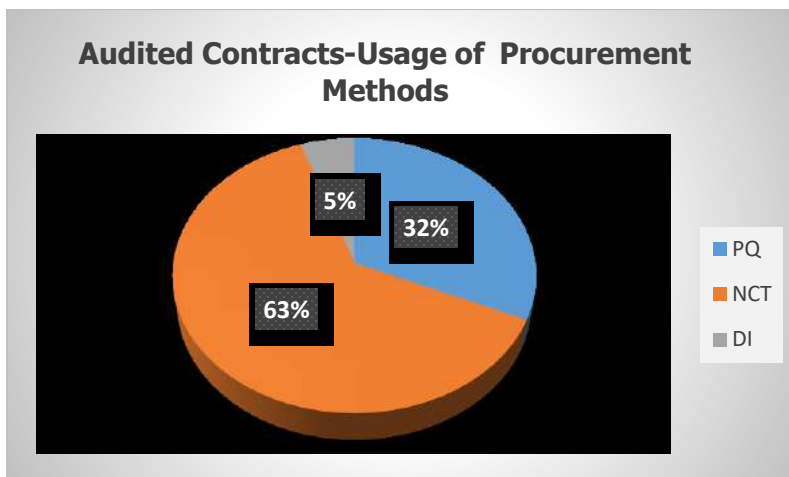


Figure 1 Procurement methods Usage of Sample

0.4.6 Size of Procurement

Section 20 and schedule 1A of act 663 as amended categorizes entities into various groups based on low/small, medium and large/high spending activities. The UoG – WACCI per schedule 1A is categorized under 'Category C' as a Tertiary Institution.

57% of the total procurement contracts audited is classified under "Medium Value" procurement contracts, 29% representing "Large/High Value" procurement contracts and 14% representing "low/Small Value" Contracts. The table below (table 3) indicates the size of procurement contracts executed by the Center which was audited.

The Center can be classified as a "Medium Spending" Procurement Entity under the Categorization of Public Procurement Entities.

Table 3 Size of Procurement

Size of Procurement	Procurement Type			Total	%
	Works	Goods	Services		
Low/Small	0	1	0	1	14%
Medium	0	3	1	4	57%
Large/High	1	1	0	2	29%
Total	1	5	1	7	100%

0.5 Summary of Sample Size Selection

Table 4 below indicates the distribution of 30% of the sample contracts selected for the procurement audit. The procurement plans for the period under review (August, 2016 –July, 2018) were not updated to include 3 procurement contracts not completed within the first procurement year of the Center (June, 2015 – July, 2016). The update of the 3 contracts resulted in a total sample size of 7 procurement contract packages out of a total of 21 procurement contract packages for the year under review.

Table 4 Summary of Sample Size Selection

				Procurement Method						Type of Procurement			
ID	Total No. of Procurement Packages	30% sample	Sample Size	NCT	RFQ	ICT	SS	RT	DI	GDS	WKS	CS	NCS
WACCI	18	5.4	6	8	8	0	0	2	0	18	0	0	0
WACCI-Rev	21	6.3	7	10	8	0	0	2	1	18	2	1	0
	Sample size-30%		30%	3	2.4	0	0	0.6	0.3	5.4	0.6	0.3	0
Selected Sample for Audit			7	3	3	0	0	0	1	5	1	1	0

The seven (7) selected procurement packages have 19 specific procurement lots in all.

0.6 Audit Tools

0.6.1 Procurement Performance and Risk Assessment Rating

A specifically designed form to determine the procurement performance and rating of the Centre was used. Timely performance of the Center, appropriate procurement method usage forms, contract approving authority forms, Red Flags Checklist for measuring Risks Levels was also used with the view to collecting information about possible symptoms and levels of Risks in the procurements carried out by the Centre. The tools are attached as **appendix 7a** of this report.

0.6.2 Procurement Responsibility Matrix Form

A specifically designed form to determine the responsibility matrix of the Center was used with the view to determining the people involved in the procurement of goods/works/services contracts within the procurement cycle. The specific roles and responsibilities of each person involved in the procurement process was evaluated and recoded through the RACI Responsibility Matrix. The tools are attached as **appendix 7b** of this report

0.6.3 Frequency of bidders in winning contracts/payment of contracts/payment schedules form

A specifically designed form to determine the frequency of bidders winning the sample contracts was done. This was to assess the risk exposure levels of the Center with respect to bidders and familiarity. The lead time utilised by the Center in processing and paying bidders when invoices are submitted was also evaluated with a designed form. The total payments made to bidders was also assessed with a form. The tools are attached as **appendix 7c** of this report

0.7 Key Findings

Generally, the following were key observations of the audit;

1. Out of the 19 specific Lots procurement contracts audited (7 contract packages), 15 procurement contracts equivalent to 78.95% of the audited procurement contracts performed 'very well' (above 95%), whilst 3 procurement contracts equivalent to 15.79% performed 'well' (89% - 95%). 1 procurement contract performed 'good' (above 80 - 89%). No procurement contract package performed unsatisfactorily or poorly. A summary of procurement contracts performance is attached in section 2.8
2. The satisfactory assessment of procurement performance was evaluated in four (4) areas whereby, overall, planning scored 96.49% rated as good; tendering scored 89.79% rated as good; contract administration scored 90.78% rated as good;
3. Based on visits to project sites to assess and undertake physical inspections of the projects executed vis-à-vis the available reports, the consultants are of the considered opinion that the projects executed and the goods supplied met the required quality levels (by relative quantitative assessment of quality by the audit team, quality of works scored 93.86%).
4. The overall performance for all the audited contracts was assessed to be 92.73% signifying that, the procurement performance of the Centre was good.
5. The overall score on Procurement Risks and Red Flags was assessed to be 'low risk' at the time of the audit at 30.10%. This can be attributed largely to the fact that, the audit team is able to falsify the red flags based on the available documentation.

6. Inappropriate Splitting of one procurement contract among bidders without prior disclosure in Tender Documents. Splitting of Lots could only be justified when pre-disclosed in the tender documents (ITT).
7. One (1) procurement contract was not procured using the appropriate procurement method (UG/ACE-WACCI/02004/2016-Consulting Services Phase).
8. Two (2) procurement contracts were not referred to the appropriate contract approving authority for approval or otherwise (UG/ACE-WACCI/02004/2016-Consulting Services Phase 1 and UG/WK/ACE-WACCI/06/05/2016-Phase 2)
9. One (1) procurement contract was not appropriately stated in the updated procurement plan of the Center (UG/WK/ACE-WACCI/06/05/2016-Phase 2)
10. Five (5) procurement contracts were not referred to the appropriate tender review committee for concurrent approval or otherwise as a result of contract modifications during implementation (UG/G/ACE-WACCI/02009/2017-Lot 2, UG/G/ACE-WACCI/02002/2017-Lot 1 and Lot 2, UG/ACE-WACCI/02004/2016, UG/ACE-WACCI/02004/2016-Consulting Services Phase 2)
11. For Seven (7) procurement Contracts, the Centre exceeded their approved budgetary allocation for the procurements by US\$ 1,356,443.59 (UG/G/ACE-WACCI/02004/2017-Lot 6, UG/G/ACE-WACCI/02001/2017, UG/G/ACE-WACCI/02002/2017-Lot 1 & Lot 2, UG/WK/ACE-WACCI/06/05/2016, UG/WK/ACE-WACCI/06/05/2016, and UG/ACE-WACCI/02004/2016)
12. The Centre has the requisite capacity to handle procurement contracts adequately and efficiently.
13. The Public Procurement Act, 2003 (Act 663) as amended was used in the procurement activities of the Centre.
14. Procedures and processes used during procurement activities were found adequate and acceptable and in line with Act 663 as amended for 18no procurement contracts
15. The Procedures and processes used for the procurement of One (1) procurement contract was found inconsistent with Act 663 as amended (UG/ACE-WACCI/02004/2016).
16. Procurement contract documentations/ records and filing were adequate
17. Inadequate update of procurement plans thereby resulting in non-availability of procurement contracts in the updated procurement plans for the years under review (UG/WK/ACE-WACCI/06/05/2016, UG/WK/ACE-WACCI/06/05/2016, and UG/ACE-WACCI/02004/2016)
18. Five (5) contracts had large variance between the cost estimates and the bid amounts received (UG/G/ACE-WACCI/02004/2017- Lot 1, Lot 4, Lot 5, and Lot 6, UG/G/ACE-WACCI/02001/2017- Supply and installation of seed science equipment - PCR Thermocycler Lot 2)
19. Fourteen (14) contracts were found to have narrow variance between the cost estimates and the bid amounts received

20. Inadequate modification of contract and tender data in standard bidding documents (SBDs) in some projects.
21. Inadequate procurement contract close out for all contracts
22. Unavailability of documentary evidence of approval of Center's procurement Plans by the Entity Tender Committee (ETC) of the University of Ghana.
23. Unavailability of verifiable database of suppliers/contractors for Request for Quotations
24. Non issuance of Final Acceptance Certificates or Work Completion Certificates to some suppliers/contractors
25. Inadequate planning for phase 2 of WACCI building – resulted in 41.58% increase in original contract sum
26. Unavailability of addendum contract for consulting services contract after revision of fees and scope of works
27. Unavailable documentation of Publication of General Procurement Notice prior to Publication of Specific Procurement Notices for various procurement contracts
28. Non adherence to standard procurement planning templates which results in inadequate estimation of procurement activity durations

0.8 Recommendations

1. Continuous Professional Training and Development of Staff of Procurement Unit
2. Continuous Improvement of procurement contract records/documentations and filing
3. Initiation of steps to properly close out procurement contracts (issuance of Final Acceptance Certificates, discharge of performance security after warranty period, project completion reports etc),
4. Publishing of General Procurement Notice (GPN) by the Centre
5. Seeking of Public Procurement Board's Ratification through the Public Procurement Authority for Restricted Tendering used for consultancy services procurement contract
6. Seeking Ratification for procurement contracts that had modifications during implementation with respect to section 87 of Act 663 as amended.
7. Publishing of contracts awarded by the Centre with the PPA and or newspaper of wider circulation for all contracts within the audit period.
8. Preparation of Specific Addendum Contract for Phase 2 of Consulting Services Contract
9. Full disclosure of multiple items splitting to bidders in tender documents (ITT) considering the multivariate items of procurement in one lot
10. Implementation of section 64(2) when winning bids record substantially high margins between client's budget and least evaluated bidder
11. Clear categorization and grouping of items of procurement into lots to avoid splitting of one (1) procurement contract lot to multiple vendors
12. Adherence to standard procurement templates in procurement planning for subsequent years
13. Specific capacity building and training of procurement officers on Estimation and Budgeting for the Center.

1 PROCUREMENT AUDIT OF THE AFRICAN CENTRE OF EXCELLENCE (ACE) CENTRE

1.1 Introduction

The Africa Centre of Excellence (ACE) Project was instituted in 2013 by the Governments of Nigeria, Ghana, Benin Republic, Togo, Burkina Faso, Cameroun and Senegal with support from the World Bank, to promote regional specialization amongst participating universities in the West and Central Africa sub-region within disciplines that address particular common regional challenges.

It also aims at strengthening the capacities of these universities to enable them deliver high quality training and applied research.

The West African Centre for Crop Improvement (WACCI) is one of the African Centre of Excellence Centre at the University of Ghana – Legon.

As part of the performance monitoring process of the funds made available to the Centre, the procurement procedures and processes under the project shall be audited in accordance with adequate procurement audit standards.

The ACE-WACCI therefore engages the services of Procurement Audit Consultant to carry out the procurement audit of the ACEs (WACCI) for the period August 2016 to July 2018.

1.2 Background of Project

The West African Centre for Crop Improvement (WACCI) at the University of Ghana was established to contribute towards the apparent shortage of plant breeders in West and Central Africa. The World Bank African Centre of Excellence funding for the Centre provides the springboard for transforming WACCI into sustainable African Centre of Excellence for training plant breeders, Seed Scientists and Technologists.

The objectives of the project are;

1. Admit and train 65 PhD students in plant breeding and 60 MPhil students in Seed Science and Technology between 2014 and 2018
2. Expand, modernize and strengthen the WACCI breeding programme
3. Review and introduce new curricula and equip the Biotechnology Centre for cutting-edge research and training
4. Host world-class visiting faculty including Africans in the diaspora
5. Grant short term external fellowships in advanced laboratories to WACCI PhD students
6. Arrange three months internships for seed science and technology students for hands-on training with seed companies
7. Strengthen research collaboration with advanced institutions
8. Open up for mentoring of WACCI PhD and MPhil Students by scientist in advanced laboratories

1.3 Aim and Objectives of Assignment

The overall objectives of the consultancy services required as stated in the TOR and scope of works given by the Client include but not limited to the following:

1. To review the procurement, contracting, and implementation processes which have been followed for a sample of up to 30% of the total contracts, to confirm their consistency with the Credit Agreements.
2. To seek conclusions on:
 - a. the procurement and contracting procedures and processes followed for the contracts;
 - b. compliance with the World Banks general guiding principles of economy and efficiency, equal opportunity, transparency and quality including but not limited to, and to the extent possible, technical, physical completion, and price competitiveness aspects of contracts; and
 - c. possible improvements in the system.
3. To review the internal capacity to handle procurement efficiently, comment on the quality of procurement and contracting; and identify reasons for delays, if any.

1.4 Methodology of Assignment

Procurement audit standards require the clear definition of methodology employed to arrive at various conclusions and recommendations on procurement contracts audits.

1.4.1 Entry Conference

After signing of contract with the University of Ghana, an entry conference was held with the procurement unit of the client. A designated coordinator for the assignment in the person of Mr. Razak Mohammed (Principal Procurement Assistant) was introduced. Documentations on the WACCI Centre were made available for the commencement of the assignment.

1.4.2 Review of General Documentations

The following general documentations were provided by the WACCI Centre for review by the procurement audit consultant;

1. Financing Agreement
2. Performance and Funding contract
3. Revised Implementation Plan (2014 – 2018)
4. Environmental Management Plan for WACCI building
5. Approved Procurement Plans for the procurement year

1.4.3 Review of Specific Procurement Contracts Documentations

Documentations on specific procurement contracts were provided to the procurement audit consultants. As contained in the annual procurement plans of the Centre, procurement contracts were grouped and categorized into lots and types for ease of reference as per standard procurement planning.

Procurement contracts files and documentations were studied and reviewed thoroughly to ascertain their conformance with the general procurement plans.

Documents required for each procurement contract file were inspected and missing/inadequate documents requested from the coordinator of the assignment.

All necessary documentation required for each procurement contract file were requested for and made available to the consultant.

Specific procurement files were maintained for each procurement contract.

1.4.4 Sites/Stores/Project Fields Visitations

Direct confirmation of goods supplied and works executed/executing was done by the procurement audit consultant at the stores section of the WACCI Centre and project sites for works procurement contracts.

Physical inspections were carried out some of the goods supplied were examined to confirm specific goods procurement contracts contained on files.

Construction sites were visited to ascertain the progress of works procurement contracts and to verify the existence of such contracts as contained on files.

Photographs of physical inspections and examinations of goods supplied and received at stores were taken. Construction sites visits were photographed. These pictures form part of this procurement audit report under appendix 7 Pictures of Procurement Contracts examined.

1.4.5 Clarifications and Further Documentations

To aid in the arrival of conclusions and opinions on the procurement process and procedures used in the disbursement of proceeds from the funds of the ACE project, clarifications and further documentations and evidence were requested from the Centre and designated procurement officers and staff during the procurement audit process.

1.4.6 Interaction with Staffs of Centre & Procurement Unit of UoG

As part of the process to verify and ascertain end-user involvement and participation in the procurement process, interactions with the staff of the Centre and the designated procurement officers of the Centre were undertaken.

Opinion of staff directly involved in procurement activities of the Centre were sought and incorporated in this report. The perceptions of these personnel on procurement activities and contracts of the ACE project and its impact on its beneficiaries was noted. Clarifications and answers were used to solicit opinions on the procurement decisions of the Centre.

1.4.7 Exit Conference

As a mandatory requirement for procurement audit assignments, an Exit Conference was held with the Centre and the Procurement Unit of UoG. Key issues observed and noted during the procurement audit process were made known. Explanations and clarifications were solicited and answers provided to issues of concern. Preliminary findings and opinion of the audit team were discussed with all and responsible officers provided adequate explanations and documents to support their justifications.

The cooperation of stakeholders involved during the procurement audit process was remarkable.

1.5 Sampling of Procurement Contracts

As stated in the Terms of Reference, the consultant is expected to review a sample of up to thirty percent (30%) of the total contracts under the African Centre of Excellence World Bank Project at the Centre.

Based on the procurement plans submitted for the period under review, the criterion applied in choosing a sampling design was to design the sample so that it would yield the desired information with the reliability required at a minimum cost to the employer.

Statistical Sampling was considered more appropriate than judgmental sampling in determining the 30% proposed by the client. Simple Random Sampling of procurement contracts based on a Simple Stratified (Cluster) Sampling Technique was used to arrive at 30% sample of the procurement contracts.

The following criteria was therefore used to determine the design sample for procurement contracts selected for the procurement audit.

1. Type of Procurement Contract: Procurement contracts were categorized into works, goods, services and non-consulting services (technical services). This is in consonance with the approved procurement plan of the Centre.
2. Procurement method Used: the method of procurement used to procure goods, works, services and non-consulting services was considered in the selection of procurement contracts for the procurement audit
3. Unique coding of all procurement contracts on the approved procurement plan. All procurement contracts under the period of review were given unique coded numbers so as to ensure Simple Random Sampling of contracts for audit.
4. Selection of sample based on Simple Stratified (Cluster) Sampling Technique

1.6 Selected samples for Audit

Table 5 below indicates the distribution of 30% of the sample contracts selected for the procurement audit. The procurement plans for the period under review (August, 2016 –July, 2018) were not updated to include 3 procurement contracts not completed within the procurement year June, 2015 – July, 2016. The update of the 3 contracts resulted in a total sample size of 7 procurement contract packages out of a total of 21 procurement contract packages for the year under review.

Table 5 Distribution of Samples for Audit

				Procurement Method						Type of Procurement			
ID	Total No. of Procurement Packages	30% sample	Sample Size	NCT	RFQ	ICT	SS	RT	DI	GDS	WKS	CS	NCS
WACCI	18	5.4	6	8	8	0	0	2	0	18	0	0	0
WACCI-Rev	21	6.3	7	10	8	0	0	2	1	18	2	1	0
	Sample size-30%		30%	3	2.4	0	0	0.6	0.3	5.4	0.6	0.3	0
Selected Sample for Audit			7	3	3	0	0	0	1	5	1	1	0

1.7 Usage of Country Procurement Systems (CPS)

'The Use of Country Systems (UCS) refers to the usage of the procurement procedures, processes and methods contemplated in the public procurement system in place in the country of a Borrower that have been determined to be consistent with the Guidelines of the Bank and acceptable to the Bank'.

Justification for the usage of the Public Procurement Law of Ghana 2003, Act 663 as amended, the public procurement manual and guidelines of Ghana in the implementation arrangements for the project is explicitly stated in section 2.2 of the Performance and Funding Contract – Africa Centre of Excellence for Crop Improvement (WACCI), University of Ghana. Section 2.2 of the performance and funding contract must be read together with section 1.5, 2.6, 2.10, and 4.4 to adequately justify the usage of the Public Procurement Law, 2003 (Act 663 as amended) and manual.

The procurement audit consultants were convinced on the justification for the usage of Country Procurement systems (CPS) for the procurement of goods, works, consulting services, and non-consulting services under the African Centre of Excellence (ACE) World Bank Project for the year under review (1st August, 2016 – 31st July, 2018).

1.8 Conflict of Interest

The World Bank's procurement guidelines and policies require that a firm participating in a procurement process under Bank-financed projects shall not have a conflict of interest. Any firm or individual professional found to have a conflict of interest shall be ineligible for award of a procurement contract.

To determine and test for conflict of interest situations, the registration and legal status of bidders were reviewed and checked to ensure compliance with potential situation of conflict of interest. Conflict of interest declaration forms by evaluation panel members and bidders were requested for from the Centre – WACCI and the Procurement Unit of University of Ghana. There was no documentary evidence of the availability of conflict of interest declaration forms. The following criteria were used to ascertain conflict of interest situations in this procurement audit assignment:

1. A firm that is providing goods, works, non-consulting services resulting from or directly related to consulting services for the preparation or implementation of a project that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm
2. Such firm submits more than one bid, either individually or as a joint venture partner in another bid, except for permitted alternative bids.
3. Such firm (including its personnel) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan)
4. Such a firm does not comply with any other conflict of interest situation as specified in the Bank's Standard Bidding Documents relevant to the specific procurement process.

2 PROCUREMENT AUDIT OF THE WACCI

2.1 Background

The ACE Centre of WACCI is located on the main campus of the University of Ghana – Legon. Procurement contracts of the Centre are managed by the Procurement Unit and Physical Development and Municipal Services Directorate (PDMSD) of the University of Ghana.

For the period under review, a total of twenty - one (21) procurement contract packages were planned and executed by the Centre.

Of the total number, eighteen (18) were goods procurement contracts (86%), one (1) consulting services contract (5%), two (2) works procurement contracts (9%). See table 6 below

Table 6 Total Procurement Packages of WACCI

ID	Total No. of Procurement Packages			Audited Procurement Packages		
	Procurement Contract Type	Total No. of Contract Packages	Percentage	No. of Contract Packages Audited	%	% of Total Contract Packages Selected
1	Goods	18	86%	5	71%	28%
2	Works	2	9%	1	14%	50%
3	Consulting Services	1	5%	1	14%	100%
4	Total	21	100%	7	100%	33.33%

A total of seven (7) procurement contracts package representing 33.33% of the total procurement contracts packages executed within the period of the audit were reviewed and examined. The selected 7 reviewed contract packages comprise of 19 specific procurement contract lots was representative of all the types of procurement contracts executed by the Center (28% of all Goods contracts, 50% of all works contracts and 100% for services contract).

For the selected reviewed contracts, National competitive tendering (NCT) procurement method constituted 63% (i.e.12no.) of the procurement contracts, 32% (i.e. 6no.) for Price Quotation (shopping) method of procurement and 5% (i.e. 1no.) for Direct Invitation Tendering Method (using Quality Cost Based Selection) of procurement for Consultancy services. See figure 2 below

For the 19 selected reviewed contracts, Procurement of goods contract constituted 84.2% (16no.) and Works procurement contracts represented 10.5% (2no.) and consulting services procurement contract representing 5.3% (1no.). see figure 2 and 3 below.

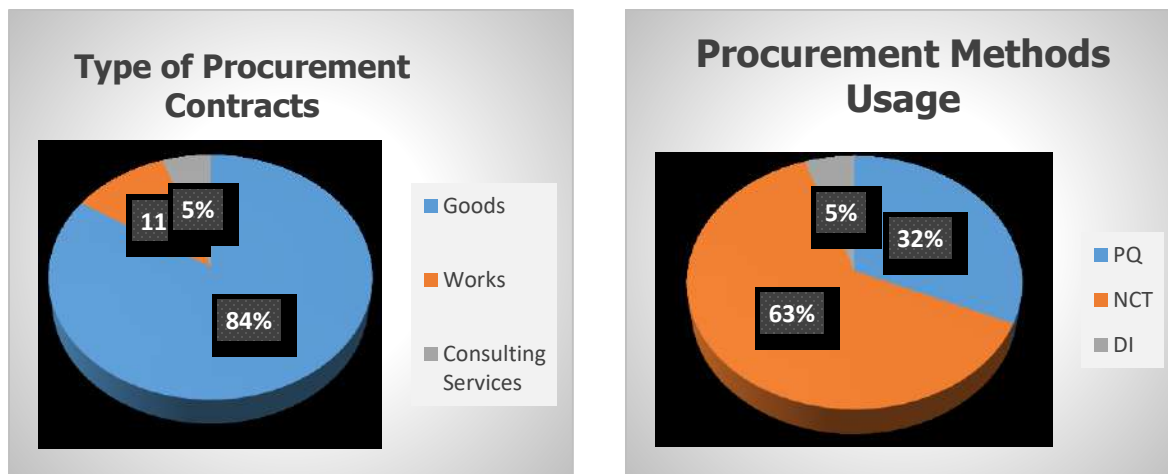


Figure 2 Type of Procurement Contracts & Procurement methods

2.2 Key Issues Identified

Key issues identified during the procurement audit were categorized into:

1. Performance (performance was evaluated in 5 areas); and
2. Procurement risks and red flags (Procurement risks evaluated in 3 areas)

2.2.1 Planning

Under this aspect, assessment was done on the appropriateness of procurement planning, designs, specifications, and TOR to meet the intended project objectives. Issues such as adequacy of designs, completeness and comprehensiveness of tender documents, drawings details and specifications were assessed. With regards to consultancy services, this was intended to examine whether the Request for proposals and the accompanying TOR fully addressed the project objective.

The overall score for planning was assessed to be good at 96.49% (Table 5).

The observed weaknesses on planning included;

1. None publication of General Procurement Notices (GPN)
2. Non adoption of standard procurement plant templates leading to Inadequate information on procurement plan (Tender invitation dates, Tender closing/submission dates, Evaluation of tenders and submission of tender evaluation reports date, Contract Approving authorities, Approval of evaluation report by final authority dates etc)
3. Non-availability of any one member of entity tender committee on the tender opening panels used by the Centre
4. Inadequate update of procurement plans thereby resulting in non-availability of information of procurement contracts in the updated procurement plans of the period under review (UG/WK/ACE-WACCI/06/05/2016, UG/WK/ACE-WACCI/06/05/2016, and UG/ACE-WACCI/02004/2016)
5. One (1) procurement contract was not referred to the appropriate contract approving authority for approval or otherwise (UG/ACE-WACCI/02004/2016-Consulting Services Phase)
6. Procurement of consulting services contract was not captured in the procurement plan of the Centre (UG/ACE-WACCI/02004/2016).

7. Unavailability of documented evidence of approval of Center's procurement Plans by the Entity Tender Committee (ETC) of the University of Ghana.
8. Unavailability of verifiable database of suppliers/contractors for Request for Quotations
9. Inadequate planning for phase 2 of WACCI building – resulted in 41.58% increase in original contract sum
10. High substantial margin between the client's budget and the lowest evaluated bid (UG/G/ACE-WACCI/02004/2017- Supply and installation of seed science equipment - Freeze Dryer Lot6, UG/G/ACE-WACCI/02001/2017)
11. One (1) procurement contract was not appropriately stated in the updated procurement plan of the Center (UG/WK/ACE-WACCI/06/05/2016-Phase 2)
12. Splitting of Procurement Contract Lot among bidders without prior disclosure in Tender documents

2.2.2 Tendering & Solicitation

Under this aspect, a critical review was made on the tender process with a view to determining whether the tender process complied with Public Procurement Act and its Regulations. In addition, the assessment aimed at determining whether procurement contract documents contained all necessary information and whether the contract was properly signed.

The overall score for tendering and solicitation was assessed to be good at 89.79% (table 5)

The observed weaknesses on tendering and solicitation included;

1. Inadequate customization of the bidding documents and contract documents;
2. Lack of publication of procurement contracts award
3. No filling and signing of conflict of interest declaration forms by evaluation panel members
4. Return of bid securities to unsuccessful bidders done on few contracts
5. Lack of notification of contract award to unsuccessful bidders
6. Usage of Direct Invitation method for consultancy services without approval of the Public Procurement Board (UG/ACE-WACCI/02004/2016)
7. High substantial margin between the client's budget and the lowest evaluated bid (UG/G/ACE-WACCI/02004/2017- Supply and installation of seed science equipment - Freeze Dryer Lot6, UG/G/ACE-WACCI/02001/2017)
8. Inappropriate Splitting of one procurement contract among bidders without prior disclosure in Tender documents. Splitting of Lots could only be justified when pre-disclosed in the tender documents (ITT).
9. Five (5) contracts had large variance between the cost estimates and the bid amounts received (UG/G/ACE-WACCI/02004/2017- Lot 1, Lot 4, Lot 5 & Lot 6, UG/G/ACE-WACCI/02001/2017- Supply and installation of seed science equipment - PCR Thermocycler Lot 2)
10. Fourteen (14) contracts were found to have narrow variance between the cost estimates and the bid amounts received

2.2.3 Contract Administration

Under this aspect, a critical review was made on whether the procurement contract was properly administered by assessing time, scope, quality, risk, communication and cost management issues such as extension of time, delays, variation orders, claims analysis, price fluctuations, payment procedures, dispute resolutions, contract terminations, etc. was determined.

The overall score on contract administration was assessed to be good at 90.78% of all the audited procurement contracts (Table 7).

As far as contracts administration is concerned, the auditors revealed the following weaknesses:

1. Unavailability of Performance securities for 4 out of 19 contracts
2. Discharge of performance security within 28 days after expiry of one year of warranty of equipment supplied not done.
3. Inadequate procurement contract close out procedures on all projects
4. Non issuance of Certificate of Final Acceptance of equipment by Centre
5. Lack of Concurrent approvals for procurement contracts with modifications resulting in more than 10% of the original contract sums (UG/G/ACE-WACCI/02009/2017-Lot 2, UG/G/ACE-WACCI/02002/2017-Lot 1 and Lot 2, UG/ACE-WACCI/02004/2016, UG/ACE-WACCI/02004/2016-Consulting Services Phase 2)
6. Inadequate procurement contract close out including preparation of project completion reports with lessons learnt
7. Unavailability of addendum contract for consulting services contract after revision of fees and scope of works

2.2.4 Quality

Under this aspect, issues related to compliance with Specifications, Drawings, Bills of Quantities and quality assurance plan were critically reviewed.

The audit team visited the stores for the goods supply contracts and the project sites for the works contracts to undertake physical assessment of the deliverables. The team also inspected available test certificates/reports and other quality assurance and control tools. The team is of the considered opinion that the quality of goods delivered and works executed met the specifications stated in the contract documents and met the desired levels of quality.

Quantitatively, the audit team scored quality as 'good' at 93.86% (table 5).

The observed weaknesses on Quality included;

1. Performance securities were not submitted in some cases
2. Non issuance of Certificate of Final Acceptance

2.2.5 Procurement Risks and Red Flags

In order to collect information about possible risks levels and exposure in the procurements carried out by Centre, the Procurement Audit Team specifically developed Procurement Risks Indicators and Red Flags Checklist were used.

It is important to note that a detected red flag is not in itself evidence of a procurement risk. However, the higher the number of red flags detected, the higher the likelihood that the risk exposure level is high. To that end, Red Flag Checklist for each project was completed, and findings summarized.

It is the Procurement Audit Team opinion that all procurement contracts which scored 40% and above on Red Flags scale, indicates likelihood of Medium to High Risk Exposure level in its procurements or the procurement of the respective contracts.

The overall score on Procurement Risks and Red Flags was assessed to be 'Low Risk' at 30.10% as indicated in table 4. This can be attributed largely to the fact that; the audit team is able to falsify the red flags based on the available documentation.

Please see section 2.8.2 for detailed risk assessment of procurement contracts and rating.

2.3 Internal Capacity to handle Procurements

2.3.1 Organizational structure

In order to determine the capacity of the Centre to handle procurements, the procurement Audit Team assessed the Units responsible for procurement activities of the University of Ghana. Two (2) departments are responsible for the management of procurement activities of the Centre. The Procurement Unit (PU) and the Physical Development and Municipal Services Directorate (PDMSD) oversee the management of procurements for the Centre.

2.3.2 Procurement Officer

1. There was a focal person responsible for procurement activities of the Centre
2. The head of Procurement Unit of the University of Ghana, oversees the schedule of this officer
3. The procurement officer responsible for the Centre has the requisite educational and professional qualifications to handle adequately the procurement activities and function of the Centre (please see appendix 8).
4. The officer is a professional member of the Chartered Institute of Procurement and Supply (MCIPS) which is a recognized and accredited Professional body (please see appendix 8).
5. The officer has requisite knowledge of the Ghanaian Procurement Legal Framework and Legislations

2.3.3 Procurement Unit

The Procurement Unit is largely responsible for the coordination of all activities involved in the procurement of works, goods, services and non-consulting services for the Centre.

The Procurement Unit is responsible for the planning, development, implementation, administration, integration and monitoring of contracting and procurement activities at the Centre. The unit has five (5) procurement professionals with the Unit headed by a senior member of the University. The professional associations and qualifications of the staff of the Unit is attached as appendix 6.

The head of procurement unit is the secretary of the Entity Tender Committee (ETC) of the University as required by act 663 as amended.

2.3.4 Physical Development and Municipal Services Directorate (PDMSD)

The Physical Development and Municipal Services Directorate (PDMSD) is in charge of works procurement contracts, technical support in construction and supervision of construction works.

The directorate is headed by a director with 25 years of experience in the procurement of works (see appendix 8). The directorate has seven (7) professionals with diverse backgrounds in the procurement and supervision of construction projects.

2.3.5 Entity Tender Committee

An entity tender committee per Section 20 and Schedule 1A and 1B of Act 663 as amended was in place at the time of the procurement audit.

The educational and professional qualifications of officers involved in the procurement activities of the Centre is attached as appendix 6.

2.4 Contract Packages and Procurement Methods

The value of a procurement contract package will determine the appropriate method of procurement to be used for procuring the contract.

The procurement plan of the Centre was prepared and estimates for contract packages were denominated in United States Dollars. Base on the Foreign Exchange Rate at the time of preparing the procurement plan (10th February, 2017) for approval, the following contract packages were procured using the appropriate procurement method. Direct Invitation method for consulting services was used without the prior approval of the public procurement board (PPB) (Engineering Consultancy Services for WACCI Building-Phase 1&2).

Table 7: Contract Packages & Procurement Methods

S/No	ENTITY	CONTRACT NO	PROJECT NAME	CATEGORY	ESTIMATED COST (US\$)	ESTIMATED COST (GHS)*	PROCUREMENT METHOD USED/IN PROCUREMENT PLAN	APPROPRIATE PROCUREMENT METHOD**
1	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 - Conference Room Chairs	GOODS	61,225.28	267,701.44	NCT	NCT
2	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	GOODS	16,697.80	73,009.48	NCT	PQ*
3	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 - Visitors Chairs & double Wardrobe Cabinets)	GOODS	20,290.53	88,718.31	NCT	PQ*
4	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 - Reception Desk, Sofa and Center table	GOODS	8,040.15	35,154.77	NCT	PQ*
5	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5- Executive swivel chair & Desk & Book shelve	GOODS	8,926.13	39,028.60	NCT	PQ*
6	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 - Reception Desk, Sofa and Center table	GOODS	4,820.10	21,075.40	NCT	PQ*
7	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	GOODS	10,000.00	43,724.00	PQ	PQ
8	WACCI	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	GOODS	20,000.00	87,448.00	PQ	PQ
9	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3	GOODS	20,000.00	87,448.00	PQ	PQ
10	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	GOODS	15,000.00	65,586.00	PQ	PQ

11	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	GOODS	68,206.00	298,223.91	NCT	NCT
12	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	GOODS	13,206.00	57,741.91	PQ	PQ
13	WACCI	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	GOODS	8,625.00	37,711.95	PQ	PQ
14	WACCI	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	GOODS	250,000.00	1,093,100.00	NCT	NCT
15	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	GOODS	52,000.00	227,364.80	NCT	NCT
16	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	GOODS				
17	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	WORKS	800,000.00	3,497,920.00	NCT	NCT
18	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Firefighting/internet/lab hardware/specialist works	WORKS		3,879,600.00	NCT	NCT
19	WACCI	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	CONSULTING SERVICES		355,857.80	DI	PPB approval ¹

* Exchange rate of 4.3724 as at 10th February 2017 (<https://bog.gov.gh/markets/daily-interbank-fx-rates>)

** Based on Act 663 as amended Thresholds

PQ* appropriate method when contract package is split into lots in procurement plan

¹ Public Procurement Board Approval required for single sourcing procurement

2.5 Appropriate Contract Approving Authority

Procurement Entities are required to refer to the appropriate contract approving authority any procurement above its threshold or usage of specific procurement methods for approval or otherwise. During the period of the review and examination of the procurement contracts, the following contracts were not referred to the appropriate contract approving authority for approval or otherwise.

Table 8 Contract Approving Authority

No	CONTRACT NO	PROJECT NAME	CATEGORY	CONTRACT AMOUNT (GHS)	PROCUREMENT METHOD	CONTRACT APPROVED BY	APPROPRIATE FINAL APPROVING AUTHORITY ¹
1	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1	CONSULTING SERVICES	355,857.80	Direct Invitation	ETC	PPB

1-Approving Authority based on Act 663 as amended 5th Schedule

2.6 Review and Concurrent Approvals

Entity Tender Committees are required to refer to the appropriate tender review committee any procurement above its threshold for concurrent approval or otherwise due to contract modifications exceeding 10%. During the period of the review and examination of the procurement contracts, the following contracts were not referred to the appropriate tender or tender review committee for concurrent approval or otherwise as a result of contract modifications.

Table 9: Review and Concurrent Approvals

No	CONTRACT NO	PROJECT NAME	TOTAL CONTRACT SUM (GHS)	TOTAL PAYMENTS TO DATE (GHS)	DEFICIT/SURPLUS PAYMENTS (GHS)	% COST OVERRUN	REMARKS *
1	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	27,000.00	34,200.00	(7,200.00)	27%	Greater than 10%
2	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	669,314.79	996,927.81	(327,613.02)	49%	Greater than 10%
3	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	521,799.24	865,216.15	(343,416.91)	66%	Greater than 10%
4	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	355,857.80	479,925.94	(124,068.14)	35%	Greater than 10%

*-10% limit of modification without need to seek concurrent approval per section 87 of Act 663 as amended

2.7 Procurement Responsibilities Matrix

To outline the chain of responsibilities within the procurement arrangement, a Responsible – Accountable – Consulted – Informed (RACI) Chart was used. It is a responsibility matrix that outlines the roles of individuals against various tasks or deliverables within the procurement arrangement of the Centre.

This clearly spells out who does what, within which required period, who has the responsibility of clearing any document prepared by the procurement officer, who and which office provides technical input to the procurement document among others within the procurement arrangement of the Centre.

During the review and examination of the procurement contracts, the following chain of responsibility was observed;

1. Tendering process was initiated by the Centre Leader based on the approved procurement plan and the need for the procurement.
2. The procurement officer was responsible for the preparation of tender and contract documents with technical input from the technical unit of the Centre (IT, Works, Automobiles, Laboratory technicians, etc)
3. The tender and contract document is approved by the Head of Procurement Unit
4. The Entity Tender Committee of the University of Ghana approves the award of contract within their thresholds or seek concurrent approval from the Central Review Committee before award
5. The head of entity signs all procurement contracts
6. The minimum timelines allowed by the public procurement act (act 663 as amended) were adhered by all involved within the procurement process
7. The guidelines and regulations of the public procurement acts (act 663 and act 914) were used
8. The procurement unit of the university of Ghana manages all procurement processes and procedures for the Centre
9. Roles and responsibilities were defined and clear.

Key to responsibility matrix chart:

Responsible (R)	Those responsible to do the work to achieve the outcome required
Accountable (A)	Those who authorise the work and who are ultimately accountable for the correct completion of the work
Consulted (C)	Those who are consulted about the work at various stages of its progress
Informed (I)	Those who are kept informed about the work

Table 10: Procurement Responsibility Matrix

PROCUREMENT RESPONSIBILITY MATRIX

S/No.	Activity/Deliverable	Duration (days)	Human Resource								
			Procurement Officer	Technical Unit (IT, Works, Auto etc)	Centre Leader	Head of Proc. Unit	Head of Entity	ETC-UoG	CTRC	Stores Unit	Finance Officer
1	Initiation of Tendering/Solicitation	10	A	C	R	I					
2	Preparation of Tender Documents (amendment of STD's)	5	R	C	I	A					
3	Preparation of Technical Specifications	15	A	R	C	I					
4	Review & Approval of Tender Document(+Tech. Specs)	7	A	I	C	R					
5	Invitation to Tender	7-28	R	I	C	A					
6	Receipt & Opening of Tenders	1	A	I	C	R		I*			
7	Constitution of Evaluation Panel	10	C	I	R	A					
8	Evaluation of Tenders	10	R	C	I	A					
9	Writing of Evaluation Report & Submission	5	R	C	I	A					
10	Approval of Report & Taking of necessary Action	10	I		I	C	A	R			
11	Concurrent Approval of Report (if applicable)	1	I		I	C	A		R		
12	Award of Procurement Contract	5	I	I	I	A	R	I			
13	Signing of Contract	5	C		I	A	R	I			I
14	Inspections/Approvals/Receipt of Goods/Works/Services	Min. 14	A	C	I	I	I			R	I
15	Payments	30 after	I		C	I	A				R
16	Observation/Monitoring during Warranty Period	6mnth-3yrs	R	A	I	C	I				
17	Final Acceptance of Product	6mnth-3yrs	I	R	C	A	I			I	I

I*-Usage of Tender Opening panel

2.8 Examination of Procurement Risk

2.8.1 General Procurement Contract Risks

In order to collect information about possible risks levels and exposure in the procurements carried out by Centre, the Procurement Audit Team specifically developed Procurement Risks Indicators and Red Flags Checklist and used them to evaluate the risk performance.

The following risks were observed and rated as per section 2.8.2 below;

1. Inadequate modification of tender and contract data sections of standard bidding documents (SBD)
2. Environmental, health and safety, management plans of suppliers and their commitment to the Centre's policy document on same not clearly defined
3. Lack of concurrent approvals or otherwise for procurement contracts with modifications beyond 10% (please see Review and concurrent approvals for each procurement contract examined)
4. Unusually large variance between the price of competing bids for 4 contracts
5. Failure to publicise award decisions and simultaneously notify all bidders
6. Failure to write project completion reports with lessons learnt
7. Failure to request for performance bonds/securities in some procurement contracts
8. Non- availability of detailed information on tendering & evaluation dates and final approving authority for each specific procurement contract in the Procurement plan of the Centre (tender invitation dates, tender closing dates, submission and approval of tender evaluation report dates)
9. Inadequate update of procurement plans
10. Lack of adequate planning for phase 2 of Works procurement Contract
11. Difficulty in the overall assessment of timely procurement progress (Actuals verses planned) as a result of inadequate information on the procurement plan.

2.8.2 General Procurement Risk Rating & Performance

The performance and rating of risks levels and exposure was evaluated in three (3) areas (Table 4);

It is the Procurement Audit Team's opinion that all procurement contracts which scored 40% and above on Risk Exposure level assessment and Red Flags scale, indicates likelihood of Medium to High Risk Exposure level in its procurements or the procurement of the respective contracts.

Evaluation scale of risk assessment and rating

Overall Project Risk Performance	30.10%		
Evaluation Scale	0= NA	0%	
	1=L	0% - 39%	
	2=M	40% - 59%	
	3=H	60% -100%	
NA=Not Applicable, L=Low Risk, M=Medium and H=High Risk			

1. Pre-bid phase

The overall score for pre-bid phase risk assessment and rating was found to be 'low risk' at 33.71%.

2. Evaluation and award phase

The overall score for Evaluation and Award Phase risks was assessed to be 'Low risk' at 35.34%.

3. Contract management and close out phase

The overall score on contract management and close out was assessed to be 'low risk' at 21.25% of all the audited procurement contracts.

The overall score on Procurement Risks and Red Flags was assessed to be "Low Risk" at the time of the audit at 30.10% (table 11). This can be attributed largely to the fact that the audit team is able to falsify the red flag based on the available documentation.

2.8.3 Frequency of Bidders in Winning Multiple Contracts

Efforts to fight bid rigging more effectively can be supported by collecting historical information on bidding behaviour, by constantly monitoring bidding activities, and by performing analyses on bid data received by the Center. The frequency of bidders winning contracts with the Center was analysed with respect to competitive tenders. It is important to state that, this does not confirm any pattern but seek to indicate the risk exposure level of the Center with respect to these tenders.

It can therefore be inferred from table 12 below that, bidders have the tendency of winning multiple lots in subsequent tenders. This may not entirely constitute a risk to the procurement entity in goods procurement contracts as long as the supplier demonstrates adequate financial capacity to handle the multiple lots concurrently.

In goods procurement contracts, the risk is minimal with respect to multiple lots awarded to one bidder. However, this tends to be more a cause of concern in works procurement contracts in which case, the procurement entity has to package tender documents in such a way that, a bidder will be required to make available different set of personnel and equipment in the event if one particular bidder emerges successful in multiple lots.

Table 11: General Procurement Risk Rating & Performance

ID	ENTITY	CONTRACT NO	PROJECT NAME	CONTRACT AMOUNT (GHS)	CATEGORY	STATUS	PRE-BID PHASE	EVALUATION AND AWARD PHASE	CONTRACT MANAGEMENT AND CLOSE OUT PHASE	PROJECT OVERALL
1	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	99,000.00	GOODS	COMPLETE	33.33%	37.04%	20.37%	30.25%
2	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	27,000.00	GOODS	COMPLETE	33.33%	35.19%	20.37%	29.63%
3	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	32,809.36	GOODS	COMPLETE	33.33%	37.04%	19.30%	29.89%
4	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	13,000.76	GOODS	COMPLETE	33.33%	35.19%	20.37%	29.63%
5	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shive	14,433.36	GOODS	COMPLETE	35.71%	37.04%	21.57%	31.44%
6	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	7,794.00	GOODS	COMPLETE	33.33%	34.26%	20.37%	29.32%
7	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	-	GOODS	0	33.33%	35.19%	20.37%	29.63%
8	WACCI	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	26,437.50	GOODS	COMPLETE	35.71%	35.19%	19.30%	30.07%
9	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3	74,520.85	GOODS	COMPLETE	33.33%	37.04%	20.37%	30.25%
10	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	41,000.00	GOODS	COMPLETE	33.33%	35.19%	19.30%	29.27%
11	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	39,944.30	GOODS	COMPLETE	33.33%	35.19%	20.37%	29.63%
12	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	98,289.83	GOODS	COMPLETE	33.33%	35.19%	19.30%	29.27%
13	WACCI	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	35,300.00	GOODS	COMPLETE	33.33%	33.33%	20.37%	29.01%
14	WACCI	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	1,723,601.00	GOODS	COMPLETE	33.33%	33.33%	17.54%	28.07%
15	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	669,314.79	GOODS	COMPLETE	33.33%	35.19%	19.30%	29.27%
16	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	521,799.24	GOODS	COMPLETE	33.33%	35.19%	19.30%	29.27%
17	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed buidling for WACCI- Phase 1	3,558,578.00	WORKS	COMPLETE	33.33%	35.19%	28.07%	32.20%
18	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed buidling for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	3,879,600.00	WORKS	COMPLETE	33.33%	35.19%	24.56%	31.03%
19	WACCI	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	355,857.80	SERVICES	COMPLETE	35.71%	35.29%	33.33%	34.78%
OVERALL RISK ASSESSMENT				11,218,280.79			33.71%	35.34%	21.25%	30.10%

Table 12 Frequency of Bidders in winning Multiple Contracts

S/No	ENTITY	CONTRACT NO	PROJECT NAME	CATEGORY	PROCUREMENT METHOD USED	CONTRACT SUM @ AWARD (GHS)*	SUCCESSFUL BIDDER	FREQUENCY OF BIDDER WITHIN SAMPLE	REMARKS
1	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	GOODS	NCT	99,000.00	Gracefield Ventures	1 Lot	
2	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	GOODS	NCT	27,000.00	Yepon Ventures	1 Lot	
3	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	GOODS	NCT	32,809.36	Alban Logistics	3 Lots	
4	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	GOODS	NCT	13,000.76	Alban Logistics	3 Lots	
5	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shelve	GOODS	NCT	14,433.36	Alban Logistics	3 Lots	
6	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	GOODS	NCT	7,794.00	Life Time Furniture	1 Lot	
7	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	GOODS	PQ	-			
8	WACCI	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	GOODS	PQ	26,437.50	Arcoa Ghana Ltd	3 Lots	
9	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 860C Upright Freezer Lot 3	GOODS	PQ	74,520.85	Arcoa Ghana Ltd	3 Lots	
10	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	GOODS	PQ	41,000.00	Resolve System		
11	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	GOODS	NCT	39,944.30	DCL Laboratory Ltd	1 Lot	
12	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	GOODS	PQ	98,289.83	Arcoa Ghana Ltd	3 Lots	
13	WACCI	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	GOODS	PQ	35,300.00	Sams Firma Limited	1 Lot	
14	WACCI	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	GOODS	NCT	1,723,601.00	Pe-Aviv Company Ltd	1 Lot	
15	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	GOODS	NCT	669,314.79	Wagtech Gh Ltd & Resolve Systems		Lot Splitting*
16	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	GOODS	NCT	521,799.24	Bany Lab, Wagtech Gh Ltd & Resolve System		Lot Splitting*
17	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	WORKS	NCT	3,558,578.00	Amonu Bonsu Ltd	1 Lot	
18	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	WORKS	NCT	3,879,600.00	Premier Shelter Ltd	1 Lot	
19	WACCI	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	SERVICES	RT	355,857.80	TAL Consult Ltd	1 Lot	

2.9 Measurement of Procurement Progress Performance

2.9.1 Procurement Performance

Table 13: Satisfactory Procurement Progress Performance

ID	ENTITY	CONTRACT NO	PROJECT NAME	CONTRACT AMOUNT(GHS)	CATEGORY	STATUS	PLANNING	TENDERING	CONTRACT ADMINISTRATION	QUALITY	PROJECT OVERALL
1	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	99,000.00	GOODS	COMPLETE	100.00%	89.47%	87.50%	91.67%	92.16%
2	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	27,000.00	GOODS	COMPLETE	100.00%	91.23%	100.00%	91.67%	95.72%
3	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	32,809.36	GOODS	COMPLETE	100.00%	92.59%	100.00%	91.67%	96.06%
4	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	13,000.76	GOODS	COMPLETE	100.00%	89.47%	95.24%	100.00%	96.18%
5	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swivel chair & Desk & Book shelve	14,433.36	GOODS	COMPLETE	100.00%	83.33%	87.50%	91.67%	90.63%
6	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	7,794.00	GOODS	COMPLETE	100.00%	92.59%	87.50%	91.67%	92.94%
7	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	-	GOODS	0	100.00%	90.74%	95.83%	100.00%	96.64%
8	WACCI	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot2	26,437.50	GOODS	COMPLETE	100.00%	91.23%	87.50%	91.67%	92.60%
9	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot3	74,520.85	GOODS	COMPLETE	100.00%	89.47%	87.50%	91.67%	92.16%
10	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	41,000.00	GOODS	COMPLETE	100.00%	87.04%	100.00%	91.67%	94.68%
11	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	39,944.30	GOODS	COMPLETE	100.00%	91.23%	95.83%	100.00%	96.77%
12	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	98,289.83	GOODS	COMPLETE	100.00%	90.74%	87.50%	91.67%	92.48%
13	WACCI	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	35,300.00	GOODS	COMPLETE	100.00%	90.00%	90.48%	91.67%	93.04%
14	WACCI	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	1,723,601.00	GOODS	COMPLETE	90.00%	94.44%	80.95%	91.67%	89.27%
15	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	669,314.79	GOODS	COMPLETE	100.00%	92.59%	100.00%	100.00%	98.15%
16	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	521,799.24	GOODS	COMPLETE	100.00%	90.74%	95.24%	91.67%	94.41%
17	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	3,558,578.00	WORKS	COMPLETE	78.79%	89.47%	84.31%	92.86%	86.36%
18	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	3,879,600.00	WORKS	COMPLETE	78.79%	87.72%	85.42%	95.24%	86.79%
19	WACCI	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	355,857.80	SERVICES	COMPLETE	85.71%	81.82%	76.47%	95.24%	84.81%
OVERALL PROCUREMENT CONTRACTS ASSESSMENT				11,218,280.79			96.49%	89.79%	90.78%	93.86%	92.73%

Evaluation scale – Procurement Progress Performance

Overall Performance	92.73%		
Evaluation Scale	1=Poor	0% - 49% Poor	
	2=Fair	50% - 74% Fair	
	3=Good	75% -100% Good	

2.9.2 Timely Performance

Timeliness of the performance of the procurement contracts were assessed using the procurement plan provided (attached in appendix 1). Timely performance of procurement was done based on two (2) categories to ascertain 'planned' activities of procurement against 'actual' activities of procurement;

1. Tendering stage
2. Contract Formation and Delivery stage

2.9.2.1 Tendering Stage

This stage of the procurement process could not be assessed in terms of timely procurement progress performance. This was as a result of lack of the following information on the procurement plan of the Centre;

1. Tender invitation dates
2. Tender closing/submission dates
3. Period of Evaluation of tenders and submission of tender evaluation reports date
4. Dates Approval of evaluation report by final authorities

2.9.2.2 Contract Formation and Delivery Stage

The table below (Table 14) provides detailed information on the planned activities of procurement and actual activities of procurement executed by the Centre for the procurement contracts reviewed and examined during the procurement audit.

For Seven (7) procurement Contracts, the Centre exceeded their approved budgetary allocation for the procurements by US\$ 1,356,443.59 (UG/G/ACE-WACCI/02004/2017-Lot 6, UG/G/ACE-WACCI/02001/2017, UG/G/ACE-WACCI/02002/2017-Lot 1 & Lot 2, UG/WK/ACE-WACCI/06/05/2016, UG/WK/ACE-WACCI/06/05/2016, and UG/ACE-WACCI/02004/2016). The percentage of deviation is more common in the works procurement contract – Phase 2 and the services procurement contract since they were not found in the procurement plan of the Centre.

A total net duration of 3024 days (approximately 100.8months) was lost in overall procurement contract formation and signing activities. In terms of contract delivery activities, the Centre could not execute planned activities of procurement within the stipulated plan periods. A total net duration of 4746 days (approximately 158 months) was lost in the expected contract delivery periods.

2.9.3 Payment of Invoices for Procurement Contracts

2.9.3.1 *Timeliness of Payment*

For the year under review, timeliness of the Center in the receipt, processing and payments of invoices submitted by contractors/suppliers/consultants was measured. For all the 19 procurement contracts reviewed, no invoice was paid beyond the twenty-eight (28) days allowed in the bidding documents (ITT). One procurement contract recorded the highest duration of 21 days after certification by the project manager. This was however found acceptable within the 28 days stipulated in the bidding and contract documents. See table 14 below

2.9.4 Delay in Payments

For the year under review, the Center recorded no delay in payments of invoices submitted by various contractors, suppliers and consultants.

2.9.5 Interest on Delayed payment

The Center recorded zero interest on delayed payment with respect to invoices submitted by various contractors, suppliers and consultants. This is attributed largely to the fact that, there was no delay in payment of invoices.

2.9.6 Claims – additional claims on loss and expenses

There was no record of contractors/suppliers/consultants submitting additional claims for loss and expenses to the Center.

Table 14: Timely Procurement Progress Performance

No.	Contract Package	Description	Estimated Cost (Planned) US\$	Actual Cost. US\$	Diff. (US\$)	Contract Signing Date (Planned)	Contract Signing Date (Actual)	Diff. (Days)	Contract Delivery Date (Planned)	Contract Delivery Date (Actual)	Diff. (Days)
1	2	3	4	5	6	7	8	9	10	11	12
1	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	61,225.28	22,642.03	38,583.26	30-Mar-17	11-Sep-17	-165	28-Apr-17	29-Dec-17	-245
2	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	16,697.80	6,175.10	10,522.71	30-Mar-17	11-Sep-17	-165	28-Apr-17	23-Oct-17	-178
3	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	20,290.53	7,503.74	12,786.79	30-Mar-17	11-Sep-17	-165	28-Apr-17	29-Nov-17	-215
4	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	8,040.15	2,973.37	5,066.78	30-Mar-17	11-Sep-17	-165	28-Apr-17	29-Nov-17	-215
5	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shelve	8,926.13	3,301.02	5,625.11	30-Mar-17	11-Sep-17	-165	28-Apr-17	29-Nov-17	-215
6	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	4,820.10	1,782.55	3,037.55	30-Mar-17	11-Sep-17	-165	28-Apr-17	29-Nov-17	-215
7	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	10,000.00	-	10,000.00	28-Feb-17			30-Mar-17		
8	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	20,000.00	6,046.45	13,953.55	28-Feb-17	11-Sep-17	-195	30-Mar-17	23-Oct-17	-207
9	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3	20,000.00	17,043.47	2,956.53	28-Feb-17	11-Sep-17	-195	30-Mar-17	6-Oct-17	-190
10	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	15,000.00	9,377.00	5,623.00	28-Feb-17	11-Sep-17	-195	30-Mar-17	6-Oct-17	-190
11	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	68,206.00	9,135.55	59,070.45	30-Mar-17	11-Sep-17	-165	28-Apr-17	11-Apr-18	-348
12	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	13,206.00	22,479.61	(9,273.61)	28-Feb-17	11-Sep-17	-195	30-Mar-17	14-Dec-17	-259
13	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	8,625.00	8,073.37	551.63	28-Feb-17	19-Apr-17	-50	30-Mar-17	3-May-17	-34
14	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	250,000.00	394,200.21	(144,200.21)	30-Mar-17	28-Mar-18	-363	28-Apr-17	12-Mar-19	-683
15	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	25,609.03	153,077.21	(127,468.18)	30-Mar-17	27-Dec-17	-272	28-Apr-17	19-Apr-18	-356
16	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	26,390.97	119,339.32	(92,948.35)	30-Mar-17	27-Dec-17	-272	28-Apr-17	27-Apr-18	-364
17	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	800,000.00	813,872.93	(13,872.93)	31-Jul-16	10-Dec-16	-132	30-Jun-17	20-Aug-18	-416
18	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	-	887,293.02	(887,293.02)	0-Jan-00	20-Aug-18			20-Aug-18	
19	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	-	81,387.29	(81,387.29)	0-Jan-00	29-Feb-16		30-Jun-17	20-Aug-18	-416
			1,377,037.00	2,565,703.23	(1,188,666.23)			-3024			-4746

No.	Contract Package	Description	Tender Invitation Date (Planned)	Tender Invitation Date (Actual)	Tender Submission/Closing Date (Planned)	Tender Submission/Closing Date (Actual)	Diff. (Days)	Submission of Tender Evaluation Report (Planned)	Submission of Tender Evaluation Report (Actual)	Approval by Final Authority (Planned)	Approval by Final Authority (Planned)
1	2	3	4	5	6	7	8	9	10	11	12
1	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs									
2	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)									
3	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)									
4	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table									
5	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shelve									
6	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table									
7	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1									
8	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2									
9	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3									
10	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4									
11	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5									
12	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6									
13	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges									
14	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI									
15	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1									
16	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2									
17	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1									
18	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works									
19	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2									

Table 15 Payment of Invoices 1

ID	ENTITY	CONTRACT NO	PROJECT NAME	INVOICE #	AMOUNT	DATE OF INVOICE	EXPECTED DATE OF PAYMENT	ACTUAL DATE OF PAYMENT	DIFF. (DATES)	TOTAL INVOICES (GHS)
1	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	No. 1	54,450.00	9.10.2017				99,000.00
				No. 2	44,550.00	29.12.2017				
2	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	No. 1	27,000.00	23.10.2017				34,200.00
				No. 2	7,200.00	27.07.2018				
3	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	No. 1	32,809.36	29.11.2017				32,809.36
4	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	No. 1	13,000.76	29.11.2017				13,000.76
5	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shelve	No. 1	14,433.36	29.11.2017				14,433.36
6	WACCI	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	No. 1	7,794.00	29.09.2017				7,794.00
7	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1							-
8	WACCI	UG/G/ACE-WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	No. 1	26,437.50	23.10.2017				26,437.50
9	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3	No. 1	74,520.85	23.10.2017				74,520.85
10	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	No. 1	41,000.00					41,000.00
11	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	No. 1	39,944.30	11.04.2018				39,944.30
12	WACCI	UG/G/ACE-WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	No. 1	98,289.83	14.12.2017				98,289.83
13	WACCI	UG/G/ACE-WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	No. 1	35,300.00	03.05.2017				35,300.00
14	WACCI	UG/G/ACE-WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI	No. 1 - No. 4	1,549,948.00	various				1,549,948.00
15	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1	No. 1 - No. 6	996,927.81	various				996,927.81
16	WACCI	UG/G/ACE-WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2	No. 1 - No. 6	865,216.15	various				865,216.15
17	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	No. 1 - No. 14	3,268,039.00	various				3,268,039.00
18	WACCI	UG/WK/ACE-WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	No. 1 - No. 6	3,198,691.23	various				3,198,691.23
19	WACCI	UG/ACE-WACCI/02004/2016	Engineering Consultancy Services for WACCI Building-Phase 1&2	No. 1 - No. 11	479,925.94	various				479,925.94
TOTAL										10,875,478.09

Table 16 Payment of Invoices 2

Procurement Contract	Invoice No. 1	Invoice No. 2	Invoice No. 3	Invoice No. 4	Invoice No. 5	Invoice No. 6	Invoice No. 7	Invoice No. 8	Invoice No. 9	Invoice No. 10	Invoice No. 11	Invoice No. 12	Invoice No. 13	Invoice No. 14	Total Invoices
Construction and Completion of proposed building for WACCI- Phase 1	721,640.75	238,894.35	210,027.16	143,394.46	195,569.20	100,505.64	240,947.43		174,383.62	376,202.92	288,177.32		329,061.42	249,234.73	3,268,039.00
Date of Invoice	12.12.2016	7.03.2017	16.05.2017	24.07.2017	13.09.2017	12.10.2017	29.11.2017		14.03.2018	14.05.2018	3.4.2018		7.06.2018	16.07.2018	
Actual Date of Paymt															
Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works)	699,242.76	343,588.30	653,679.25	654,127.55	340,402.04	507,651.33									3,198,691.23
Date of Invoice	5.12.2017	2.02.2018	23.03.2018	10.05.2018	16.07.2018	3.08.2018									
Actual Date of Paymt															
Engineering Consultancy Services for WACCI Building-Phase 1&2	142,343.12		33,450.63	33,450.63	33,450.63	33,450.63		12,810.90	1,598.10	111,776.30	77,595.00				479,925.94
Date of Invoice	8.12.2016		4.05.2017	28.07.2017	28.08.2017	25.10.2017		26.03.2018	4.12.2017	19.02.2018	22.05.2018				
Actual Date of Paymt															
Construction of Highly Specialised Automated Green House for WACCI	116,416.00	190,667.00	49,560.00	41,704.00	1,151,601.00										1,549,948.00
Date of Invoice	12.03.2019	16.05.2018	17.08.2018	25.10.2018	26.04.2018										
Actual Date of Paymt															
Supply and Installation of various farm inputs and equipment -Lot1	231,235.20	17,811.79	343,080.00	114,480.00	99,643.00	190,677.82									996,927.81
Date of Invoice	25.01.2018	19.04.2018	31.05.2018	29.05.2018	28.08.2018	09.05.2018									
Actual Date of Paymt															
Supply and Installation of various farm inputs and equipment-Lot 2	292,681.21	28,920.00	199,749.39	44,429.55	31,920.00	267,516.00									865,216.15
Date of Invoice	25.04.2018	25.04.2018	27.04.2018	9.05.2018	31.05.2018	11.07.2018									
Actual Date of Paymt															

2.10 Price Reasonableness

Table 17 Price Reasonableness Analysis

ID	Contract Package No.	Project Name	Bidder ID	Responsive Bidders	Corrected Bidder's Quotation GHS	Corrected Bidder's Quotation US\$	Center's Budget US\$	%Deviation from Centers Budget	AVERAGE of Corrected Bidders Quotation	STD. DEV. Of Corrected Bidders Quotation	Remarks
1	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot1 -Conference Room Chairs	1	Lifemate Furniture	109,980.00	25,208.00	61,225.28	-58.83%	28,476.74	6,918.78	
			2	Alban Logistics	109,792.00	25,164.91	61,225.28	-58.90%			
			3	Central Furniture works	123,375.00	28,278.21	61,225.28	-53.81%			
			4	Manjigo Co Ltd	120,000.00	27,504.64	61,225.28	-55.08%			
			5	Luz Bethel Ventures	183,300.00	42,013.34	61,225.28	-31.38%			
			6	Gracefiled Ventures	99,000.00	22,691.33	61,225.28	-62.94%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
2	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot2 -office Desks & swivel chairs)	1	Lifemate furniture	50,241.00	11,515.51	16,697.80	-31.04%	8,182.81	2,351.99	
			2	Alban Logistics	35,202.10	8,068.51	16,697.80	-51.68%			
			3	Manjigo Co Ltd	30,360.00	6,958.67	16,697.80	-58.33%			
			4	Yepon Ventures	27,000.00	6,188.54	16,697.80	-62.94%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
3	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot3 -Visitors Chairs & double Wardrobe Cabinets)	1	Lifemate furniture	37,490.00	8,592.91	20,290.53	-57.65%	8,173.68	461.56	
			2	Alban Logistics	32,809.36	7,520.08	20,290.53	-62.94%			
			3	Central furniture works	35,884.50	8,224.92	20,290.53	-59.46%			
			4	Manjigo Co Ltd	36,460.00	8,356.83	20,290.53	-58.81%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
4	UG/G/ACE-WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot4 -Reception Desk, Sofa and Center table	1	Lifemate furniture	19,103.00	4,378.51	8,040.15	-45.54%	3,549.89	629.91	
			2	Alban Logistics	13,000.76	2,979.84	8,040.15	-62.94%			
			3	Central furniture works	13,747.50	3,151.00	8,040.15	-60.81%			
			4	Manjigo Co Ltd	16,100.00	3,690.21	8,040.15	-54.10%			

		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
	UG/G/ACE- WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot5-Executive swive chair & Desk & Book shlve	1	Lifemate furniture	18,151.00	4,160.31	8,926.13	-53.39%	3,239.49	1,466.73	
			2	Alban Logistics	14,433.36	3,308.20	8,926.13	-62.94%			
5			3	Central furniture works	5,000.00	1,146.03	8,926.13	-87.16%			
			4	Manjigo Co Ltd	18,950.00	4,343.44	8,926.13	-51.34%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
6	UG/G/ACE- WACCI/02009/2017	Supply and installation of office Furniture & Equipment - Lot6 -Reception Desk, Sofa and Center table	1	Lifemate furniture	7,794.00	1,786.43	4,820.10	-62.94%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
	UG/G/ACE- WACCI/02004/2017	Supply and installation of seed science equipment - Nanodrop Lot1	1	Arcoa Ghana Ltd	27,789.23	6,369.44	10,000.00	-36.31%	29,784.69	22,237.80	
			2	Bany lab & Supplies	255,955.00	58,666.25	10,000.00	486.66%			
			3	Huge Ltd	112,344.26	25,749.90	10,000.00	157.50%			
			4	MES Equipmment	226,286.39	51,866.05	10,000.00	418.66%			
			5	Servaco PPS Ltd	55,246.15	12,662.71	10,000.00	26.63%			
			6	Fuldako Furniture Ltd	43,453.35	9,959.74	10,000.00	-0.40%			
7			7	Wagtech Ghana Ltd	266,752.57	61,141.11	10,000.00	511.41%			
			8	Oak generation Ltd	45,120.00	10,341.75	10,000.00	3.42%			
			9	Resolve System	63,200.00	14,485.78	10,000.00	44.86%			
			10	DCL Lab Product Ltd	203,329.11	46,604.12	10,000.00	366.04%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
	UG/G/ACE- WACCI/02001/2017	Supply and installation of seed science equipment - PCR Thermocycler Lot 2	1	Arcoa Ghana Ltd	26,437.50	6,059.62	20,000.00	-69.70%	12,477.42	6,289.42	
			2	Bany lab & Supplies	95,507.78	21,890.89	20,000.00	9.45%			

8			3	Huge Ltd	28,633.92	6,563.05	20,000.00	-67.18%			
			4	MES Equipmment	93,247.55	21,372.84	20,000.00	6.86%			
			5	Servaco PPS Ltd	35,009.78	8,024.43	20,000.00	-59.88%			
			6	Fuldako Furniture Ltd	82,223.63	18,846.10	20,000.00	-5.77%			
			7	Wagtech Ghana Ltd	62,848.42	14,405.19	20,000.00	-27.97%			
			8	Oak generation Ltd	29,760.00	6,821.15	20,000.00	-65.89%			
			9	Resolve System	37,000.00	8,480.60	20,000.00	-57.60%			
			10	DCL Lab Product Ltd	53,708.62	12,310.30	20,000.00	-38.45%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
9	UG/G/ACE- WACCI/02004/2017	Supply and installation of seed science equipment - 86OC Upright Freezer Lot 3	1	Arcoa Ghana Ltd	74,520.85	17,080.58	20,000.00	-14.60%	25,993.69	5,509.07	
			2	Bany lab & Supplies	136,454.40	31,276.08	20,000.00	56.38%			
			3	Huge Ltd	124,657.98	28,572.28	20,000.00	42.86%			
			4	MES Equipmment	124,665.77	28,574.06	20,000.00	42.87%			
			5	Servaco PPS Ltd	149,762.16	34,326.29	20,000.00	71.63%			
			6	Fuldako Furniture Ltd	120,039.97	27,513.80	20,000.00	37.57%			
			7	Wagtech Ghana Ltd	110,625.02	25,355.85	20,000.00	26.78%			
			8	Oak generation Ltd	110,799.00	25,395.72	20,000.00	26.98%			
			9	Resolve System	74,800.00	17,144.56	20,000.00	-14.28%			
			10	DCL Lab Product Ltd	107,753.54	24,697.69	20,000.00	23.49%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
	UG/G/ACE- WACCI/02004/2017	Supply and installation of seed science equipment - Spectrometer Lot4	1	Arcoa Ghana Ltd	71,477.73	16,383.08	15,000.00	9.22%	16,423.52	5,916.75	
			2	Bany lab & Supplies	103,629.54	23,752.44	15,000.00	58.35%			
			3	Huge Ltd	75,523.76	17,310.45	15,000.00	15.40%			
			4	MES Equipmment	127,069.65	29,125.04	15,000.00	94.17%			

10			5	Servaco PPS Ltd	49,817.65	11,418.47	15,000.00	-23.88%			
			6	Fuldako Furniture Ltd	66,207.37	15,175.08	15,000.00	1.17%			
			7	Wagtech Ghana Ltd	53,970.44	12,370.31	15,000.00	-17.53%			
			8	Oak generation Ltd	61,620.00	14,123.63	15,000.00	-5.84%			
			9	Resolve System	41,000.00	9,397.42	15,000.00	-37.35%			
			10	DCL Lab Product Ltd	66,225.51	15,179.24	15,000.00	1.19%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
11	UG/G/ACE- WACCI/02004/2017	Supply and installation of seed science equipment - Shaking Incubator Lot5	1	Arcoa Ghana Ltd	244,505.63	56,042.00	68,206.00	-17.83%			
			2	Bany lab & Supplies	225,547.75	51,696.75	68,206.00	-24.20%			
			3	Huge Ltd	116,592.93	26,723.72	68,206.00	-60.82%			
			4	MES Equipmment	143,365.33	32,860.10	68,206.00	-51.82%			
			5	Servaco PPS Ltd	56,612.68	12,975.93	68,206.00	-80.98%			
			6	Fuldako Furniture Ltd	107,359.37	24,607.34	68,206.00	-63.92%			
			7	Wagtech Ghana Ltd	404,069.08	92,614.79	68,206.00	35.79%			
			8	Oak generation Ltd	32,361.60	7,417.45	68,206.00	-89.12%			
			9	Resolve System	329,000.00	75,408.56	68,206.00	10.56%			
			10	DCL Lab Product Ltd	39,944.30	9,155.45	68,206.00	-86.58%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
12	UG/G/ACE- WACCI/02004/2017	Supply and installation of seed science equipment - Freeze Dryer Lot6	1	Arcoa Ghana Ltd	98,289.83	22,528.55	13,206.00	70.59%			
			2	Bany lab & Supplies	200,929.10	46,054.02	13,206.00	248.74%			
			3	Huge Ltd	333,553.07	76,452.15	13,206.00	478.92%			
			4	MES Equipmment	237,678.24	54,477.12	13,206.00	312.52%			
			5	Servaco PPS Ltd	200,327.08	45,916.04	13,206.00	247.69%			
			6	Fuldako Furniture Ltd	107,958.80	24,744.73	13,206.00	87.37%			

			7	Wagtech Ghana Ltd	249,531.12	57,193.87	13,206.00	333.09%			
			9	DCL Lab Product Ltd	206,869.15	47,415.51	13,206.00	259.05%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		4.07.2017							
13	UG/G/ACE- WACCI/02011/2017	Supply and installation of Air Conditioners and Table Top Fridges	1	Dynamic Access Trading Ltd	37,150.00	8,514.98	8,625.00	-1.28%	8,341.55	222.30	
			2	Sams Firma	35,300.00	8,090.95	8,625.00	-6.19%			
			3	Somotex Ghana Ltd	36,730.00	8,418.71	8,625.00	-2.39%			
		Exchange Rate		4.3629							
		Tender Opening Date/ Exchange Rate Date		3.07.2017							
14	UG/G/ACE- WACCI/02001/2017	Construction of Highly Specialised Automated Green House for WACCI		Pe Aviv Company Ltd	1,723,601.00	393,875.91	250,000.00	57.55%			
		Exchange Rate		4.376							
		Tender Opening Date/ Exchange Rate Date		26.10.2017							
15	UG/G/ACE- WACCI/02002/2017	Supply and Installation of various farm inputs and equipment -Lot1							See split lots table below		
		Exchange Rate		4.3951							
		Tender Opening Date/ Exchange Rate Date		24.08.2017							
16	UG/G/ACE- WACCI/02002/2017	Supply and Installation of various farm inputs and equipment-Lot 2							See split lots table below		
		Exchange Rate		4.3951							
		Tender Opening Date/ Exchange Rate Date		24.08.2017							
17	UG/WK/ACE- WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 1	1	Mikadu Construction Ltd	3,969,695.63	922,777.29	800,000.00	15.35%	1,082,450.41	296,758.12	
			2	Krane Const. Ltd	6,448,739.07	1,499,044.39	800,000.00	87.38%			
			3	Premier Shelter Ltd	4,649,361.00	1,080,769.20	800,000.00	35.10%			
			4	Amonu Bonsu Ltd	3,558,578.00	827,210.77	800,000.00	3.40%			
		Exchange Rate		4.3019							

		Tender Opening Date/ Exchange Rate Date		7.06.2016							
	UG/WK/ACE- WACCI/06/05/2016	Construction and Completion of proposed building for WACCI- Phase 2 (Elect/mech/Fire fighting/internet/lab hardware/specialist works	1	Premier Shelter Ltd	3,879,600.00	905,243.02	-	(905,243.02)	949,830.48	54,731.37	
18			2	Trump Const. Ltd	4,000,000.00	933,336.44	-	(933,336.44)			
			3	Amono Bonsu Ltd	4,332,465.50	1,010,911.99	-	(1,010,911.99)			
		Exchange Rate		4.2857							
		Tender Opening Date/ Exchange Rate Date		31.05.2017							
	UG/ACE- WACCI/02004/2016	Engineering Consultancy Services for WACCI Building- Phase 1&2	1	Oriental Consult	1,480,192.80	384,995.66	-	(384,995.66)	918,025.30	795,024.90	
19			2	TAL Consult	355,857.80	92,558.01	-	(92,558.01)			
		Exchange Rate		3.8447							
		Tender Opening Date/ Exchange Rate Date		2.02.2016							

Split lot

Table 18 Split Lot Price Analysis 1

Bidder	Least Evaluated Price GHS	Least Evaluated Price US\$	Center's Budget US\$	%Deviation from Center's Budget
Resolve	650,088.00	147,911.99		
Wagtech Gh	19,226.79	4,374.60		
TOTAL	669,314.79	152,286.59	25,609.03	494.66%
Exchange Rate			4.3951	
Tender Opening Date/ Exchange Rate Date			24.08.2017	

Bidder	Least Evaluated Price GHS	Least Evaluated Price US\$	Center's Budget US\$	%Deviation from Center's Budget
Wagtech Gh	195,743.76	44,536.82		
Resolve System	302,236.00	68,766.58		
Bany Lab	23,786.56	5,412.06		
TOTAL	521,766.32	118,715.46	26,390.97	349.83%
Exchange Rate			4.3951	
Tender Opening Date/ Exchange Rate Date			24.08.2017	

2.10.1 Establishment of Competition

National Competitive Tendering (NCT) was the dominant method of procurement used by the Centre (12no Lots – 63%). Competitive Tendering is the default method of procurement per section 35(1) of act 663 as amended. Price quotation method (6no.) represented 32% and direct invitation (Quality Cost Based Selection) for consultants (1no.) represented 5%.

An average of 5 bidders was recorded per lot and this should guarantee adequate competition and ensure price reasonableness considering that, it is the most appropriate competitive method for procuring. However, one bid recorded the submission of 1 tender (UG/G/ACE-WACCI/02001/2017 - Construction of Highly Specialised Automated Green House for WACCI) after the specific procurement notice was published in two newspapers of wider circulation. This was attributed largely due to the fact that, an initial tender recorded non-responsiveness from all competing bids after evaluation. Initial Advert on July 10, 2017. - 2 papers (daily graphic & Ghanaian times newspapers)

2.10.2 Percentage deviation from client's budget

The percentage deviation of lowest evaluated bidders price from the client's budget recorded an overall average of minus 13.24%. Two extreme outliers were recorded for the selected contracts under review. Below the Center's Budget recorded a minus 86.58% (UG/G/ACE-WACCI/02004/2017- Supply and installation of seed science equipment - Shaking Incubator Lot5) and beyond the Center's budget recorded +494.66% (UG/G/ACE-WACCI/02004/2017- Supply and installation of seed science equipment - Freeze Dryer Lot6, UG/G/ACE-WACCI/02002/2017- Lot 1 & 2).

For eleven (11) procurement contracts, the lowest evaluated bidder's price recorded substantial deviations from the Center's Budget. The average deviation below the Center's estimate is minus 56.19%. However, the inspections of the supplies reveals that, the suppliers met the expectations of the Center with respect to the goods supplied. This presupposes that, the Center's estimate for the procurement contracts were comparatively high.

For three (3) procurement contracts, the average lowest evaluated bidders price exceeded the Center's budget by 43.85%. The outliers in greater deviations from the Center's estimate was recorded in two (2) procurement contracts with an average deviation of plus 422.25%. Considering the substantial margin between the client's budget and the lowest evaluated bid for these five (5) contracts, section 64(2) of act 663 as amended should have been employed (UG/G/ACE-WACCI/02001/2017, UG/G/ACE-WACCI/02004/2017 and UG/WK/ACE-WACCI/06/05/2016).

2.10.3 Variance of competing bids

The period under review recorded an unusually large variance between the price of competing bids (UG/G/ACE-WACCI/02004/2017- Lot1, Lot 4 & Lot 5, UG/G/ACE-WACCI/02001/2017- Supply and installation of seed science equipment - PCR Thermocycler Lot 2)

This unusually large variance between the price of competing bids (4 procurement contracts) could suggest a lack of understanding and appreciation of the scope of works to be executed in the specific lots with this challenge.

2.10.4 Average price of competing bids

The average price of competing bids was found to be good except four (4) procurement contracts where an unusually large variance between the price of competing bids was recorded as stated in section 2.10.3 above.

Fifteen (15) procurement contracts award bid prices was found to be closer to the average bid price between the competing bids. See table 17 above average column.

2.11 Overall Conclusion

Overall, the results of the audit was measured against the objectives of the assignment as stated in the Terms of Reference (TOR).

2.11.1 Objective 1:

"To review the procurement, contracting, and implementation processes which have been followed for a sample of up to 30% of the total contracts, to confirm their consistency with the Credit Agreements".

1. Sampling of the contracts audited was done through Simple Random Sampling based on a Simplified (Cluster) sampling technique to arrive at 30% of the procurement contracts.
2. A total of twenty – one (21) procurement contracts packages were planned and executed by the Centre for the period under Review (August, 2016 – July, 2018).
3. A total of seven (7) procurement contract packages representing 33.33% of the contract packages were reviewed and examined.
4. The seven (7) selected contract packages had a total of 19 lots which was analysed in this assignment

2.11.2 Objective 2a:

"To seek conclusions on the procurement and contracting procedures and processes followed for the contracts"

1. Five (5) procurement contracts were not referred to the appropriate tender review committee for concurrent approval or otherwise as a result of contract modifications during implementation (UG/G/ACE-WACCI/02009/2017-Lot 2, UG/G/ACE-WACCI/02002/2017-Lot 1 and Lot 2, UG/ACE-WACCI/02004/2016, UG/ACE-WACCI/02004/2016-Consulting Services Phase 2)

2. The Centre in fifteen (15) procurement contracts had used the appropriate processes and procedures and procurement method for solicitation of bids. This was found consistent with the Act 663 as amended and its regulations.
3. One (1) procurement contract was not procured using the appropriate procurement method (UG/ACE-WACCI/02004/2016-Consulting Services).
4. One (1) procurement contract was not referred to the appropriate contract approving authority for approval or otherwise (UG/ACE-WACCI/02004/2016-Consulting Services)
5. The Centre had referred twenty (20) procurement contracts to the appropriate final contract approving authority for approval prior to award of contract.
6. National Competitive Tendering (NCT) was the dominant method of procurement used by the Centre (63% of contracts reviewed) in the solicitation of bids.
7. None publication of General Procurement Notice (GPN) by the Centre
8. Usage of Direct Invitation method of procurement for consultancy services without approval of the Public Procurement Board (UG/ACE-WACCI/02004/2016)
9. Inappropriate Splitting of one procurement contract among bidders without prior disclosure in Tender documents. Splitting of Lots could only be justified when pre-disclosed in the tender documents (ITT).
10. Non adoption of standard procurement plan templates leading to inadequate information on procurement plan (Tender invitation dates, Tender closing/submission dates, Evaluation of tenders and submission of tender evaluation reports date, Contract Approving authorities, Approval of evaluation report by final authority dates etc)

2.11.3 Objective 2b:

"To seek conclusions on Compliance with the World Bank's general guiding principles of economy and efficiency, equal opportunity, transparency and quality including but not limited to, and to the extent possible, technical, physical completion, and price competitiveness aspects of contracts"

Guided by the principle that "open competition is the basis for efficient public procurement" the following conclusions were made;

1. Twelve (12) out of the Nineteen (19) procurement contracts audited, used National Competitive Tendering (NCT) procurement method for the solicitation of bids. The procedures and processes engaged were found consistent with section 44 of Act 663 as amended).
2. Six (6) procurement contracts used Price Quotation for solicitation of bids. They were found consistent with the procedures and processes outline in section 43 of Act 663 as amended
3. An advertisement for Expression of Interest (EOI) was not published for the Services procurement contract reviewed. As per the 5th Schedule of Act 663 as amended, EOI is required for the procurement of consulting services.

4. The method of procurement of the services was considered as Direct Invitation considering how the consultants were engaged. There was no evidence of approval from the Public Procurement Board for this contract although Quality Cost Based Selection (QCBS) procedures was used.
5. Four (4) contracts had large variance between the cost estimates and the bid amounts received (UG/G/ACE-WACCI/02004/2017- Lot 1, Lot 4 & Lot 5, UG/G/ACE-WACCI/02001/2017- Supply and installation of seed science equipment - PCR Thermocycler Lot 2)
6. Fifteen (15) contracts were found to have narrow variance between the cost estimates and the bid amounts received
7. All the procurement contracts were not published per section 31 of Act 663 as amended.
8. One (1) procurement contract was published at the website of the Centre.
9. The overall score on quality of contracts delivered/ongoing was assessed as "GOOD" at a mark of 93.86%. However, there were challenges recorded in the assessment of quality (lack of submission of performance securities in some cases, non-issuance of Certificates of Final Acceptance by the Centre for goods after warranty period.)
10. The overall score and assessment of procurement risks and red flags was rated as 30.10%. This represented 'low risk' based on the risk scale provided. Contract Management and Closeout Phase recorded the best score in risk performance (21.25%) with Evaluation and Award Phase recording the high risk performance (35.34%).
11. There has not been any incident of conflict of interest recorded or seen during the procurement audit.
12. There was no publication of a General Procurement Notice (GPN)
13. The overall assessment of the performance of the projects audited and the implementing agency was scored as "GOOD" at a scale of 92.73%.
14. For all the 7 procurement contract packages (19 specific lots contracts) audited, the budgetary allocation of the Centre was exceeded by US\$ 1,188,666.23
15. A total net duration of 3024 days (100.8 months) was lost in overall procurement contract formation and signing activities.
16. A total net duration of 4746 days (158.2 months) was lost in the expected delivery of contracts.
17. Timely satisfactory performance of contracts during the tendering stage could not be assessed due to lack of "planned" information on tender invitation dates, tender closing dates, evaluation and submission of tenders, etc on the procurement plan of the Centre.
18. Contract files contained required documentation
19. High substantial margin between the client's budget and the lowest evaluated bid (UG/G/ACE-WACCI/02004/2017- Supply and installation of seed science equipment - Freeze Dryer Lot6, UG/G/ACE-WACCI/02001/2017)

2.11.4 Objective 2c:

"To seek conclusions on Possible improvements in the system"

1. Need for Significant improvement of the filing and documentation system of the Procurement Unit of the Centre. Specific procurement contract files should be kept with 'all' files of the contract stored appropriately. Preferably 'hard cover' files should be used to enhance safe storage. Electronic Storage System should be considered in the medium to long term
2. Adopt Standard Procurement Plan Template in the preparation of Subsequent Procurement Plans
3. Initiation of steps to properly close out all procurement contracts including the preparation of project completion reports
4. Continuous professional training and development of the skills and capacity of the procurement unit (proactive contract close out phase)
5. Request for Price/Rate Analysis from bidders with large variance between bids received and estimates of Centre. This will allow price reasonableness Analysis prior to award of contract.
6. Review of solicitation documents prior to invitation to tenders
7. Seeking approvals or otherwise for procurement contracts based on the usage of Restricted Tendering procurement method
8. Seeking concurrent approval or otherwise for modifications to contract beyond 10% of original contract sums with respect to section 87 of Act 663 as amended.
9. Clear categorization and grouping of items of procurement into lots to avoid splitting of one (1) procurement contract lot to multiple vendors.
10. Specific capacity building and training of procurement officers on Estimation and Budgeting for the Center.

2.11.5 Objective 3:

"To review the internal capacity to handle procurement efficiently, comment on the quality of procurement and contracting; and identify reasons for delays, if any"

1. Performance of the Centre on quality of procurement and contracting is rated as 93.86%. This is considered "GOOD" base on the evaluation scale of procurement performance assessment.
2. The procurement structure of the Center through the University System is in consonance with Act 663 as amended, with the following present during the period of the audit
 - a. Procurement Unit
 - b. Head of Procurement Unit
 - c. Procurement Entity
 - d. Head of Procurement Entity
 - e. Entity Tender Committee
 - f. Chairman of Entity Tender Committee

3. The Centre has the internal capacity to handle procurements considering the procurement structure, systems and personnel and their educational/professional qualifications at the procurement unit and the PDMSD of the University
4. There is a designated officer responsible for procurements of the Centre with over 11 years of experience in procurements.

2.12 Recommendations

Following the review and examination of the procurement contracts, the following recommendations have been put forward for the improvement of the procurement processes within the Centre;

1. Continuous Professional Training and Development of Staff of Procurement Unit
2. Continuous Improvement of procurement contract records/documentations and filing
3. Initiation of steps to properly close out procurement contracts (issuance of Final Acceptance Certificates, discharge of Performance Security after warranty period, writing of project completion reports etc)
4. Publication of General Procurement Notice (GPN) by the Centre
5. Seeking of Public Procurement Boards Ratification through the Public Procurement Authority for Direct Invitation used for consultancy services procurement contract
6. Seeking of Ratification for procurement contracts that had modifications during implementation with respect to section 87 of Act 663 as amended.
7. Publication of contracts awarded by the Centre with the PPA and or newspaper of wider circulation for all contracts within the audit period.
8. Preparation of Specific Addendum Contract for Phase 2 of Consulting Services Contract
9. Clear categorization and grouping of items of procurement into lots to avoid splitting of one (1) procurement contract lot to multiple vendors
10. Implementation of section 64(2) when winning bids record substantially high margins between client's budget and least evaluated bidder
11. Full disclosure of multiple items splitting to bidders in tender documents (ITT) considering the multivariate items of procurement in one lot
12. Preparation of suppliers/contractors/consultant's database to facilitate shortlisting of vendors for price quotations or restricted tendering.
13. Specific capacity building and training of procurement officers on Estimation and Budgeting for the Center

3 Appendices

3.1 Appendix 1: Procurement Plan of Centre

SIMPLIFIED PROCUREMENT PLAN FOR ACE PROJECT

Year 3

Institution Name: University of Ghana (UG), **Country:** Ghana

Prepared: February 10, 2017

By: West Africa Centre for Crop Improvement (WACCI)

Updated:

Approved by the Bank:

Approved by:

Update approved:

1	2	3	4	5	6	7	8	9	10	11
Package/Contract	Activity Description	Estimate Cost	Type of Procurement	Procurement Method	Review by Bank (Prior/Post)	Contract Signing Date	Contract Completion Date (planned)	Contract amount (US\$)	Contract Signing Date	Contract Execution Infor
Ref. No.		(US\$)				(Planned)			(Actual)	
		QTY								
UG/G/ACE-WACCI/02001/2017	Standard plastic screen houses	2	250,000	GDS	NCT	N/A	30/03/17	28/04/17		
UG/G/ACE-WACCI/02002/2017	Farm inputs and equipment	Vrs	52,000	GDS	NCT	N/A	30/03/17	28/04/17		
	Fertilizers, wheel borrows, wellington boots, processing bags, over coats, Nose masks, labelling pegs, cutlasses, punchers, racks for seed storage, herbicides and pesticides, pollination bags weather station, spad meter, tension meter, manual transplanter, GPS, digital camera, tablet for data capture, dehumidifier, etc									
UG/W/ACE-WACCI/02003/2017	Nanodrop	1	10,000	GD	PQ	N/A	28/02/17	30/03/17		

UG/G/ACE-WACCI/02004/2017	UV spectrophotometer	1	15,000	GD	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02004/2017	PCR Thermocycler	1	20,000	GD	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02004/2017	Shaking incubators (3 stacking units)	1	68,206	GD	NCT	N/A	30/03/17	28/04/17			
UG/G/ACE-WACCI/02004/2017	-80 freezer	1	20,000	GD	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02005/2017	General Office Consumables										
	Stationery	Vrs	8,000	GD	PQ	N/A	28/02/17	30/03/17			
	Equipment Maintenance										
	Toner & Ink Cartridge										
	Printing										
UG/G/ACE-WACCI/02006/2017	Bioinformatics Equipment & Accessories	Vrs	79,000	GD	NCT	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02006/2017	Accounting Software	Vrs	3,250	GDS	RT	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02007/2017	Statistical Analysis System Software(SAS)										
		Vrs	13,000	ITC	RT	N/A	28/02/17	30/03/17			
		Vrs	90,000	GDS	NCT	N/A	30/03/17	28/04/17			

UG/G/ACE-WACCI/02008/2017	Lecture room equipment and accessories										
UG/G/ACE-WACCI/02009/2017	Conference and meeting room equipment and accessories	Vrs	120,000	GDS	NCT	N/A	30/03/17	28/04/17			
UG/G/ACE-WACCI/02010/2017	Cold room equipment and accessories	Vrs	62,876	GDS	NCT	N/A	30/03/17	28/04/17			
UG/G/ACE-WACCI/02011/2017	Table top fridge	8	8,625								
	Air conditioners	7		GDS	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02012/2017	Office safe	1	600	GDS	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02013/2017	Seed science laboratory equipment		13,206								
	(Refractometer, sterilizer, incubator, mill, oven, growth chamber, flow hood, drying platform, steel trolley, spiral separators, colour sorter and analytical sorter, threshers, tissue grinder)	Vrs		GDS	PQ	N/A	28/02/17	30/03/17			
UG/G/ACE-WACCI/02014/2017	Tissue Culture laboratory equipment	Vrs	83,835	GDS	NCT	N/A	30/03/17	28/04/17			

3.2 Appendix 2: TOR of Assignment

THE ENGAGEMENT OF PROCUREMENT AUDIT CONSULTANTS

1. Introduction

The Africa Centers of Excellence (ACE) Project was instituted in 2013 by the Governments of Nigerian, Ghana, Benin Republic, Togo, Burkina Faso, Cameroun and Senegal with support from the World Bank, to promote regional specialization amongst participating universities in the West and Central Africa sub-region within disciplines that address particular common regional challenges. It also aims at strengthening the capacities of these universities to enable them deliver high quality training and applied research.

The Government of Ghana and the International Development Agency (IDA) of the World Bank (WB) entered into a credit agreement (Credit Number 5415-GH) to finance the ACE project. To implement the project, the government of Ghana has secured US\$16.0 million credit from International Development Association (IDA) for the 2 ACEs at University of Ghana.

The objective of the ACE project among others;

- Meet the labor market demands for skills within specific areas where there are skill shortages affecting development, economic growth and poverty reduction;
- The project will, on a demand basis, invest in well performing universities that can start building a foundation for Africa to increase knowledge and technology absorption, and build knowledge-based competitive advantages.
- The project design is innovative and cross-sectoral. It is envisioned to herald in a new wave and modality of support to African higher education.
- The project will generate lessons on the impact of the following key aspects for Africa's higher education: (i) creating a pattern of regional specialization among African universities; (ii) assisting African higher education institutions to tightly link their education and research with the region's development needs; (iii) using results-based financing; (iv) developing dynamic institutions that gradually become more independent financially, managerially, and administratively; and (v) helping African institutions meet international quality standards.

The ACE Ghana intends to engage the services of Procurement Audit Consultants to carry out the procurement audit of the 2 ACEs (WACCI and WACCBIP) from inception to date.

1.1 Using the World Bank's Procurement Guidelines (the Guidelines), the ACEs (WACCI and WACCBIP) seek to assure themselves that procurement and contracting are carried

out in accordance with the procedures specified in the Credit Agreements or authorized by the World Bank through formal waivers.

1.2 Credit Agreement specifies in detail, review procedures as applicable to the Client:

- i. "Prior Review": Under this project, since the objective is to focus on Disbursement Linked Indicators which would be assessed by the agreed result, all the procurement activities will only be subject to post review. However, Borrower and Bank has agreed to allow the ACEs use the university thresholds in the implementation of the project
- ii. For contracts on account of which disbursements are made on the basis of Statements of Expenditure (SOE), the World Bank reviews these contracts and their award decisions ex-post, either in the field during the World Bank's supervision missions or by contracting with independent, third-party Procurement Consultant to carry out such audits on the Client's behalf.

1.3 The World Bank requires the use of its Standard Bidding Documents (SBD) and Standard Documents for Prequalification and Bid Evaluation in International Competitive Bidding, and Standard Requests for Proposals (for consulting services).

1.4 The procurement audit plays an important role in our responsibility by:

- i. creating a deterrent to negligence in procurement management, decision-making and oversight, to ensure that an environment conducive to corrupt and fraudulent practices is not allowed to develop and that any such practices are brought to light and eliminated; and
- ii. Monitoring both procurement and review functions and stimulating corrective action by the appropriate parties wherever non-compliance or deficiencies are identified.

2. Objective

- 2.1 The objective of the procurement audit is to review the procurement, contracting, and implementation processes which have been followed for a sample of up to 30% of the total contracts, to confirm their consistency with the Credit Agreements.
- 2.2 The purpose of the audit is to seek conclusions on:
 - i. the procurement and contracting procedures and processes

- Followed for the contracts;
- ii. compliance with the World Banks general guiding principles of economy and efficiency, equal opportunity, transparency and quality including but not limited to, and to the extent possible, technical, physical completion, and price competitiveness aspects of contracts; and
- iii. possible improvements in the system.

3. Scope of the Procurement audit

- 3.1 The procurement review will cover a sample of up to 30 percent of total contracts.

Contract Name	Contract No.	Contract Amount

The consultant will select the sample to be reviewed, in accordance with the criteria specified in Annex 1 to the TOR.

- 3.2 Under the review of the procurement transactions, the consultant should conduct a thorough review of contracts that have been selected. For some of the contracts selected, and as appropriate, the project sites should be visited to conduct physical inspections of quality and quantity of goods, works and services procured. Where appropriate, and to the extent practicable, prices should also be compared with similar contracts financed by other agencies in the country or compared with market prices.
- 3.3. To cover systematically the various objectives, the audit should focus its review on the following main areas:
- i. determine whether the procedures, processes and documentation for procurement, contracting and reviews were in accordance with the Credit Agreements, and procurements carried out achieved the expected economy and efficiency;
 - ii. determine, to the extent possible, whether identified non-compliance with the Credit Agreements, inappropriate practices or questionable decisions/actions, may have been related to corrupt practices;

- iii. review our internal capacity to handle procurement efficiently; comment on the quality of procurement and contracting; and identify reasons for delays, if any. Determine whether adequate systems are in place for procurement planning, implementation and monitoring and if documentation is maintained as per required standards and can be relied upon;
- iv. verify, to the extent possible, whether Goods, Works and Consulting Services contracted were supplied/completed according to the required specifications and technical standards and comment on the reasonableness of prices.
- v. in the light of deficiencies, identify improvements in the procurement and contracting systems.

4. Methodology

4.1 The procurement review should follow three broad phases:

- i. Prior to undertaking the assignment and commencement of work, a procurement discussion on the selected contracts, finalization of the work plan for the review and obtaining of the essential information on the contracts, should be held with the coordinating officer;
- ii. Field review work in our offices to take approximately 3days for each Center.
- iii. Preparation of the Final procurement audit Report following discussions of the draft Report.

4.2 The consultant is expected to select the sample of contracts to be reviewed and to obtain prior agreement to the sample and work plan before commencing implementation of the services. If the consultant should find it necessary, during the conduct of the review, to introduce variations to the number, nature and other aspects of contracts to be reviewed, such changes should be agreed in advance.

5. Procurement Audit Report

5.1 At the completion of the review, and prior to completing the Final Report, the consultant will present their preliminary findings in the form of a Draft Report in one original and one electronic copy.

- 5.2 The Final Report, in one original and one electronic copy, should focus on the review findings and recommendations. Details of the review methodology and procedures, evidence substantiating the findings, and elaboration on the recommendations should be covered in the annexes.
- 5.3 Except as otherwise justified by the consultant, the report should be structured as follows:
- Summary of findings and recommendations.
 - Outline of the audit:
 - Objectives and Terms of Reference:
 - Scope, approach and review sample.
 - Findings on matters relating to:
 - procurement:
 - Organization (ACE -WACCI and WACCBIP) issues, including specific procurement and contracts:
 - general issues.
 - Recommendations for improvements.
 - Appendixes:
 1. Terms of Reference.
 2. Audit Methodology.
 3. Audit Data (by contract)
 - details of all audit findings with evidence substantiating all findings;
 - tables and graphs illustrating the detailed analysis carried out during the audit.
- 5.4 We will review the Draft Report and furnish the consultant with our comments. We will address all of the findings and recommendations. The consultant shall not be required or expected to change the findings or the Report to reflect our comments. If there is a disagreement between the Client and the consultant, the consultant should retain the findings and recommendations, but must incorporate the Client's position, verbatim, in the Report making it clear that this is the Client's position on the issue.
- 5.5 All reports will be in the English language.

6. Time Schedule

- 6.1 The review work will take place mainly in the 2 ACEs at University of Ghana which is expected to take approximately 4 weeks. The review shall be completed and Final Report

presented to the client within 4 weeks from the date of signature of the contract between the consultant and the Client.

- 6.2 The consultant shall finalize the Work Plan within 2 calendar days of commencement of the services. Any major changes in the Work Plan must be agreed with the Client in advance.
- 6.3 The Draft Report shall be presented within 5 days from the date of commencement of the services. (The draft report shall be presented within 5 calendar days from the date of concluding the exercise at the scheduled Centers)
- 6.4 The Client will furnish its comments in writing on the Draft Report within 5 calendar days of receipt of the report. The Final Report shall be submitted to the Client within 5 calendar days after the Client has furnished the consultant its comments in writing on the Draft Report.
- 6.5 If acceptable, the Client shall approve the Final Report within 5 working days; if not, the Client will specify reasons and require the consultant to address them and resubmit the Final Report for acceptance.

7. Data, Documents, Services and Facilities

- 7.1 The Client will make available to the consultant the documents and information listed in Annex 2 to the TOR.
- 7.2 The documents and information listed in Annex 3 to the TOR will be available from the Client. Much of this information will be in the client's contract files and the consultant should be prepared to review and inspect this information in the Client's office.
- 7.3 The consultant should work in close co-ordination with the staff of the client for the review work to be performed. As far as practicable, the consultant should give the client advance notice of the information and documents which they will require and to arrange for site visits.
- 7.4 The Client will nominate a contact person or persons to facilitate the work of the consultant and provide liaison, assistance and co-ordination. The Client's contact person will be the main means of communication between the consultant and the Client.

7.5 The Client's staff responsible for this assignment will be:

PROF. ERIC DANQUAH
Director/Centre Leader,
WACCI ACE
Telephone: **0244632088**
E-mail: **edanquah@wacci.ug.edu.gh**

PROF. GORDON AWANDARE
Director/Centre Leader,
WACCBIP
Telephone: **0543717697**
E-mail: **gawandare@hotmail.com**

8. Reporting

8.1 The primary output of the audit will be the Draft Final Report and the Final Report, which shall be the sole responsibility of the consultant and shall represent the opinions of the consultant.

9. Profile of The Procurement Consultants

The Procurement audit will be carried out by a team of professionals in similar field with relevant and comprehensive experience in Procurement functions especially in World Bank financed projects. The key personnel will have to be experienced in Procurement functions and would have done similar procurement audit for reputable organizations in the last 5 years. Experience of World Bank financed projects will be an added advantage.

- a. One (1) Senior Procurement/Contract Management Professional with Research/Engineering background and with a minimum of 10 years' post-qualification experience.
- b. Two (2) Procurement Specialists with minimum of 5 years' post-qualification experience in procurement audit, related procurement assignments.
- c. One (1) Accountant with minimum of 5 years post qualification experience in Bank's financed project.

1. DURATION OF THE ENGAGEMENT

The Procurement audit will be approximately 4 weeks per ACE Project Centre. The consultant shall prepare his proposal on this estimate or the number of days he believes necessary to successfully complete the exercise.

3.3 Appendix 3: Specific Procurement Contracts Data

3.4 Appendix 4: Exit Conference Notes & Response of Centre

S/NO	ISSUES IDENTIFIED	RECOMMENDATIONS	Centre's Responses/Remarks
1	Notification to unsuccessful bidders	1. Notification of contract awards to unsuccessful bidders 2. Publication of award of contracts especially NCT Procurements	1. Centre is willing to notify all unsuccessful bidders 2. Publication of procurement contracts shall be done
2	Return of bid securities	1. Return of all bid securities to successful and unsuccessful bidders	1. Bid securities shall be returned to all bidders after successful signing of contract
3	Performance bond/guarantee for Price Quotation (PQ) procurements	1. Specific request for PB/PG in PQ procurements	1. Specific request for PB/PG in PQ procurements is likely to increase the final cost of procurement contract. 2. It is not a mandatory requirement, but it shall be considered in the pursuit of good practices and procedures
4	Publication of contract awards with PPA (done for via Centre website)	1. Publication of procurement contracts awarded with the PPA	1. Publication of procurement contracts shall be done
5	Certificate of Final Acceptance for goods procurement contract	1. Issuance of Certificate of Final Acceptance for goods procurement contract	1. Certificate of Final Acceptance for goods procurement contract shall be issued after warranty period
6	Usage of tender opening panels and non-availability of 1 member of entity tender committee	1. Inclusion of at least 1 member of Entity Tender Committee at Opening sessions	1. Head of Procurement Unit is willing to ensure that, at least a member of the entity tender committee if not the secretary (head of procurement) is present to witness all bid opening sessions.
7	In-adequate modification of tender and contract data sections of STD's	1. Review of all solicitation documents before issuance	1. Head of procurement Unit/senior procurement officer shall always review all solicitation documents after preparation

8	Singing of conflict of interest declaration forms by evaluation panel members	1. Signing of conflict of interest declaration forms by all members of evaluation panel	1.Evaluation panel members shall be encourage to sign conflict of interest forms as part of good practice and procedure
9	Use of specific INCOTERMS for goods procurement contract (critical for goods procured outside Ghana)	1. Usage of specific INCOTERMS for goods procurement contracts (Ex. CIP, CIF, etc)	1.Specific INCOTERMS will be used for goods procurement contracts
10	Discharge of performance security	1. Discharge of performance security after successful delivery of contract	1.performance securities shall be discharge after successful delivery of procurement contract
11	Procurement of consultancy services in Procurement plan	1. Outsourcing of certain aspects of consultancy services (Structural, Electrical & Mechanical engineering) should be captured in the procurement plan and treated as services procurement	1.Outsourcing of certain aspects of consultancy services (Structural, Electrical & Mechanical engineering) shall be captured in the procurement plan as services procurement

3.5 Appendix 5: Procurement Audit Tools and Explanatory Notes

Guidelines for Use of Procurement Risks (Red Flags) Checklist

Note:

The auditor is required to use his or her professional judgment when completing the Checklist

The risk assessment of all procurement contracts is qualitative based on available documentations provided in procurement files.

When Checklists have been completed for all sampled procurements in a procurement audit, all Checklists shall be submitted to the Team Leader for report compilation.

It is important to note that a detected red flag is not in itself evidence of high risk. However, the higher the number of red flags detected, the higher the likelihood that the risk levels are high in the procurement contract.

Objective of the Checklist

The objective of this *Checklist* is to provide a tool for the Procurement Audit Team to collect information about possible risks in the procurements carried out by procuring entities.

When to use the Checklist?

The Checklist is applicable to procurement audits. For every procurement contract sampled for auditing, a procurement risk Checklist shall be completed by the auditor as part of his or her auditing of the various phases of the procurement.

How to use the Checklist?

The Checklist consists of statements ("Risks" or "red flags"), each of which must be thoroughly considered by the procurement auditor when auditing a procurement contract. For each statement, the auditor must assess whether the statement is of low risk, medium or high risk based on a true or false response, or whether the statement is not relevant to the procurement contract in question. Based on the assessment, the auditor must tick one of four (4) possible boxes: "Not applicable = 0", "Low risk = 1", "medium risk = 2", or "High risk = 3. The four (4) boxes are to be used as follows:

Not applicable = 0

Indicates that the risk is not relevant to the method of procurement used for the procurement contract in question. For example, (*The tender is not packaged with other tenders for similar goods*) only applies to procurement of goods, as the problem of splitting contracts is not relevant to services. When completing the Red Flags Checklist for a major works or services procurement, the auditor hence ticks "*Not applicable*" for this red flag. Similarly, (*Insufficient advertising*) does only apply to procurements using competitive methods for which advertisement is a requirement. When completing the Red Flags Checklist for a request for price quotation, the auditor hence ticks "Not applicable". In other words, the auditor is required to use his or her professional judgment when completing the Checklist

The “*Not applicable*” box shall also be used if insufficient documentation is available to assess whether a red flag exists or not.

High Risk = 3

Indicates that the auditor is able to verify the red flag based on the available documentation. For example, (*The same Evaluation Committee members are involved in many procurements*), the assessor must look into the appointment letters of Evaluation Committee members for the specific procurement and compare these with appointment letters in other procurements, in order to establish if there is an unnaturally high overlap between the two. If this is the case, the auditor will verify this red flag by ticking “3”.

Low Risk = 1

Indicates that the auditor is able to falsify the red flag based on the available documentation. For example, (*Major similarities between competing bids*), the auditor must compare the formats, content, prices of all submitted tenders in order to detect major similarities. If such similarities are not found, the auditor falsifies this red flag by ticking “1”.

Medium Risk = 2

Indicates that the auditor is not able to entirely falsify the red flag based on the available documentation.

Project	
Contract No.	
Supplier/Contractor	
Contract Sum	
Contract Period	
Date of Procurement Audit	

S/N	PROCUREMENT RISK (RED FLAG)	EVALUATION SCORE			
		NA	L	M	H
A	Pre-bid phase	0	1	2	3
1	The procurement is not in the procurement plan				
2	The objective of the procurement is unclear or vague				
3	Insufficient or inconsistent planning timeframe applied				
4	The tender is not packaged with other tenders for similar goods (i.e. splitting/Bulk Breaking)				
5	Significant deviations from standard bidding documents				
6	Technical specifications are weak or unclear				
7	Technical specifications are narrow or appear tailored				

8	Selected procurement method does not observe existing thresholds				
9	Insufficient advertising				
10	Inadequate time given for preparing bids				
11	Lack of mandatory approvals by appropriate authority				
12	Inaccurate minutes of pre-bid meetings				
13	Clarifications are not circulated to all bidders				
14	Incomplete records of the pre-bid phase				
	Average Performance Pre-bid phase Stage				
B	Evaluation and award phase	0	1	2	3
1	Evaluation Committee members do not have the technical expertise necessary				
2	The evaluation is being conducted by a small number of persons (less 3)				
3	The same Evaluation Committee members are involved in many procurements				
4	Qualified bidders are voluntary dropping out of tender process				
5	Disqualification of bidders on minor technicalities				
6	Unreasonable delays in evaluating the bids and awarding the contract				
7	Evaluation criteria are amended after receipt of bids				
8	Narrow variance between the cost estimate and the bid amounts received				
9	Major similarities between competing bids (e.g. similar format, errors, prices)				
10	Unusually large variance between the price of competing bids				
11	The same shareholders are involved in several bids using different company names				
12	Failure to disqualify bids despite major errors				
13	Falsification of submitted documentation (e.g. authorisations, CVs, etc.)				
14	Failure to publicise award decisions simultaneously to all bidders				
15	Contract is not in conformity with bid documents (e.g. specification or quantities)				
16	Non-responsive bids are made responsive as result of clarification from procuring entity				
17	Quality criteria are not defined in the contract				
18	Incomplete records of evaluation and award				
	Average Performance Evaluation and award phase Stage				
C	Contract management and Close Out phase	0	1	2	3

1	Negotiation team does not include adequate technical expertise				
2	Minutes of the negotiations are not in line with Terms and Conditions of Contract				
3	Contract specifications altered after award of contract				
4	Contract is not signed by duly authorised officer				
5	Failure to deliver the quality specified in contract				
6	Failure to deliver the right quantities of goods and materials				
7	Delays in delivery of goods, works or services				
8	Replacement of nominated consultant by less qualified personnel				
9	Instructions are not given in writing to contractors/Suppliers				
10	Cost overruns are inadequately justified				
11	Contract variations are not approved by appropriate authority				
12	Failure to impose liquidative damages in case of delays				
13	Failure to make progress payments or final payment within stipulated timeframe				
14	Failure to pay retention money in a timely manner				
15	Double payment of supplier				
16	No or insufficient evaluation of the contractors’ quality of performance				
17	Client dissatisfaction with completed products				
18	Incomplete contract management records				
19	Failure to write project completion reports				
	Average Performance Contract management and Close Out				
Overall Project Performance					
Evaluation Scale			0=NA	0%	
			1=L	0% - 39%	
			2=M	40% - 59%	
			3=H	60% -100%	
NA=Not Applicable, L=Low Risk, M=Medium and H=High Risk					

S/N	ASPECT	EVALUATION SCORE		
		POOR	FAIR	GOOD
A	Planning Stage	1	2	3
1	Was the project in the approved/revised budget?			
2	Was the project in the approved procurement plan?			
3	Was the procurement plan/revised procurement plan approved/followed?			
4	Was the Consultant timely engaged before the Contractor?			
5	Was the Need/Problem properly identified?			
6	Was feasibility study/survey carried out correctly before detailed designs?			
7	Were designs and drawings complete and adequate?			
8	Were engineer's estimates prepared and adequate?			
9	Were BoQs for the works prepared and adequate?			
10	Were Technical Specifications, including Specifications of Particular Application, written properly?			
11	Were bidding documents satisfactorily prepared?			
	Average Performance Planning Stage			
B	Tendering/Solicitation Stage	1	2	3
1	Was tender notice in compliance with Section 47 of PPA 2003 or 2016?			
2	Were the tender documents & tender documents availability to all prospective bidders in compliance with Section 49 & 50 of PPA 2003 or 2016?			
3	Was the procurement method used in line with Section 34A of PPA 2016 or Part IV of PPA 2003?			
4	Was the selected contractor appropriate with respect to the size of the Procurement Contract (Goods/works/Services)?			
5	Were appropriate bidding documents used in compliance with Section 50 of PPA 2003 or PPA 2016?			
6	Was the Invitation to tenders/prequalification and shortlist carried out as per Section 47 of PPA 2003 or 2016?			
7	Were evaluation and award in line with the PPA 2003 or 2016?			
8	Was adequate time given to bidders in compliance with Section 53 of the PPA 2003 or 2016?			
9	Were clarifications (if any) communicated to all bidders?			
10	Was the tender evaluation committee constituted as per Section 19 of PPA 2003 or Section 20E of PPA 2016?			
11	Was the tender evaluation report comprehensive?			

12	Was the approval for award by the ETC in compliance with PPA 2003 or 2016?			
13	Were unsuccessful bidders notified in line with Section 65 (9) of PPA 2003 or 2016?			
14	Were awards published in line with Section 31 of PPA 2003 or 2016?			
15	Were minutes of Tender Committee meetings properly prepared?			
16	Was the procurement process efficient in comparison with the standard procession times?			
17	Were contract documents adequately prepared?			
18	Was the contract properly signed?			
19	Were records for this tender properly kept and readily available?			
20	Were there any other deviation from PPA 2003 or 2016?			
	Average Performance Procurement Stage			
C	Contract Administration	1	2	3
1	Did the contractor submit the performance bond? (If applicable?)			
2	Did the Contractor submit a contractually complying Advance payment Bond? (If applicable)			
3	Was the work program prepared, approved and satisfactory?			
4	Was the Good supplied/work implemented according to the approved Delivery Schedule/work program? (within contract period)			
5	Were site meetings held regularly as per the contract?			
6	Was the project completed in time?			
7	Were the variations approved according to laid down procedure?			
8	Were extensions of time contractually justifiable and were legally approved?			
9	Was the project completed within the approved budget (Including approved variations)?			
10	Did payment certificates include measurement sheets/Valuations/Invoices?			
11	Was the Supplier/contractor paid in accordance with provisions in the contract?			
12	Are the records of selecting and testing of the materials used and completed works complete and adequate?			
13	Were claims properly managed?			
14	Were site Instructions properly and timely issued?			
15	Was the snag list prepared and signed by parties? (Client, Consultant, Contractor)			

16	Was Final Certificate Issued and on time?			
17	Were communications from the contractor/Supplier timely acted upon?			
18	Were liquidated damages contractually claimed for delayed completion?			
19	Any other aspect noted (specify)? Record keeping			
	Average Performance Contract Administration and Quality Aspects			
D	Quality of Product/Works	1	2	3
1	Was there a quality assurance plan (supervision, stage approvals, testing and test results)?			
2	Were the materials tested and approved?			
3	Were there stage approvals? (where applicable)			
4	Were specifications adhered to?			
5	Are the dimensions (lay out) in accordance to drawings?			
6	Quality of materials used and completed works assessment			
7	Floor (assess general quality appearance)			
8	Walls (assess general quality appearance)			
9	Roof (assess general quality appearance)			
10	Ceiling (assess general quality appearance)			
11	Doors (assess general quality appearance)			
12	Windows (assess general quality appearance)			
13	Ironmongeries (assess general quality appearance)			
14	External works			
15	Were final inspections carried out properly?			
	Average Performance Quality of Works			
	Overall Project Performance			
Evaluation Scale		1=Poor	0% - 49% Poor	
		2=Fair	50% - 74% Fair	
		3=Good	75% -100% Good	

Procurement Performance Measurement

3.6 Appendix 6: Educational and Professional Qualifications of PU & PDMSD

PROCUREMENT AUDIT OF THE 2 ACE'S UOG LEGON

INTERNAL CAPACITY TO HANDLE PROCUREMENT

KEY STAFF OF PHYSICAL DEVELOPMENT & MUNICIPAL SERVICES DIRECTORATE

No.	NAME OF OFFICER	POSITION/DESIGNATION	ACADEMIC QUALIFICATIONS (as many as possible list)	PROFESSIONAL QUALIFICATIONS (as many as possible list)	GENERAL YRS OF EXPERIENCE	YRS OF EXPERIENCE AT CURRENT UNIT
1	CHARLES AUGUSTINE KOFINTI	AG. DIRECTOR FISHERY	B.Sc. (P.A. DI/FISH) (PRACTISEMENT) M.Sc. PG. DIP	A.G.I.A. E.F.M.A	25 years	4 years
2	PETER ABALANBATH	QUALITY SURVEYOR	BSC QUALITY SURVEYING MSc PROS. MGT	MGHIS	20 YEARS	09 YEARS
3	GEORGE WIREKO-SPARROW	ARCHITECT	Bx. P.G.DP (ARCH)	A.G.I.A.	18 YEARS	11 YEARS
4	KINGSLEY AKOL ADEI	PRINCIPAL WORK ASSIS.	BSc (B.TECH), MSc (PRODUCT MGT) CENI (PRACTISEMENT)	MGHIS ACISM	8 YEARS	8 YEARS
5	EDMUND SEKIEDE SENNA	PRINCIPAL DRAUGHTSMAN	BSc. PG. DIP (ARCH)	A.G.I.A	9 years	9 years
6	ELVIS CATHUNDEN	SEN. ASST CLERK OF WORKS	BSc (B.TECH)		8 yrs	8 yrs
7	KWAME OFORJ	PRINCIPAL DRAUGHTS (MND)	BSc. PG. DIP (ARCHITECTURE)	ACIAT	8 yrs	8 yrs

3.7 Appendix 7: Pictures of Procurement Contracts