

Works Contract Management Practice in the Public Sector in Bangladesh: *a case study of LGED*

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DECLARATION

I declare that this thesis has been written solely by me and that it has not been submitted, in whole or in part, in any previous application for a degree. I state and acknowledge all the sources of information that has been composed in my dissertation.

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CERTIFICATION

This is to certify that the thesis entitled “**Works Contract Management Practice in the Public Sector in Bangladesh: a case study of LGED**” that is being submitted by Galib Ibna Siddique, in partial fulfillment for the degree of **Masters in Procurement and Supply Management** to the BRAC Institute of Governance and Development, BRAC University is a record of bonafide work carried out by him under my guidance and supervision. The results embodied in this thesis have not been submitted to any other University or Institute for the award of any degree.

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ACKNOWLEDGEMENT

After an intensive period, today is the day: writing this note of thanks is the finishing touch on my dissertation. Writing this dissertation has had an important impact on me. I would like to reflect on the people who have supported and helped me so much throughout this period.

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ABSTRACT

Contract management is one of the most important phases in construction projects and involves numerous tasks occurring before and after contract execution and issuance of Notification of Award (NOA). Furthermore, contract management involves making timely decisions, smooth and efficient flow of information and decisions to enable completion of the project as required by the contract documents, including review, supervision and monitoring of the construction project. Local Government Engineering Department (LGED) is one of the largest government organizations in Bangladesh who has the mended of both rural urban and small scale water resources infrastructure development programs and procurements of goods, works and services as a large scale. This case study is concerned with LGED officials, addressing the present practice of contract management in works procurement and its knowledge among themselves. The study summarizes that LGED officials have moderate understanding on contract management issues though some field level staffs have little knowledge of it in procurement process. Procurement system follows the all clauses which are mentioned in PPR-2008 and STD's recommended by CPTU. Recently LGED published a draft Works Contract Management Manual to provide proper guidance under the same umbrella of its staffs. Adequate training on contract management plan for all stakeholders including procuring entities, contractors and beneficiaries is very important in order to increase knowledge. Finally, there is scope of further study about the issues in works procurement .

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LIST OF ABBREVIATIONS AND ACRONYMS

BBS	Bangladesh Bureau of Statistics
BOQ	Bill of Quantities
CPTU	Central Procurement Technical Unit
DLP	Defect Liability Period
DoFP	Delegation of Financial Power
DPM	Direct Procurement Method
EWO	Extra Work Order
GCC	General Conditions of Contract
GoB	Government of Bangladesh
HOPE	Head of Procuring Entity
ITT	Instructions to Tenderers
JV	Joint Venture
KPI	Key Performance Indicators
LGED	Local Government Engineering Department
LTM	Limited Tendering Method
NCT	National Competitive Tender
NOA	Notification of Award
PCC	Particular Conditions of Contract
PE	Procuring Entity
PPR	Public Procurement Rules
PM	Project Manager
PW	Procurement of Works
QCBS	Quality and Cost Based Selection
OSTETM	One Stage Two Envelop Tendering Method
OTM	Open Tendering Method
QS	Quantity Survey
RVQ	Request for Variation Quotation
RIMS	Risk Identification and Management System
STD	Standard Template Document
TSTM	Two Stage Tendering Method
RFQM	Request for Quotation Method
UE	Upazila Engineer
TDS	Tender Data Sheet
TEC	Tender Evaluation Committee
TEC	Tender Evaluation Committee
VO	Variation Order

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Introduction

A contract is a voluntary arrangement between two or more parties that is enforceable by law as a binding legal agreement.

Contract management is the process of administering the legal and contractual relationships that a business forms with vendors and employees. It is concerned primarily with written contracts that constitute an obligation to perform a works/goods/service in exchange for payment. Being mindful of the process for managing contracts is important to business leaders because it enables them to keep a close eye on the relationships they form with stakeholders. Contract management is one of the most important phases in construction projects and involves numerous tasks occurring before and after contract execution and issuance of Notification of Award (NOA). Furthermore, contract management involves making timely decisions, smooth and efficient flow of information and decisions to enable completion of the project as required by the contract documents, including review, supervision and monitoring of the construction project. Effective contract administration includes developing proper and accurate contract documents; complying with contract documents and specifications; enforcing national rules and regulations; ensuring quality assurance by overseeing, inspecting, reviewing, sampling and testing of all materials and work; ensuring the works are done within the agreed timeframe and with contracted price; keeping and maintaining accurate construction project records; recording, verifying and preparing monthly pay estimates; negotiating and processing of change orders, supplemental agreements and other contract modifications in a timely manner; promoting good public relations; setting and maintaining a high professional standard etc.

1.1 Background of the Study:

Most of the public fund of Bangladesh is spent in various projects related with works. Similar with the others engineering departments, Local Government Engineering Department (LGED) is responsible for the implementation of local infrastructure in three areas such as rural, urban and small scale water sector. All infrastructures are being implemented following the country's Procurement Act, Rules and subsequent documents. For effective implementation of the projects of LGED Contract management is very important to practice within the department. Contract management is a vital part of a procurement process, though in the procurement cycle, it is a post contract activity. Without effective contract management, project/procurement objectives cannot

be achieved within defined time, budget and quality and this also affects the five rights of procurement. Still today, not many researches are done in this area, especially in Bangladesh. As in the public sector, huge expenditure is there for procurement of works. If the contract management is not performed effectively, there is a potential to make the whole procurement void and result in a potential loss of public fund.

1.2 Problem Statement

In most countries, the contract management is only known by the contracting agency and the contractor. The Public procurement process is gradually being recognized as an instrument of government policy and a lever for wider economic, social and environmental change. The Bangladesh's Public Procurement Act 2006 and the Public Procurement Rules 2008, seems to address many issues on contract management and shows comprehensive guidelines at this regard. Behind the scene there are some critical problem arises due to lack of qualified procurement personnel, incorrect interpretation and application of some provisions of the procurement Act, slow pace in regularizing the Draft Regulations, lack of clear procedures for Emergency Procurement, lack of Training Avenues or Institutions, poor Record Management (scattered files), poor handling of Suppliers' Complaints, poor Procurement Planning, Mobilization and Implementation and poor Contract Management.

Every year a major portion of government budget is allocated for procurement of works of different kinds for different public agencies. Works include all kinds of civil works like building, roads, bridges, flyovers and other infrastructure construction projects which are under supervision by different government agencies. This is a common problem that due to poor contract management, we fail to ensure right quality, in right time at right price.

Though indicated as a problem, contract management has received very little research attentions both by the PPA and researchers who are interested in procurement issues. The limited research in this area of contract management can be attributed to the very little interest on the subject as well as the legality associated with contracts. This is added to the limited knowledge on the importance of contract management to the public sector.

Additionally, the delay in the implementation of the procurement plans, in most cases has led to overrun of contract period.

1.3 Aim of the study

The aim of the study is to examine the common practice and challenges of contract management in the procurement of works in Local Government Engineering Department (LGED). In order to understand these challenges, the study further aims at understanding the contract management processes as well as the Public procurement processes in LGED

1.4 Objective of the study

General Objective:To measure the performance of contract management of works in major development projects under LGED.

Specific Objectives:

- a. Identify the extent to which the existing contract management practices in LGED comply with the PPR-2008;
- b. To measure how far the procurement objectives of LGED are achieved through the existing contract management process.
- c. To find out the importance of contract management in LGED
- d. To find out the kind of challenges LGED encounter during contract management.

1.5 Research Question:

Base on the research objective outlined above, the following research questions are worth considering

- a. What is the present Contract management practice in LGED ?
- b. How far the present contract management practice in LGED complies with the PPR-2008?

1.6 Research Methodology:

Here qualitative study has been performed as research methodology. A combination of questionnaire survey among selected projects' personnel has been used in performing the research work. Literature review from similar nature of study, PPR-2008, PPA-2006, tender document used for the procurement of works in the selected projects will also be taken into account. The data has been analyzed by using MS Excel and other statistical tools as appropriate and will be presented through tables for better understanding.

Target group for conducting survey: Executive Engineers, Procurement Function's officials, Upazila Engineers, Tender Evaluation Committee members and Major Contractors at LGED.

Chapter 2: Literature Review

2.1 Contract and Contract Management:

An agreement between two or more parties which is intended to be enforceable by law is called Contract. Usually contracts are in written form but may be spoken or implied.

Contract management “is the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk”. There are a number of other definitions of contract management, the majority of which refer to post-award activities. Successful contract management, however, is most effective if upstream or pre-award activities are properly carried out. Contract management term comes after selecting desired bidder. It includes negotiating the terms and conditions in contracts and ensuring compliance with the technical specifications, terms and conditions as well as documenting and agreeing on any changes or amendments that may arise during its implementation or execution.

According to Public Procurement Rule 2008 ‘the contract administration and management shall include all administrative, financial, managerial and technical tasks to be performed by the PE from contract award until it is successfully concluded or terminated or until payment is made and the underpinning disputes or claims (if any) are resolved.’ The PE shall apply professional ethics for adopting the contract administration and management techniques to ascertain the proper implementation of the signed contracts in line with the agreed conditions covering delivery, payments, quality control, contract implementation, liquidated damages and other related issues. The PE shall ensure that Goods to be procured conform to the technical requirements set forth contract, and for such purpose, PE may establish inspection and testing facilities, form inspection teams, enter into arrangements for the joint or collective use of laboratories and inspection and testing facilities, and contract with others for inspection or testing work as needed.

2.2 Importance of Contract Management:

Organizations in both the public and private sectors are facing increasing pressure to reduce costs and improve financial and operational performance. New regulatory requirements, globalization, increases in contract volumes and complexity have resulted in an increasing

recognition of the importance and benefits of effective contract management. The growing recognition of the need to automate and improve contractual processes and satisfy increasing compliance and analytical needs has also led to an increase in the adoption of more formal and structured contract management procedures and an increase in the availability of software applications designed to address these needs. It is worthwhile noting that contract management is successful if:

- The arrangements for service delivery continue to be satisfactory to both parties, and the expected business benefits and value for money are being realised
- The expected business benefits and value for money are being achieved
- The supplier is co-operative and responsive
- The organization understands its obligations under the contract
- There are no disputes
- There are no surprises
- A professional and objective debate over changes and issues arising can be had
- Efficiencies are being realized.

2.3 Key Points of Contract Management:

According to American Based Training Centre **Purchase and Procurement** (<https://www.purchasing-procurement-center.com/contract-management-process.html>) the contract management process is the interaction between the contractor and the Procuring Entity that ensures that both parties meet their respective obligations in any procurement relationship. The aim is to meet the operational, functional and business objectives required by the contract and provide a profitable interaction.

The contract management process includes:

- **Managing Contract performance**
To ensure that the works are implemented as per specification within the time limit.
- **Managing the Relationship**
This is the communications between the Contractor and the Procuring Entity/Project Manager or any others related to the works.
- **Managing the Contract**
This is the ongoing contract administration to ensure that the day-to-day procurement activities follow the spirit and sections of the contract.

- **Seeking Improvements**

Improvements within a procurement environment mean greater efficiencies and an increase in profits.

- **Ongoing Assessment**

The entire procurement activities are assessed on a continual basis to ensure that the contracts are adhered to and the purchasing processes followed.

- **Managing Change**

In a long term procurement relationship, there are sometimes changes in activities, requirements or products available. All of these changes need to be noted and handled effectively.

A thorough understanding of the contract management process and all that it entails are crucial to the success of a Government agency like Local Government Engineering Department (LGED). The key activities within a contract management process are:

- The Procuring Entity should possess a procuring strategy that focuses on value for money and efficient procurement activities. All staff and contractors should be aware of these strategies and the resulting activities are required to follow them.
- Key Performance Indicators (KPI's) should be in place with all contractors. These should be used to measure contractors' performance as well as encourage them to reach for excellence.
- There should be a detailed master agreement in place with each contractor that details the expected performance and quality works as per design, drawings and specifications that is to be performed on a regular basis. This is a core requirement of any contract management process.
- Ongoing and regular monitoring of each contractor should be instigated and maintained. This can be undertaken by the installed software wherever possible.
- Regular ad hoc inspections and tests as to works, materials quality and communication should be undertaken and the actions taken on the results.
- Continual improvements of contractor/Procuring entity relationships should be undertaken.
- All potential risks should be identified and managed.

- All issues, exceptions and problems should be managed and escalated to the appropriate management level. They should all be resolved within an appropriate time frame.
- In the event of poor contract performance, the appropriate remedies should be put into place in a timely manner. These might include financial penalties, training or removal of the contractor relationship.

The contract management process can be difficult but the rewards emanating from a profitably managed contract management process are potentially huge.

2.4 Practice of Contract Management:

2.4.1 Managing the relationship with the Contractor:

Every time a Contracting Authority enters into a contract with one or more Economic Operators, it creates a subordinate relationship the extent of which varies depending on the type and duration of the contract. By applying the best practices in public procurement, the successful Contractor must be the most suitable one to implement the Project to be executed. Based on this assumption and given that the procedures and cost of changing the Contractor or terminating the contract and re-announcing a tender is high, the Contracting Authority must care for the development of a good working relationship with the Contractor and furthermore, continuously invest in that relationship. **(Public Procurement Directorate of Republic of Cyprus)**

It is estimated that the good working relationship between Contractor and Contracting Authority:

- Gives the Contractor the possibility to better understand the goals of the Project and expectations of the Contracting Authority, as well as its business and administrative environment, thus allowing him to act preventively and submit proposals for the improvement of the actions to be executed,
- Motivates the Contractor to improve his performance
- Allows the Contracting Authority to realize the weak and strong points of the Contractor and hence to concentrate its efforts on the improvement of the performance of the latter where there is room for better performance.

2.4.2 Factors having a negative effect on the relationship between Contracting Authority and Contractor:

Cases where the Contracting Authority and Contractor relationship is affected by external factors and lacks the room for development which, under normal conditions, it could have, are:

- The Contracting Authority and the Contractor are characterized by different cultures which are in conflict during the implementation of the contract scope, Project management and contract management.
- The contract scope is innovative and the economic operators which can implement it apart from the successful one are few. The Contractor does not feel, during the execution of the Contract, the competitive pressure in the market and begins to deviate from the course to provide the best value for money.
- Most of the Contractor's turnover comes from the implementation of projects for the specific Contracting Authority, in which case he is quite susceptible to the pressures he may be subjected by it
- The activity, operation and services of the Contracting Authority depend to a great extent on one economic operator (the Contractor) resulting in the former fearing of any withdrawal of the economic operator from the market for any cause/ reason whatsoever.

2.4.3 Evaluation of the relationship with the Contractor:

The relationship and cooperation between Contracting Authority and Contractor are some of the issues that must be evaluated throughout the execution of the Contract in order to identify what goes well and what needs improvement. More specifically, the following must be reviewed on a regular basis:

- The degree of involvement of the Contractor or the degree to which the Contracting Authority invites the Contractor to be involved with different activities arising from the execution of the contract.

- How well are the Project administration structures of both the Contracting Authority and the Contractor operating and collaborating?
- Whether there is a successful communication between all the organizational levels of the Contractor and Contracting Authority.
- The extent of the appearance or avoidance of any conflicts of interests and if appeared whether they were resolved effectively.
- Whether the results of the Contractor's performance monitoring are notified to him in order to proceed with improvement actions that may be required.
- The degree of satisfaction of both sides from the cooperation, communication and problem solving until now.

2.4.4 Ethical Behavior and Professionalism:

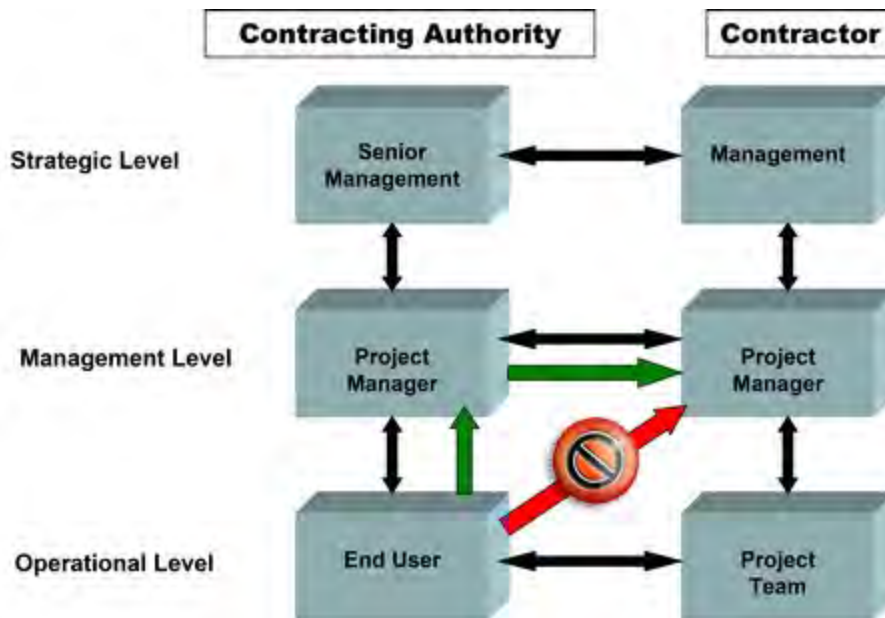
The staff of Contracting Authorities participating in Contract Management, as well as all of the staff participating in the public procurement procedures is required to observe the "Code of Ethics" and apply in practice the rules and guidelines arising from it. The observance of the Code of Ethics sets the basis for an open, fair and efficient cooperation between Contracting Authority and Contractor, which leads eventually in the more successful execution of contracts and the achievement of better value for money.

2.4.5 Communication:

Establishing a good communication is a structural element in the relationship between the Contracting Authority and the Contractor. The international practice in contract execution has proven that problems of lack of trust or concern related with the performance of the Contractor are frequently due to the ineffective communication of those managing the contract from both sides as well as the failure to communicate and explain to the Contractor the goals and intentions of the Contracting Authority with reference to the specific Project. The practice of communication must begin immediately after the end of the tender procedure and signature of the contract, with the kick-off meeting at which time is set the foundation for the application of a **continuous information exchange policy** between Contracting Authority and Contractor. The effort to achieve optimum communication between Contracting Authority and Contractor must be continued during the planning of the method for executing the contract (Project

implementation), at which time answers must be given to the questions of the checklist and draft the "Communication Plan";

Communication levels (horizontal & vertical) between Contracting Authority and Contractor in the context of a contract for the supply of information technology services



2.4.6 Handling problems:

Regardless of how good the relationship and communication between Contracting Authority and Contractor is, it is quite likely that problems will arise during the execution of the contract. This is why it is imperative, on the one hand to include provisions in the contract regarding the resolution of any problems that may arise (e.g., when the performance of the Contractor is inferior to the goals set), and on the other to institute and agree from the beginning procedures for the drafting and submission of reports as well as transfer/ reference of the problems to be resolved at higher level.

The problem that appears most frequently during the execution of contracts involves the performance of the Contractor. However, apart from this problem, a considerable number of other problems referring to issues like invoicing, payments, communications, contract administration procedures etc., may appear throughout the execution of the contract scope and their possible causes are as follows:

- The time dedicated to the management of the Contractor's performance is limited and inadequate;
- The time dedicated to the management of the Contractor's performance is limited and inadequate
- The Contracting Authority or the Contractor failed to anticipate early significant risks or the need to implement changes;
- The Contractor's organizational structure changes or significant changes are made in the Project management team on the part of the Contractor;
- The planning for the execution of the contract and its scope is of limited extent and inadequate;
- The contract requirements change as a result of changes in the operational environment of the Contracting Authority or due to modifications in the needs of the end users;
- The appearance of conflicting goals and interests between Contracting Authority and Contractor;
- The original hypotheses and assumptions made on the part of the Contractor during the planning of the Project implementation are proven inaccurate or mistaken in practice;
- The occurrence of unforeseen events;
- The personalities of the key executives involved in the execution of the contract have so many differences that lead to conflict;

Actions after the appearance of a problem

- **To be recorded** in order to be taken into account in the evaluation of the overall performance as well as when reviewing the achievement of best value for money.
- **The Contractor to be notified about it** through the proper communication channel and at the proper level each time.

- **The problem to be referred to/ transferred for resolution** to the immediately higher level when its resolution at the initially involved level is not possible or becomes impossible.

2.5 Contract Administration:

2.5.1 Record Keeping:

Proper Record keeping is important for effective administration of all contracts for works. A right and structured filing system is very important to keep track of site records, avoid duplication, store records and be able to easily locate records in an orderly manner. Usually the Procuring Entity shall maintain the procurement files for the 5 years period, in special case it may be extended more than five years. Contract Records provide the following and are required for legal purposes.(Page 15 of Works Contract Management Manual, June 2017 by LGED)

- Details of all tests, inspections and work performed
- Decisions, actions, proof of and fulfillment of the responsibility
- Works execution statement and acceptance of quality, measuring books, works completion certificates.
- Extra work/variation order, amendment in contract and any other documents which affect the conditions of contracts as like contract price, intended contract completion date etc.
- Payment certificates, generated invoices and paid bills related to procurement.

2.5.2 Risk Management:

According to LGED Works Contract Management Manual, 2017, risk management is described as “the effect of uncertainty on the achievement of objectives”. Risk can have both negative and positive effect on achieving objectives. The systematic application of management techniques (such as policies, procedures, and practices), to identify, evaluate and analyze risks and formulate effective management strategies and plans to manage those risk can be described as Risk Management. These risks could be regarding cost, time, quality, environment, legal and social issues.

2.5.3 Contract Register:

Contract registers are user friendly tool to manually record correspondence details and contractual matters. The project manager is responsible for developing and maintaining the contract register for the following correspondence.

1. General
2. Payment
3. Site instruction (Site order Book)

Contract Commencement meeting:

The contract commencement meeting will be held to establish clear lines of authority, determine the duties and responsibilities, communications, subcontractor's requirements and usage, Project Manager, clarify potential misunderstandings and agree on the detailed implementation arrangements for successful completion of the contract. A successful contract commencement meeting should result in both the contractor and the project manager having a clear understanding of the construction plan, expectations and responsibilities of all parties. The PE/PM should reach the mutual understanding with the contractor and sub-contractors on all terms and conditions of the contract document.

2.5.4 Programme of Works:

It is used for monitoring the progress of the execution of works. The Project Manager is responsible for approval of the Programme of Works (as stated in GCC Clause 12.1(PW2); Clause 41.1(PW5)) submitted by the contractor within the time stated in the PCC. The Programme of Works should represent the general methods, arrangements, order and timing for all activities in the works. In addition the Project Manager should also review and approve any update programme of works within contract period submitted by the contractor at intervals no longer than the period stated in the PCC. The updated Programme will show the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities. If the contractor does not submit an updated Programme of the work at the stipulated interval in the PCC, the Project Manager is authorized to withhold an amount from the next payment certificate and continue to withhold this

amount until the next due payment after the date on which the overdue Programme of works has been submitted as per PCC.

2.5.5 Delays :

When managing a contract Project Manager should be aware of the causes of delayed. Delays could be caused by procuring agency such as delays in issuing drawings, specifications or instructions required for execution of the works and giving the contractor possession of the site, delays in approving programme of works, processing payment on time and in accordance to the schedule, delays in responding to contractor's claims, approving process, delays due to the suspension of the works ordered by Project Manager.

In addition the delays caused by the Contractor are commonly related to: submission of Programme of Works, delays in submission of Performance Guarantee, delays in commencing the works, delays in submitting to Project Manager early warning notifications, delays in completing the Works and physical services within the Intended Completion Date, not giving procuring entity staff access to the site on time for the purpose of inspection and test, delays in paying the wages to its laborers etc.

There are also delays caused by Public Authorities which may disrupt contractor's Works. These public authorities delays might be considered as compensation event if nor Procuring Entity neither Contractor have not foreseen such delays and Contractor has diligently followed the procedure laid down by legally constituted public authorities. The occurrence of the exceptional events or circumstances caused by Force Majeure may also cause delays in timely completion of construction works.

2.6 QUALITY CONTROL:

In every contract quality control and assurance are vitally important to a successful construction project and should be adhered to throughout the project from the commencement and design phases and throughout the construction and installation phases. A good quality assurance system during the construction of the works will ensure longevity of the construction itself.

2.6.1 Inspection and Testing:

Conducting regular inspections means to ensure that the works are completed in conformity with the drawings, Bills of Quantities (BOQ) and technical specifications. Regular inspections during construction will prevent costly repairs after the project is completed.

Procedure:

1) Based on the specifications and quality control requirements, the Project Manager will develop and agree with the Contractor on the inspection course of action, to make sure that the works are completed in line with the contracted quality standards.

2) During the course of inspection, the Project Manager and site staff in charge of inspection should check whether the Contractor is constructing, installing and carrying out the Works and physical services in accordance with the Specifications and Drawings as stipulated in the contract.

3) The Project Manager should give advance notice to the Contractor in case the LGED representatives are planning the examination, inspection, measurements, testing or supervision of the works under the Contract. The Project Manager can decide for such quality assurance actions at any time when he/she assess as necessary while Contractor is obliged to allow access to the Site all the time during the execution of the works.

4) The supervision, equipment, location of the material and the type of testing should be described. As a regular practice, the testing will be conducted using the LGED laboratory. However, if tests require special equipment they are to be performed by outside laboratories.

5) The Project Manager is responsible to check the Works executed by the Contractor and to notify the Contractor of any Defects found.

6) The Project Manager may also instruct the Contractor to search for a defect, to uncover and test any work that the Project Manager considers may have a Defect.

7) The Project Manager may instruct the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect. In case that such the test shows any defect, the Contractor shall pay for the test and any samples. If there is no Defect, The Project Manager shall instruct the Contractor on the procedure for reimbursement of the related costs.

8) Project Manager may decide to reject the Work if the result of examination, inspection, measurement of Works shows that the works are not constructed in accordance with a Contract. Further to a decision for rejection of Works, Project Manager should give notice to the Contractor with detailed explanation.

9) Inspection and Test form can be developed and will be used for planning purposes to identify the key performance criteria for the works and allow allocation of appropriate implementation control measures to assist achieving the required outcomes. Furthermore, such a plan will provide a framework for the works to be packaged into controllable portions, where specific risk and specification requirements can be identified and controlled.

10) PE/PM and assigned other Engineers, under their duties and responsibilities are in charge of regular supervision of the works and conducting other necessary activities to ensure quality of the construction works. The supervision should be conducted at a frequency to ensure that elements of the work are in compliance with the specified standards.

11) The supervision team should be aware of the works that will become covered and cannot be inspected after the fact. This includes concrete, where the size, number, and location or reinforcing steel cannot be readily determined after the concrete is placed. Likewise, underground utilities cannot be inspected after covering. Work of this nature must be closely controlled and monitored during construction.

2.6.2 Photographs :

Photographs are used in infrastructure projects to certify the progress achieved and also to provide a record of various events and issues. The site staff will document the works through photographs. These shall include views of major construction projected during various stages of progress, materials or construction related to changed conditions, claims, or potential claims, work in place for which removal has been ordered because of noncompliance with plans and specifications, photos of technical interest, bad and good safety practices by the Contractor, new methods of construction property or material damages, manufacturer's labels and installation instructions, emergency conditions and safety violations, accident scenes and defective work.

2.7 Cost Control:

Cost control is a very important issue during the management of a construction project and should continue throughout the whole construction period to ensure that the costs of construction remain under control. The activity of Cost control involves the calculations based on the measurement of the works completed on site and certification of regular payments to the Contractor through to monitoring the progress of costs against the budget and work progress. The Project Manager should monitor closely the actual costs and cash flow compared to planned costs and cash flow and take early action to correct where necessary, in order to maintain the project within budget. Furthermore, the Project Manager will ensure the timely payment of the Contractor and proper financial management to mitigate the risks from price escalation.

Some Payment Procedure:

The Contractor is paid for the quantity of the work done at the rate in the BOQ for each item.

Payments will be made based on:

- a) quantities calculated from drawings using measured field dimensions and levels
- b) quantities physically measured in the field
- c) Quantities based on weight either calculated or physically weighed

All payments to the Contractor shall be made into the Bank Account, in any scheduled Bank of Bangladesh, of the legal title of the Contract specified in the PCC, nominated by the Contractor in the

Currency specified in the Contract.

(a) Advance Payments

The Procuring Entity shall proceed with advance payment once the contract agreement has been signed and if there is contractual provision for advance payment and only after the Contractor has provided the Procuring Agency with an irrevocable unconditional Bank Guarantee. The amount of the advance payment and Bank Guarantee will be specified in PCC

(For example in PW3 form advance payment provision mentioned in clause GCC-73.1). Procuring Entity/Project Manager may request Contractor to submit copy of invoices to demonstrate that advance payment has been used for Equipment, Plant, Materials, and mobilization expenses as specified in GCC Sub Clause 73.2.(PW3); Clause 78.3.(PW5);

(b) Interim Payments

The interim payments should be subject to adjustments for deductions for advance payments, retention and any other additions or deductions which may have become due under the Contract or otherwise including those resulting from claims, disputes and arbitration procedures. Contractor submits monthly statement and Procuring Entity should check and certify the estimated value of the works executed less the cumulative amount certified previously. When reviewing the monthly statements, PE may decide to exclude any item or reduce any proportion certified previously in the light of later information. The value of work executed shall be determined by the Procuring Entity/Project Manager. Procuring Entity should make sure that the Contractor is paid within twenty-eight (28) days of the date of each certificate.

(c) Final Payment

The Contractor shall notify Procuring Entity/Project Manager for issuing the Completion Certificate for Works and submit detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Procuring Entity/Project Manager shall certify the Final Payment within fifty-six (56) days of receiving the Contractor's account if the payable amount claimed by the Contractor is correct and the corresponding works are completed. If Procuring Entity/Project Manager assess that the payable amount claimed and the works are not completed, he/she will issue within fifty-six 56 days a Defect Liability Schedule to allow Contractor the requested corrections.

(d) Payment upon Termination of Contract

If the Contract is terminated because of a fundamental breach of contract by the Contractor, the Procuring Entity/Project Manager shall issue a certificate for the value of the Works done and Plant and Materials ordered. The value will be decreased for advance payments received up to the date of the issue of the certificate and for any amount from percentage to apply

to the contract value of the works not completed, as indicated in the PCC). Contract can be terminated because of following reasons-

1) Fundamental breach of Contract by the Procuring Agency.

2) Force Majeure.

(e)Delayed Payment

The Procuring Entity/Project Manager should make every effort to pay the Contractor as per the schedule of payment indicated in the contract. However, if it makes a late payment, the Contractor shall be paid interest on the late payment in the next payment at the rate as specified in the PCC. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made.

Issue of Variation and Extra Work Order

Variations are changes in the scope of work that arise during the course of the project from project internal reasons. The need of variations and project changes may arise as a consequence of both positive and negative reasons; such as poor initial planning, design errors, technical innovation, modernization, emerging of new products, changes in plans, or unexpected conditions on site, etc.

Liquidated Damage

Liquidated damages are damages whose amount the parties designate during the formation of a contract for the injured party to collect as compensation upon a specific breach (e.g., late performance). Sum of money (agreed-to and written into a contract) specified as the total amount of compensation an aggrieved party should get, if the other party breaches certain part(s) of the contract. The contract also establishes what actions or failures to act constitute a breach. In order for a liquidated damages clause to be upheld, two conditions must be met. First, the amount of the damages identified must roughly approximate the damages likely to fall upon the party seeking the benefit of the term. Second, the damages must be sufficiently uncertain at the time the contract is made that such a clause will likely save both parties the future difficulty of estimating damages. (Tanveer 2013: 10). In the standard document PW3 the amount of liquidity damage has been instructed by GCC 71.1.

2.8 Conflict Management:

The implementing strategies to limit the negative aspects of conflict and to increase the positive aspects of conflict at a level equal to or higher than where the conflict is taking place is called Conflict management . Furthermore, the aim of conflict management is to enhance learning and group outcomes. It is not concerned with eliminating all conflict or avoiding conflict. Conflict can be valuable to groups and organizations. It has been shown to increase group outcomes when managed properly. (Tanveer 2013: 8)

Termination

In cases when Contractor breaches the contract for not fulfilling their contractual obligations, the ultimate recourse would be termination of the contract. It is strongly advisable for contracts to contain prior warning mechanisms that alert the Contractor to breaches and allow opportunity for negotiations to occur prior to the breach becoming a ground for termination. That said, termination can be the only viable option in certain situations. Contracts can be terminated due to following reasons: (LGED Contract Management Manual 2017)

1. If the Contractor causes the **fundamental breach** of Contract (refer to GCC Sub Clause 36.1 (PW2); Sub Clause 87.1(Pw3); Sub Clause 95.1(Pw5)which include, but not limited to the following:
 - a. The Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorized by the Project Manager;
 - b. The Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within eighty four (84) days;
 - c. The Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
 - d. The Contractor does not maintain a Security, which is required;

- e. The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of Liquidated Damages can be paid, as specified in GCC Sub Clause 71;
- f. The Contractor has subcontracted the whole of the Works or has assigned the Contract without The required agreement and without the approval of the Project Manager;
- g. The Contractor, in the judgment of the Procuring Entity has engaged in corrupt or fraudulent practices, as defined in GCC Sub Clause 38, in competing for or in executing the Contract.
- h. A payment certified by the Project Manager is not paid by the Procuring Entity to the Contractor within eighty-four (84) days of the date of the Project Manager's certificate.

2. When LGED or Contractor become bankrupt or otherwise insolvent.

Settlement of Disputes and Arbitration

A dispute is a disagreement between the Procuring Agency and Contractor arising out of or in connection with the formation, performance, interpretation, nullification, termination or invalidation of the Contract or the Works. Disputes between Procuring Entity and Contractor will be settled through:

- a) Amicable settlement,
- b) Adjudication or
- c) Arbitration

Amicable settlement

The Procuring Entity and the Contractor shall use their best efforts to settle amicably all possible disputes arising out of or in connection with this Contract or its interpretation.

Adjudication

If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was

wrongly taken, the decision shall be referred to the Adjudicator within **fourteen (14) days** of notification of the Project Manager's decision in writing. The Adjudicator named in the **PCC** should be jointly appointed by the parties. In case of disagreement between the parties, the Appointing Authority designated in the **PCC** shall appoint the Adjudicator within **fourteen (14) days** of receipt of a request from either party. The Adjudicator shall give its decision in writing to both parties within **twenty-eight (28) days** of a dispute being referred to it. The Contractor shall make all payments (fees and reimbursable expenses) to the Adjudicator, and the Procuring Entity shall reimburse half of these fees through the regular progress payments. Should the Adjudicator resign or die, or should the Procuring Entity and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator will be jointly appointed by the Procuring Entity and the Contractor. In case of disagreement between the Procuring Entity and the Contractor the Adjudicator shall be designated by the Appointing Authority within fourteen (14) days of receipt of a request from either party

Arbitration

If the parties are unable to reach a settlement amicably nor through adjudication within **twenty-eight (28) days** of the first written correspondence on the matter of disagreement, then either party may give notice to the other party of its intention to commence arbitration. The arbitration shall be conducted in accordance with the Arbitration Act (**Act No 1 of 2001**) of Bangladesh as at present in force and in the place shown in the **PCC**.

2.9 Completion procedure:

The completion procedures include the following main contractual events: Taking Over upon completion of the Works, Hand Over of the project to ultimate beneficiary, Defect Liability Period and Final Closure of contract.

a. Taking Over:

When the Contractor considers that the Works are substantially completed he should notify the Project Manager that the works are ready for final inspection and apply for Completion Certificate. Project Manager and inspection team will carry out inspection and if assessed that the works are completed in accordance

with a contract, Project Manager issue Completion Certificate stating the date on which the Works or Section were completed. For the purpose of taking over inspection Form should be used. It should be taken over the Site and the Works within **seven (7)** days of the Project Manager's issuing a Certificate of Completion.

b. Hand over the Project to Ultimate Beneficiaries

The hand over process should be planned in a way that Procuring Entity immediately pass on the works to the end user/ client. This will alleviate Procuring Entity from risk in having possession of the works for any period. Project Manager should plan the hand over process well in advance with the client and user such that they are prepared to take over possibly on the same day as Procuring Entity take over the site and the Works.

C. Defect Liability Period

It is important that a procedure is established for managing defect notification and carrying out repair works during the contract defects Liability period. Clear lines of communication between the End User, PE and the Contractor are required for any defect notification and a protocol for access to carry out investigations, remedial works and inspection of repaired works will need establishing. The Project Manager shall give notice to the Contractor, with a copy to PE and others concerned, of any Defects before the end of the Defects Liability Period, which begins at Completion Date, and is defined in the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. The Project Manager will also monitor and track the defects throughout the Defects Liability Period. Every time a notice of Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice. When all obligations under the Contract have been completed, including those required to be performed during the Defects Liability Period; the Project Manager will issue a Defects Correction Certificate. As good practice, a 12 month Defect Liability Period should be included.

D. Closure of the Contract

After the Defect Liability Period has passed, the Project Manager will make sure that the Contractor has corrected any defect during the DLP. If so, the PE upon confirmation by the Project Manager, will return the percentage of money kept as security for correction of defects. Contract will be considered closed only after the Defect Liability Period has passed and all defects are corrected by the Contractor (if any) and upon confirmation by Project Manager. Upon closure of the contract, Project Manager will make sure that all contract's documents are filed and maintained following the standard filing system.

2.10 Responsibilities of Different bodies :

Procuring Entity's Key Responsibilities

a) To assure the Quality, Time and Price control throughout the execution of the Works by the Contractor.

b) Procuring Entity pay to the Contractor, in consideration of the satisfactory progress of execution and completion of the Works and physical services, and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract Agreement.

c) For any compensation events (refer to GCC Clause 67.1 for the compensation events) occurred during the contract execution, Procuring Entity pay to the contractor as per contract agreement. Example: if LGED has delayed in given the possession of the Site or part of the Site to Contractor, the Project Manager may authorize increase of the contract price and/or extension of completion time.

d) Procuring entity approved the contractor's key personnel named in the Schedule of Key Personnel as referred to in the PCC and replacement of key personnel, to carry out the functions stated in the Schedule.

e) To approve the contractor's Work Plan, proposed by the Contractor as well as any, update in the Work Plan during the contract execution.

f) Give right of access to, and non-exclusive possession of, those parts of the Site set out in the site

plan within the time (or times) stated in the PCC.

g) Guide and assist the Contractor in obtaining, if required, any permit, license, and approvals from local public authorities for the purpose of execution of the Works and physical services under the Contract.

h) Recommends the existence of a Force Majeure that will be the basis of the issuance of order for suspension of Works and submit the recommendation to HOPE for final decision on the existence of Force Majeure.

i) Provide directives to Project Manager with regards to contract implementation.

Project Manager's Key Responsibilities:

The Project Manager is Procuring Agency's staff appointed by Procuring Entity who is responsible for supervising the execution and completion of the Works and physical services and administering the Contract, particularly, but not limited to:

a) Except where otherwise specifically stated in the PCC, decide contractual matters between the Procuring Entity and the Contractor in its role as representative of the Procuring Entity and clarify queries in conditions of the contract on behalf of PE.

b) To assure the Quality, Time and Price control throughout the execution of the Works by the Contractor.

c) Approval of Programme of Works showing the general methods, arrangements, order, and timing for all the activities in the Works.

d) Approval of the Specifications and Drawings showing the proposed Temporary Works submitted by the Contractor.

e) Giving instruction to Contractor for commencement of the Works and approving the Contractor's key personnel and any changes in the composition key personnel proposed by the Contractor.

g) Checking the works executed by the Contractor and notifies the Contractor of any defect found, instruct the Contractor to suspend the Works when assessed necessary.

h) Determination of the value of the Works executed, check the Contractor's monthly statement and certify the amount to be paid to the Contractor and issue Completion Certificate as evidence that the Contractor has executed the Works and physical services in all respects as per design, drawing, specifications and Conditions of Contract.

i) Manage the contract filing system and ensure proper documentation of all activities pertaining to contract administration.

Contractor's Key Responsibilities:

The Contractor, throughout the execution and completion of the Works will be responsible to carry out all instructions of the PE/Project Managers that are in compliance with applicable Laws. In addition the contractor should follow following points

a) Execute and complete the works and remedy any defects therein according to the provisions stipulated in the contract agreement and in line with BOQ, approved Specification, Drawings and Work Plan.

b) Preparing of the Programme of Work in the form of an Implementation Schedule showing general methods, arrangements, order and timing for all activities in the Works and submit to Project Manager for approval.

c) Designing the Temporary Works and obtain the approval of third parties to the design of the Temporary Works, where required.

d) Execute and complete any works authorized by PE under any Variation or Extra Work Order as well as any remedial work, when approved by Approving Authority (the authority in accordance with Delegation of Financial Powers).

e) Provide access to the site for authorized persons (LGED officials/personnel from ministries/development partners) for examination, inspection, measurements, testing and supervision.

f) To supply “As Built” Drawings and/or operating and maintenance manuals by the date specified in PCC, if required.

g) Submitting of monthly statement of the estimated value of the works executed less the cumulative amount certified previously to Project Manager.

h) To take all reasonable steps to safeguard the health and safety of all workers working on the Site and other persons entitled to be on it, and to keep the Site in an orderly state.

i) To provide and maintain at the Contractor’s own cost all lights, guards, fencing, warning signs and watching for the protection of the Works or for the safety on-site.

j) Take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of the Contractors methods of operation.

k) Comply with all the relevant labor Laws applicable to the Contractor’s personnel relating to their employment, health, safety, welfare, immigration and in order to allow them all their legal rights.

l) Adhere to all applicable labor Laws and other relevant treaties ratified by the government which prohibits the employment of any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health.

m) Provide the proper accommodation to his or her laborers and arrange proper water supply, conservancy and sanitation arrangements at the site for all necessary hygienic requirements and for the prevention of epidemics in accordance with relevant regulations, rules and orders of the government.

n) Pay on time the reasonable wages to his or her laborers.

o) Before starting the Works, provide, in the joint names of the LGED and the Contractor, **insurance** cover from the Start Date to the end of the Defects Liability Period, in the amounts specified in the PCC for the following events which are due to the Contractor’s risks: • Loss of or damage to the Works, Plant, and Materials; • Loss of or damage to Equipment; • Loss

of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and • personal injury or death.

p) Pay all applicable taxes, custom duties, VAT, and other levies imposed or incurred inside and outside Bangladesh.

q) Take accountability for any act or default of any Subcontractor, his or her agents or employees, as if they were the acts or defaults of the Contractor.

2.11 Methods of Public Procurement in Bangladesh

The Public Procurement Rules (PPR), 2008 prescribes several methods of procurement, dividing the procurement into national and international classes. For the national procurement, the preferred method is the Open Tendering Method (OTM) which ensures equal opportunity to all suppliers, open competition and proper advertisement. However, a number of procurement methods alternatives to the OTM are also allowed under certain circumstances. These methods must be justified on technical and economic grounds. These alternative methods for goods and works are-

- Limited Tendering Method (LTM)
- Two Stage Tendering Method (TSTM)
- Request for Quotation Method (RFQM) and
- Direct Procurement Method (DPM).
- One Stage Two Envelop Tendering Method (OSTETM).

However for consulting services procurement there are various types of tendering methods which are as follows.

- Quality and Cost Based Selection (QCBS).
- Fixed Budget Selection (FBS).
- Least Cost Selection (LCS).
- Single Source Selection (SSS).
- Community Service Organization Selection (CSOS).
- Individual Consultant Selection (ICS).
- Selection Based on Consultants Qualifications (SBCQ).
- Design Contest Selection (DCS).

There are some essential conditions that need to be considered when applying the alternative methods. The LTM can be used when suppliers are limited in number or the time and cost required to receive and evaluate tenders would outweigh the value of the contract or in an urgent situation. Two stage tendering method may be followed for complex and large projects or when preparing complete technical specifications is not possible at one stage or where alternative solutions may be available but not known to the procuring entity due to rapidly changing technology. The RFQM may be used for standardized, low value goods easily available in the market or low value works and physical services subject to the value being within the prescribed threshold value. However, for resisting the misuse of this method, the application of this method is strictly controlled by the head of procuring entity. Direct procurement method is allowed when, goods are procured from sole proprietor due to patent or copyrights, or additional goods or services are procured from the original supplier/manufacturer, or the goods are available only from the sole dealer or manufacturer, or a special type of good is procured from a local manufacturer, or for the procurement of goods, works or services of very urgent and essential nature. For international procurement, the methods mentioned above are also applicable but with certain differences to maintain standards and competition. For example, in international procurement, specifications should be made conforming to the international standards; provisions for alternative dispute resolution should be incorporated in the contract etc.

Chapter 3: LGED, At a Glance

3.1 Background

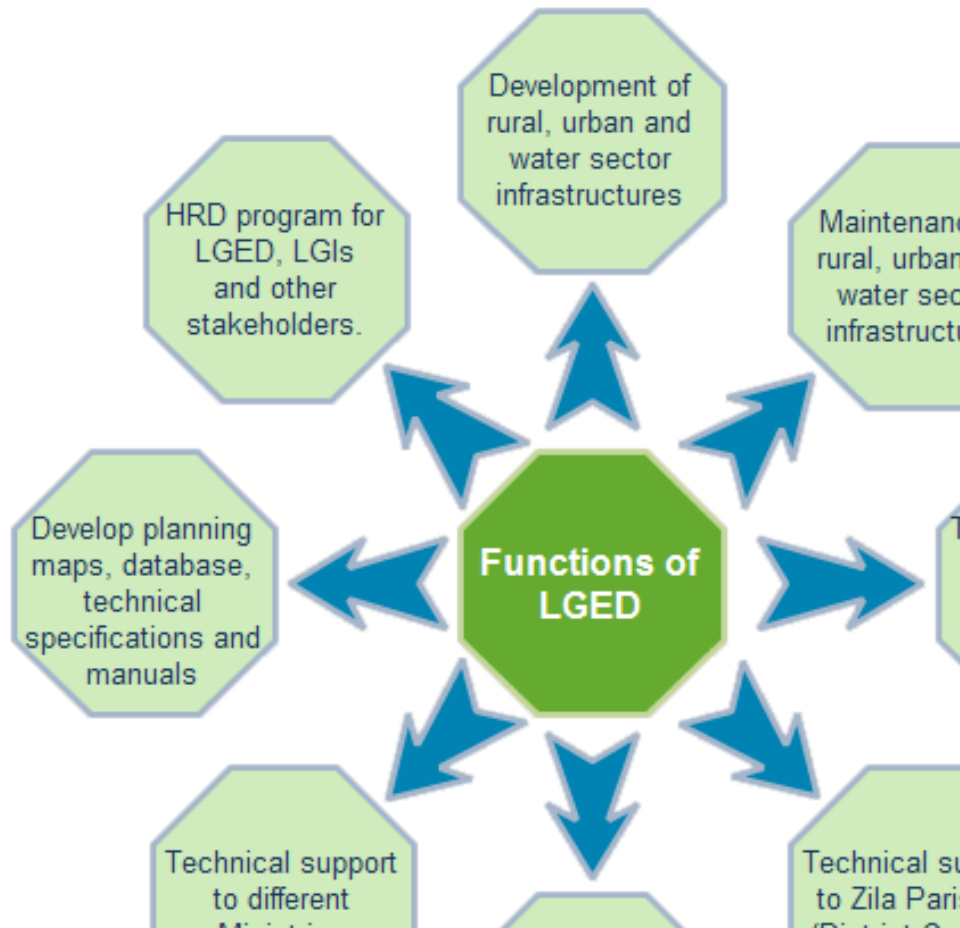
Local Government Engineering Department (LGED) is one of the largest public sector organizations in Bangladesh entrusted for planning and implementation of local level rural urban and small scale water resources infrastructure development programs. LGED works closely with the local stakeholders to ensure people's participation and bottom-up planning in all stages of project implementation cycle. The broad objectives of LGED's development activities are to improve the socio-economic condition of the country through supply of infrastructures at local level and capacity building of the stakeholders. LGED promotes labour-based technology to create employment opportunity at local level and uses local materials in construction and maintenance to optimize the project implementation cost with preserving the desired quality. LGED works in a wide range of diversified programs like construction of roads, bridges/ culverts and markets to social mobilization, empowerment and environmental protection. The organizational background of LGED can be traced back to early sixties when implementation of works program (WP) comprising Rural Works Program (RWP), Thana Irrigation program (TIP) and Thana Technical Development Committee (TTDC) was started. A "Cell" was established in the Local Government Division (LGD) under the Ministry of Local Government, Rural Development and Cooperative (MLGRD&C) in 1970s. To administer WP nationwide, the Works Program Wing (WPW) was created in 1982 under the Development Budget. It was reformed into the Local Government Engineering Bureau (LGEB) under Revenue Budget of the Government in October, 1984. LGEB was upgraded as the Local Government Engineering Department (LGED) in August, 1992.

The organizational evolution of LGED can be illustrated as follows. (sources: LGED official website)



LGED is highly decentralized organization where ninety nine percent of total manpower works at District and Upazila (Sub-District) level. The Chief Engineer is the head of the organization supported by four Additional Chief Engineers with subsequent supporting manpower. The total manpower under permanent payroll is 10287 both at head quarters and field levels.

The detail organogram is described under the section of ‘Organogram of LGED’ The thematic functional areas of LGED can be illustrated as follows.



Mission

Development and management of local infrastructure for increasing farm/non-farm production, generating employment, improving socio-economic condition, promoting local governance, reducing poverty and acting as agent of change at the local level.

Vision

LGED would continue to remain professionally competent, efficient and effective public sector agency for performing the interrelated and complementary functions of:

1. Developing, maintaining and managing transport, trading and small scale water resources infrastructure at the local level by ensuring LGI and community participation and taking care of environmental and social issues.
2. Providing technical and institutional support to strengthen the local government institutions and serving local communities and other stakeholders.

3.2 LGED procurement history and present practice:

LGED is allocated a lion's portion of government development budget every year. LGED's average annual budget is around Tk. 17,000 Crore. LGED deals with every kind of procurement (works, goods and services). Procurements of works are mainly infrastructure based like roads, bridge, building etc. Procurement of goods at LGED covers- purchasing construction equipment, supervision vehicle, quality control & laboratory equipment, utility vehicle (dump truck, hydraulic beam lifter, sewerage vacuum cleaner etc.), utility service equipment (generator, lift, water pump etc.), office equipment (photocopier, computer, air cooler, printer, multimedia projector etc.).

Before enacting Public Procurement Acts (PPR-06), all the procurement contracts were dealt with the 'The Law of Contract' which is very general in nature. Since, any public procurement contract demands simple bureaucratic procedure, high level of competency of the staff, quality tender documents, and standard tender evaluation framework, effective administration of contracts and presence of adequate mechanism for ensuring transparency & accountability, therefore, PPR-06 has distinctly given advantage over the existing Law. In a way to PPA-06, the government of Bangladesh had issued the Public Procurement regulations 2003(PPR-03). Immediately after pronouncing PPR-03, LGED established a separate Procurement Unit at head quarter level on January 2004 in order to early cope up with the changes. Procurement unit provides technical assistance to all Procuring Entities in LGED in order to implement PPA '06 and PPR'08 in public procurement and to implement Electronic Government Procurement (e-GP). Earlier, for national level tendering method form-2908 & form-2911 were used and for international tendering, donor agency guidelines (World Bank, ADB, KFW and JICA) were followed. Being a public organization, presently LGED follows PPR-2008 guidelines and relevant tender documents published by CPTU. For International competitive bidding, sometimes it follows donor agency's procurement guideline and relevant documents. LGED is one of the target organizations of the Public Procurement Reform Projects (PPRP-I & PPRP-II) of the Government of Bangladesh with assistance from World Bank.

The Objectives of PPRP II were: (i) complete remaining policy reforms, (ii) increase institutional capacity, (iii) strengthen procurement capacity at sector and CPTU levels, (iv) develop and implement e-GP and (v) involve stakeholders in public procurement and make procurement entity accountable. Major components were to continue policy reforms and

institutional capacity development; strengthen procurement management at sector and CPTU; introduce e-GP; and communication, behavioral change and social accountability.

Chapter 4: Research Area, Study Findings & Analysis

The study is based on existing public procurement documents, rules and regulations and the survey questionnaire/query designed to investigate the inclusion of current set of public procurement regulations (PPR) in conducting public procurement process of different development projects undertaken by LGED. The Interview has conducted among 31 respondents of LGED officials in different managerial level (Executive Engineers, Upazila Engineers, Sub Assistant Engineers) and Contractors.

It has been found that LGED officials are familiar with PPR/guidelines and also accordingly conducts procurement process while procuring Works. Most of the respondents are well experienced and directly involves in procurement of works, as a result the survey feedback reflects that the respondents are largely associated with procurement practices.

Since the major government budget in the development works being carried out by LGED, it thus accumulates the largest expenditures of public funds and apparently conducts huge procurement process at different PMU levels. The findings show that around 95 % of the total annual budget is being spent in conducting procurement process for procuring Works and Related Services.

4.1 Familiarity of Contract Management System:

As per Chartered Institute of procurement and supply guide Contract Management or Contract lifecycle management is defined as the process of efficient and systematic management and administration of contract creation , execution and analysis for achieving maximum operational and financial performance while minimizing risk. In my findings officers in managerial level are mostly familiar to the Contract Management System while field level staffs are not familiar with this term.

Table- 4.1: Familiarity of Contract Management System

Familiarity	Frequency	Percentage
Yes	8	25.8
No	23	74.2

In above Table 4.1, it shows that 25.8% respondents of this study are familiar to the contract management system.

4.2 Compliance of Contract Management Practice in LGED with the PPR-2008:

In the procurement of works LGED uses different documents (PW2, PW3, PW5) in different cases. All the documents, terms and conditions are the shadow of PPA-2006 (Public Procurement Act-2006) and PPR-2008 (Public Procurement Rules-2008). These documents use some critical terms like Liquidity Damages, Provisional Sum, Performance Security, Tender security, Defect Liability Period, Force Majeure, Variation of Work, Payment Terms, Arbitration which comply to the PPR-2008.

Table 4.2(a) Compliance with Standard Documents

Compliance	Frequency	Percentage
Always	31	100
Mostly	0	0
Sometimes	0	0
Rare	0	0
Never	0	0
Total	31	100

Table 4.2(a) shows all of the respondents use standard documents in procuring works.

CMP is a key management tool throughout the procurement life cycle, ranging from the initial identification of need and subsequent planning phase, right through to the long term management of the contract. CMP however essential to ensure ownership and accountability of both the parties and to build up partnerships and teamwork between owners and contractors to improve better understanding of each other's needs, and understanding their role for managing contract safety. Most of the respondents think that present contract management plan comply with the PPR2008 though some have no idea about it. Following table illustrates the view of respondents-

Table 4.2(b) Use of Contract Management Plan

Compliance	Frequency	Percentage
Always	9	29
Mostly	16	51
Sometimes	0	0
Rare	0	0
Never	0	0
No Idea	6	20
Total	31	100

4.3. Record Keeping System :

An accurate and structured filing system is necessary to keep track of site records, avoid duplication, be able to easily locate records, and store records in an orderly manner. The Procuring Entity shall maintain the procurement files for the period of 5 (five) years. In case of record keeping system, Procuring entity level, both hard copy and soft copy are stored where as in the field level staffs and contractor only store data as hard copy. Project Directors at LGED performs following activities for procurement record keeping:

- Maintains separate set of files and registers for each procurement
- Payment records are kept
- Keep change records and approvals
- Preserve key documents and information related to the particular procurement

Table 4.3 : Record keeping System

System	Frequency	Percentage
Hard Copy	18	58
Soft Copy	0	0
Both	10	32
None	3	10
Total	31	100

Above Table 4.3 shows that 58% of respondents keep their record as hard copy(record books, register books, measuring books).Meanwhile top level offices like Project Director’s office and Executive Engineer’s office store their data both in hard copy and soft copy.

4.4. Commencement Meeting and Work Program:

Commencement meeting is very important before starting any project. Procuring Entity or Project manager will invite every liable person/organization in that meeting. Findings reflects that most of the respondents arrange contract commencement meeting prior starting of a project. In most cases they invite contractor, contractor’s site engineer, project manager and any other LGED staffs assigned by the project manager.

According to PW3, GCC 41.1 it is contractor’s obligation to submit work program to the Project manager on the due date which has been mentioned in the clause, usually within the 15 days after contract signing.

Table 4.4 Work Program Submission

Submission	Frequency	Percentage
Yes	25	80
No	6	20
Total	31	100

Findings illustrates 80% procuring entity and project manager confirmed that contractors submit work program and if the failed to submit it they withhold an amount from next payment.

4.5 Quality Control:

Inspection and testing are the core theme of quality control. Findings illustrates LGED staffs always inspect the site and test the materials prior starting the works. If test result met the design specifications then project manager permit contractor to commence the work. Findings are stated in following table-

Table-4.5: Inspection Interval of Project

Inspection interval	Frequency	Percentage
Always	27	87
Mostly	4	13
Sometimes	0	0
Rare	0	0
Never	0	0
Total	31	100

According to Table-4.6, 87% respondents always supervise the site and they think that frequent supervision can maintain proper quality of the work.

4.6 Time Management:

Successful project completion depends on execution of works within the time limit. Project time extension increases project cost. Most of the LGED officials indicate the causes of delays due to delay of giving the Contractor possession of the site, delays in approving Programme of Works, processing payment on time and in accordance to the schedule, delays in responding to Contractor's claims, approving process, delays due to the suspension of the Works ordered by Project Manager, delays conducting inspections and tests, delays in issuing Completion Certificate, delays in timely giving warning notes to Contractor etc. On the other hand delays held by the contractor due to late commencing of work, insolvency and delays in paying wages to its labour.

Table-4.6: Project Completion within the Date (mentioned in agreement)

Timely	Frequency	Percentage
Always	11	36
Mostly	13	41.5
Sometimes	7	22.5
Rare	0	0
Never	0	0
Total	31	100

In LGED practice, contracts for procuring works are timely completed. Only a few respondents of the study opined that time schedule is not strictly followed. This is because LGED is a technical institution having numbers of procurement professionals and LGED spends major GoB budget in development works as a result of which Procuring Entities at LGED are highly experienced in procurement process. So LGED's PEs are quite good in Time Management.

4.7 Managing Contract Risk :

Structured risk-management is not at all present in public procurement practices in Bangladesh, especially in field level of LGED. In common practice, sufficient performance security is retained from the contractors. Litigation history of the supplier is also considered during evaluation. In global practice, there are more provisions for managing contract risks like

–

- Insurance coverage
- Guarantee from third party
- Indemnity clause put in place
- Robust monitoring of supplier's financial status
- Plan 'B' as an alternate

4.8 Contract Documents:

Contract is a legal agreement, usually between two companies, which involves doing work for a stated sum of money and also enforced by law. According to PPR-2008 the documents forming the Contract shall be interpreted in the following order of priority:

- (a) the signed Contract Agreement
- (b) the Notification of Award
- (c) the completed Tender and the Appendix to the Tender
- (d) the Particular Conditions of Contract

- (e) the General Conditions of Contract
- (f) the Technical Specifications
- (g) the General Specifications
- (h) the Drawings
- (i) the priced BOQ and the Schedules
- (j) any other document listed in the **PCC** forming part of the Contract.

4.9 General Findings:

In LGED, Procurement Practice mostly complies with PPA and PPR. To some extent, compliance is there but commitment for ensuring best value for money is not visible. In brief, the overall study findings are as follows:

- a. Major clauses used in tender document are in accordance with the requirement of PPR and Standard Tender Documents published by CPTU are used.
- b. There is no robust Contract Management Plan in LGED;
- c. Payment schedule is appreciably followed in LGED for suppliers bill payment;
- d. There is no practice of vendor rating, key performance index (KPI) among the contractors in LGED.
- e. No scope for contractor development;
- f. Price adjustment clause is not used in projects which are less 18 months project durations.
- g. Relationship management is poor;
- h. For dispute management, only three options are expressly used. Dispute resolution clauses are sometimes not understandable by the parties, as a result of which contract management process is hampered;

- i. Record keeping is good in LGED's works contract management practice. Web based project management system has been launched in some projects.
- j. Contract risk management system is not up to the mark;

However, the overall findings of the study are satisfactory to the researcher and the trend of contract management practice in LGED is very much positive despite of everything.

Chapter 5: Conclusions & Recommendations

The main objectives of the research queries of this study were to examine whether the existing Contract Management practice ensures utilization of public funds and the extent of its compliance with PPR-2008. Research questions were designed to achieve the general objective to measure the performance of Contract Management practiced in LGED and the specific objectives to identify whether the existing Contract Management practice complies with PPR and to measure achievements of public procurement objectives.

The overall findings of this study can be summarized as –

- a. Procurement Practice mostly complies with PPA and PPR in LGED though commitment for ensuring best value for money is not visible in the overall Contract Management practice. Clauses used in tender document are in accordance with the requirement of PPR and STD by CPTU. Through this study underutilization of works procured is found in LGED projects.
- b. There is no robust CMP in LGED, Time Management is not found satisfactory in some cases and Payment Management is found satisfactory. Contract risk management and relationship management is found poor in this study. Dispute resolution clauses are sometimes not understandable by the parties, as a result of which contract management process is hampered.
- c. Though vendor rating, KPI practice is very important in any organization, LGED doesn't do such kind of practice in its procurement system.

5.1 Conclusions

Usually four key components governs contract management. In this study, the researcher tried to focus on all the four components which are as follows:

1. Contract Risk analysis and management

2. **Financial**– Financial Management, achieving best value for public money; maintaining payment schedule; Contractor's compensation for late payment etc.

3. Contractor and Contract management – Contract Management Plan; Contractor’s Relationship Management etc, use of KPI, vendor rating.

4. Record Keeping and Reporting – Record keeping is an important part of contract management. The formal procurement record is a set of files containing all the critical documents and information pertinent to the procurement contract. Formal procurement record files serve three useful purposes:

a. Provides essential supporting evidence in the event that it becomes necessary to take legal action against the Contractor.

b. The procurement record helps to provide a full audit trail.

c. Information contained in the procurement record can be used to help evaluate a supplier’s past performance and additional opportunities to conduct business with the supplier should be considered.

Study and analysis found in LGED Contract Risks are not properly analyzed, contingency plans are rarely present, robust monitoring of contractor’s financial stability is not done always, Contract Management Plans are not effectively followed, relationship management is fully absent and also proper record keeping is rarely done by the procuring entities, achieving best value for money is not the main focus in case of public procurement and many more.

5.2 Recommendations

Contract Management Practice for the Procurement of Works in public sector like LGED should get momentum as the organization burns huge ADP budget. In every procurement process conducted in LGED, it would be worthwhile in putting all factors of contract management agreement e.g. Contractor’s capacity, outlining contract risks, contingency plan, robust monitoring, risk insurance, maintain procurement logs etc to reduce risk and elimination of “grey areas”. Considering all those challenges, decision makers/procurement entities in LGED must incorporate all key components of contract management to efficiently utilize public resources to ensure best value for money.

There are some recommendations to conform key issues.

5.2.1 Contract Management Risk

Risk analysis and risk management is very important issue and we have to start from need identification to reduce Contract Management Risk. The whole procurement may go in vain, if the need is wrongly expressed. The following points to be given importance –

- a. Analyze need accurately and be familiar with requirement
- b. Define your need / specification in terms of required output
- c. Carry out market analysis and communicate (objectively) with potential suppliers

5.2.2 Effective utilization of public fund

The study found that in around 60% cases the public fund utilized effectively where 91 to 95% of total project budget is spend for procurement of works. Which signifies that in LGED procurement practice, there are some level of efficiency in terms of PPR compliance but the public fund utilized is not 100% effective.

- a. Exact need analysis and accurate estimation of requirement is required prior to preparing procurement plan
- b. Procurement process for procuring goods should be started in accordance with development project's purchase schedule to prioritize best hardware utilization and timely deployment.
- c. Payment term should be comfortable to both supplier and purchaser to avoid contract failure due to financial crisis of supplier.

5.2.3 Suitability of Procurement Rules

Maximum respondent's agreed in favor of suitability of procurement rules, but still there are loopholes due to poor specifications of goods to be procured, lack of technical /procurement knowledge, limitation of specifying contractor selection criteria etc. which creates hurdles in choosing the best product and to ensure the best value for money as well. So far all procuring entities should customize their procurement documents being within the rules for selection of best supplier and best quality goods as well.

5.2.4 Contract Management Plan (CMP)

Contract management plan can add value by outlining contract objectives and outcomes; reporting and communication protocols and purpose; the financial management approach, including supplier health check; the framework for managing variations, changes to program, slippage; contract governance requirements; issue management and process; negotiation strategies to improve on specification outcomes; roles, responsibilities and obligations of the parties and their agents; how the contract performance management and reporting (KPIs) will be managed; how benefits will be tracked and reported; LGED should enforce Contract Management Plan for best utilization of public fund.

Procurement document / contract agreement should clearly define dispute settlement clauses e.g. Selection of arbitrator / adjudicator to avoid complexity of dispute management, if required, as a part of Contract Management.

5.3 Successful Contract Management

Performing this study, it is worthwhile noting that contract management is successful if:

- a. the contractor is co-operative and responsive;
- b. the organization understands its obligations under the contract;
- c. there are no disputes;
- d. the contract outcome continue to be satisfactory to both parties;
- e. the expected business benefits and value for money are being achieved;
- f. Efficiencies and effectiveness are being realized.

There are many scope of research in this field. Similar type of research work could be done for other public organizations in Bangladesh. In addition research work for a comparative study between global practice of works contract management and that practiced in public sector procurement in Bangladesh may be performed.

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**Works Contract Management Practice in the Public Sector in Bangladesh:
a case study of LGED**

Questionnaires

General Information of respondent:

1. Name:
2. Address:
3. Designation and Organization:
4. Age:
5. Gender: Male/Female/Others :
6. Length of service in present position:
7. Years of experience in public procurement:
8. Work as Contract Management level: Procuring Entity/Project Manager/Contractor
9. **Did you get training or familiar with the following concepts? (Please Tick mark)**
 - a. Public procurement of Works..... Yes/No
10. Do You Familiar with Contract Management System.....Yes/No

Please tick (√) your option/options)

(Your choice can be more than one where appropriate)

1. Does existing contract management practice in LGED comply with the PPR-2008
 - a) Always b) Mostly c) Sometimes d) Never
2. What Kind of standard document do you use in procurement of works.
 - a) PW2 b) PW3 c) PW2(b) d) PW5
3. Is there any agreed contract management plan (CMP) that you practice in your contract administration process for the procurement of Works?

- a) Always b) Mostly c) Sometimes d) Never
4. What is the record keeping system that you practice in your contract administration process for the procurement of Works?
- a) Hard Copy b) Soft Copy c) Both
5. Do you maintain Contract Register ?
- a) Always b) Mostly c) Sometimes d) Never
6. Do you arrange Contract Commencement Meeting? – Yes / No
7. If Yes, who are invited at the meeting? (Please tick (√) your option/options)
- Procuring Entity
 - Project Manager and any other LGED staff assigned by Project Manager
 - Contractors site engineer
 - Sub contractor's nominated representative (if any)
 - Representatives from Utility companies (if required)
 - Representatives from emergency entities- hospitals/Fire service (if required)
 - Any others
8. Do you take any compensation events for late commencement works?- Yes/ No
9. Does Contractor submit Programme of works timely? Yes / No
10. If not, what compensation events do you follow? (Please tick (√) your option/options)
- Fine for late submission
 - Withholding an amount form the next payment.
11. In case of managing construction contracts what are the main causes of delays held by LGED staffs? (Please tick (√) your option/options)
- Delays of issuing Drawing/ specifications
 - Delay of possession of site
 - Delays of approving Programme of works
 - Late responding of Contractor's Claims
 - Delay of approving process
- What are the causes of delays held by Contractors?
- Late submission of Work Programme

- b. Late submission of Performance Guarantee
 - c. Delays of commencing work
 - d. Delays due to insolvency
 - e. Delays in paying wages to it's labour
12. Do you record suspension and it's cause in your register? Yes /No
13. What are the major clauses / terms that you incorporate in your tender/contract document to manage on time delivery as per PPR-2008?
- a) Time is the essence of the contract
 - b) Liquidated damage clause
 - c) Termination due to delay
 - d) Force majeure clause
 - e) Time extension provision
 - f) Others (please specify)
14. Do you use Inspection and Testing Plan? Yes / No
15. What is the Inspection interval of projects that you supervise?
- a. Always b. Mostly c. Sometimes d. Never
16. Do you take any remedial works?
- a. Always b. Mostly c. Sometimes d. Never
17. What is/are the major quality assurance activities according to you?
- a. Supervision b. Inspections c. Measurements b. Tests c. All
18. Do you use photographs to control your projects ? Yes / No
19. Do you use following clauses in contract document?
- a. Advance payment
 - b. Price Adjustment
 - c. Interim payments
 - d. Liquidity Damages
 - e. Provisional sums
20. Do you handle any compensation events claimed by the contractor?
- a. Always b. Mostly c. Sometimes d. Never
21. What is/are the main causes for compensation events do you think ? (Please tick (√) your option/options)
- a. LGED does not give contractor access to the site

- b. LGED modified the schedule of others contractors
- c. PE/PM orders delay or does not issue instructions required for execution of works
- d. The PE/PM unreasonably does not approve subcontract to be let
- e. The advance payment is delayed
- f. The effect on contractor of any LGED risks
- g. The occurrence of Force majeure as defined in GCC
- h. Other Contractors, public authorities, utilities or PE cause
- i. PE/PM instruct Contractor to carry out additional test resulting in finding no defects

22. Do you terminate any contract recently ? Yes / No

23. What are the causes of termination ?

- a. LGED or Contractor causes the fundamental breach of contract (GCC sub-clause 36.1 (PW2), Sub-clause 87.1(PW3)
- b. Contractor delaying of works.
- c. Contractor not doing works as per specifications
- d. Late payment by the PE
- e. When Contractor become Bankrupt or insolvent

24. What are the methods that you expressly mention in your contract document for dispute/conflict management?

- a) Negotiation
- b) Adjudication
- c) Arbitration
- d) Litigation
- e) Conciliation
- f) Others (please specify)

25. What method/methods of procurement do you usually follow in your projects for the procurement of Works and related services?

- a) International Competitive Bidding
- b) National Competitive Bidding
- c) RFQ
- d) Direct purchasing
- e) Limited Tendering
- f) Others (please specify).....

26. With the existing rules & system, you can ensure the procurement of best quality works that can bring best benefit to the project.

- a) Always
- b) Mostly
- c) Sometimes
- d) Never

27. What measures do you take to manage contract risks?

- a) Insurance coverage
- b) Guarantee from third party
- c) Sufficient Performance Security
- d) Indemnity clause put in place
- e) Robust monitoring of supplier's financial status

28. Do you think that present contract management practice in LGED is competent enough for achieving procurement objectives? Yes/No

29. What is the importance of contract management in LGED?

.....

30. What Kind of challenges do you face during contract management practice?

.....

What is/are your suggestion(s) for effective contract management for the procurement of Works ? -----

Thanks for your Cooperation