Asian Development Bank		Kingdom of Bhutan

Construction Development Corporation Limited (CDCL)

Phuentsholing Township Development Project

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Contract N°:PTDP-PIC-1

Project Implementation Consultant (PIC)

Inception Report

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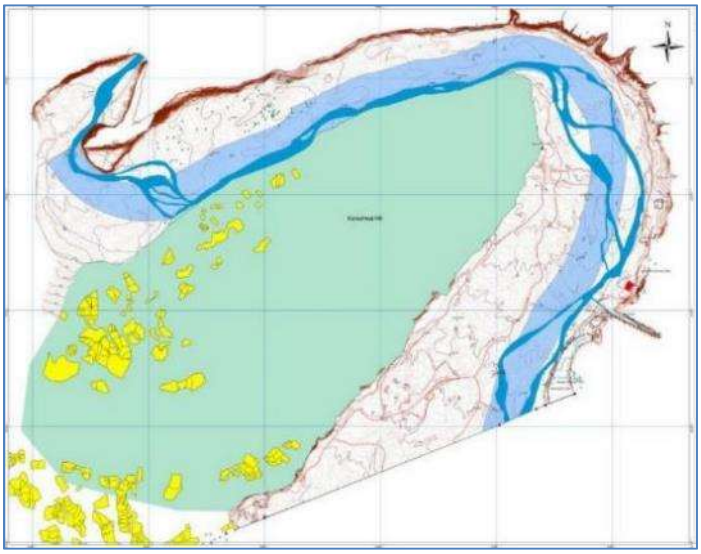

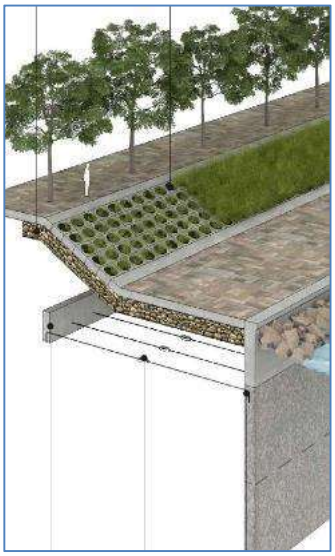

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Abbreviations

ADB – Asian Development Bank
ALDTP – Amochhu Land Development and Township Project
CDCL – Construction Development Corporation Ltd.
CW – Civil Works
DHI – Druk Holdings and Investment Ltd.
EA – Executing Agency
EIA - Environmental Impact Assessment
EMP – Environmental Management Plan
C-EMP- Contractor-Environmental Management Plan
GAP - Gender Action plan
GFC – Good for Construction
GRM Grievance Redress Mechanism
IA – Implementing Agency
ICB – international Competitive Bidding
MIS- Management Information System
MOF – Ministry of Finance
MOM - Management, Operation and Maintenance
MOWHS – Ministry of Works and Human Settlements
NCB – National Competitive Bidding
Nu – Ngultrum
PT – Phuentsholing Thromde (city council)
PIC – Project Implementation Consultant
PIU – Project Implementation Unit
PMU – Project Management Unit
PPMES- Project Performance Management Evaluation System
RGOB – Royal Government of Bhutan
RFQ – Request For Quotation
PTDP – Phuentsholing Township Development Project
PPTA – Project Preparation Technical Assistance
TOR – Terms Of Reference

Contents

Contents IV
List of figures V
List of tables V
A. Objective of the assignment 6
A.1 Project background – Urban pressure and climate change 6
A.1.1 Project understanding 6
A.1.2 Project Impact and Outcome 7
A.2 Implementation arrangement and Consultant assignment 7
B. Consultant activities and tasks adjustment 9
B.1 List of activities 9
B.2 Activities and tasks adjustment 10
B.2.4 Task 4 – Financial Management and Monitoring 12
B.2.5 Task 5 – Commissioning, Operation and Defects Liability 12
B.3 Deliverables 12
B.3.1 Project Administration 12
B.3.2 Communications 13
B.3.3 Contract Management and Construction Supervision 13
B.3.4 Management of Environmental and Social Impacts 13
B.3.5 Financial Management and Monitoring 13
B.3.6 Commissioning and Operation 13
B.3.7 Inception Report 13
C. Organization and Staffing 14
C.1 Project organization 14
C.2 Assignment of tasks and Team composition 15
C.3 Consultant mobilization 16
D. Implementation of Project's activities 17
D.1 Current Site Conditions 17
D.2 Deliverables 23
E. Issues identified during Inception Phase 24
E.1 Implementation arrangement 24
E.2 Civil Works contract 26
E.3 Adaptation or change to design 27
F. Provisional items 30
F.1 General 30
F.2 Provisional sums items 30
F.3 Procurement method/Procedure to be applied 30
G. PPMES and MIS 32
G.1 Project performance management evaluation system (PPMES) 32
G.2 Data transfer system (MIS) 32
H. Preparation of Phase 2 documents 33
I. Summary of report salient points 34

Appendixes 35
Appendix 1 - List of PIC Deliverables 36
Appendix 2 - Tasks assignment and key experts' input 37
Appendix 3 – Project Management Quality Assurance Plan 38
Appendix 4 – Draft Table of Content of Supervision Manual 40
Appendix 5 – Job descriptions Engineering Geologist / Geotechnical engineer and Materials Engineer 41
Appendix 6 – Job descriptions Environmental Specialist and Environmentalist 44
Appendix 7 - Example of a procedure – Integrity Pact 46
Appendix 8 - In & Out Correspondence Register (30 Nov. 2018) 47
Appendix 9 - Template of Monthly Progress Report 48
Appendix 10 - MIS system architecture 51
Appendix 11 – Template Project sign board 52
Appendix 12 – Letter to Proceed (12 Sep.2018) 53
Appendix 13 - Contractor Main Works Schedule (21 Nov.2018) 54
Appendix 14 – Request submission of Works Schedule (26 Nov.2018) 55
Appendix 15 - Contractor Flood Risk Safety Measure Sketch (26 Nov.2018) 56
Appendix 16 - Contractor Staff and Equipment (29 Nov.2018) 57
Appendix 17 - Social and Environment detailed tasks requirement 59
Appendix 18 – Main items of Project Monthly Report 61
Appendix 19 – Job descriptions Quantity Surveyor, Laboratory Technician, Land Surveyor and Site Inspector. 62
Appendix 20 – Design review main issues 66
Appendix 21 - Illustration Zone A extension 67
Appendix 22 – Use of Provisional Items (30 Nov. 2018) 68

List of figures

Figure A.1.1-1: ALDTP site location, adjacent to Indian border and Amo Chhu river 6
Figure A.1.1-2: ALDTP site location, development zones layout 7
Figure A.2-1: ALDTP (Phase 1) Implementation Arrangements 8
Figure C.2-1: Key staff and Non-Key staff schedule until December 2020 15
Figure D.1-1: Current site conditions – 8 November 2018 17
Figure D.1-2: Contractor's mobilization – 30 November 2018 21
Figure E.1-1: Standard Supervision Structure Organization. 24
Figure E.1-2: Proposed Office Layout Plan. 25
Figure E.2-1: Proposal of location of Contractor camp. 26
Figure E.2-2: River training cross-section. 26
Figure E.2-3: Traffic through camp site and external vehicles parked 27

List of tables

Table A.1.1-1: Project four development zones 7
Table B.1-1: PIC list of activities 9
Table C.1.1-2 presents the Summary of Consulting Firm Association key strengths 14
Table C.1-2: Summary of Consulting Firm Association key strengths 14
Table C.3-1: Consultant Personnel Mobilisation Scheduled in 2018) 16
Table D.1-1: Quality Control of the Works 18
Table E.3-1: PIC Outfall slope design review 28
Table F.2-1: Scope of provisional sums in PIC Contract 30

A. Objective of the assignment

A.1 Project background – Urban pressure and climate change

The purpose of this project is to contribute to the development, delivery and implementation of the Amochhu Land Development and Township Project (ALDTP) (the "Project") and outlining of infrastructure development works and climate change measures to be undertaken in order to facilitate the successful sustainable future for Bhutan.

As enlightened in the Program Implementation Consultant (PIC) Contract Terms of Reference (TOR), The PIC will be responsible for assisting Construction Development Corporation Limited (CDCL), a subsidiary company of Druk Holdings and Investment Ltd. (DHI) which is a Royal Government of Bhutan owned company, with implementing the "Project".

Extract of TOR:

"The proposed ALDTP will develop 464 hectares (ha) of riparian land near Phuentsholing Thromde (Municipality) located along both sides the Amochhu River on Bhutan"s south-western border with India. The project will provide protection from floods and erosion, and construct smart urban infrastructure to allow phased urban expansion…. The project will also protect the existing and new town from floods and riverbank erosion which currently threatens lives and livelihoods and disrupts connectivity with nearby communities".

A.1.1 Project understanding

The town of Phuentsholing is the second largest city in Buthan and is considered one of the most important commercial and industrial hub in the whole region. As it is opposite to one of much larger Indian market town of Jaigaon, the city is located in a strategic position on the main Indo-Bhutan trading corridors that have been developed under the framework of the South Asia Sub-Regional Economic Cooperation. Due to increasing population, the city is facing a serious shortage of land for development and expansion.

Phuentsholing is located at 200m above sea level surrounded by the Himalaya foothills. The urban center slopes gently (1-4% slope) towards the Om Chhu and Amo Chhu. The annual precipitation is in the range 5000-6000 mm, dominated predominantly by the monsoon, heavy rainfall during July, August, and September.

Today, the high monsoon flows from the Ammo chu River are eroding the land along the river banks and exposing the town to the danger of flooding. Protecting the river banks reduces the risk of erosion and makes land reclamation and opportunity to expand the city.

To cope with the drainage problem, a Drainage Master Plan was prepared under the assistance of United Nations Center for Human Settlements in 1986 and a number of drainage constructions were developed in Phuentsholing under the ADB funded loan project.

The proposed ALDTP project is expected to plan and develop 464 hectares (ha) of riparian land, near the existing town, located along both sides the Amochhu River on Bhutan's south-western border with India.

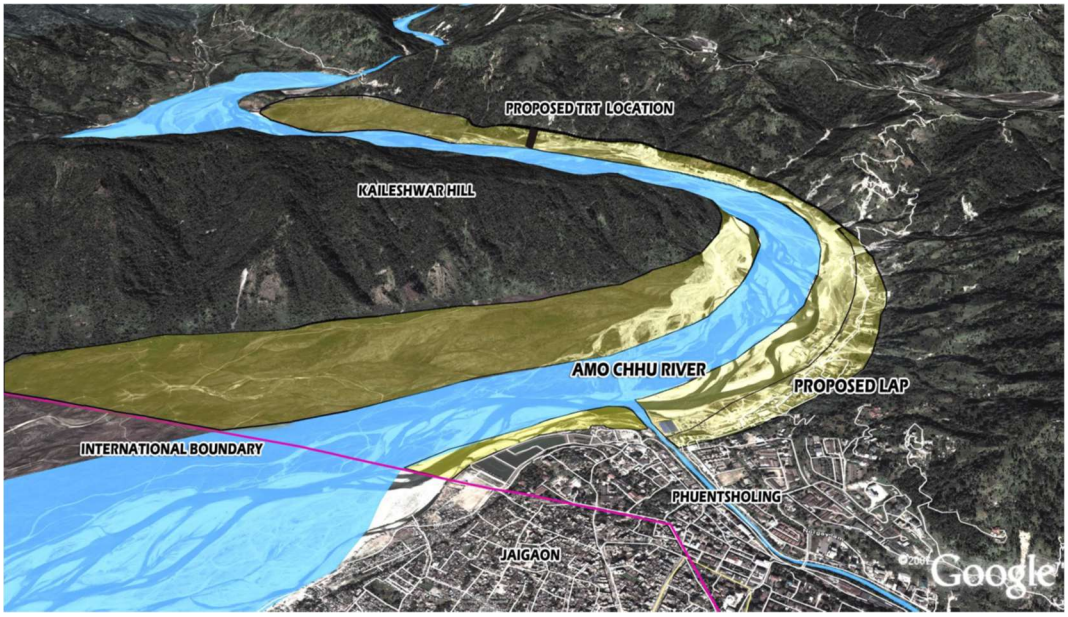


Figure A.1.1-1: ALDTP site location, adjacent to Indian border and Amo Chhu river

The ALDTP works breakdown include the implementation of 5 zones represented as follow. Phase 1 is financed with support of the Asian Development Bank (ADB).

Table A.1.1-1: Project four development zones

Zones	Area (ha)	Riverbank Protection Length (m)	PIC Phase
A	**66 ha**	**3,974**	**PIC Phase 1 - Current Contract**
B	94 ha	3,046	Other Phases
C	277 ha	4,872	
D	Kaileshwar Hill – not included in the project for development		
E	27 ha	3,083	Other Phases

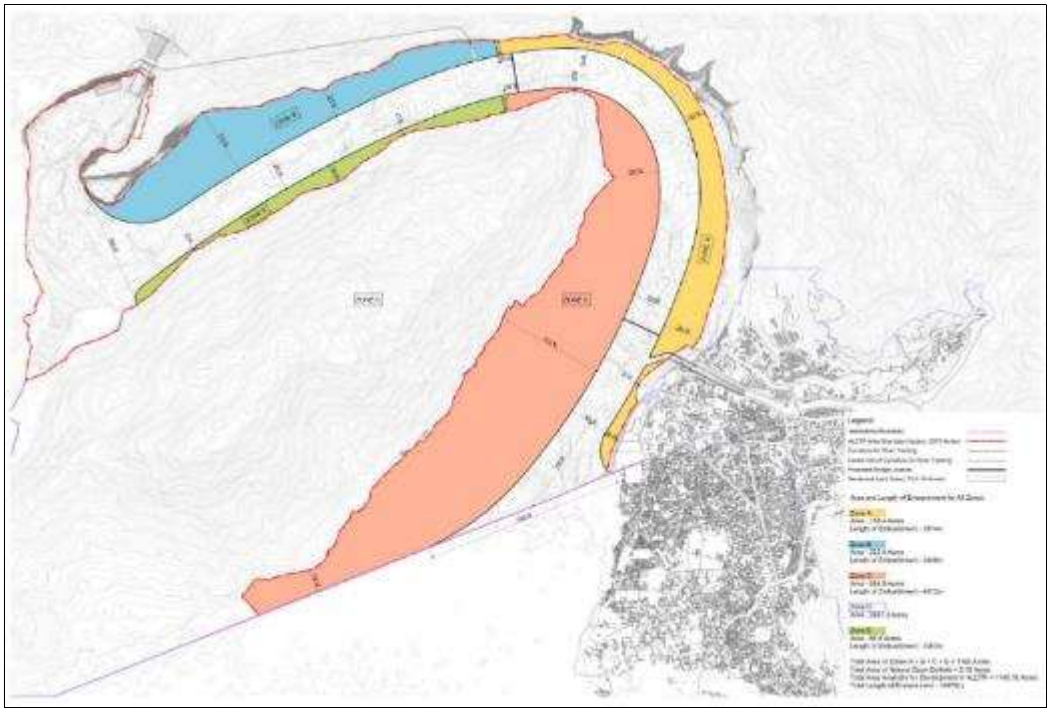


Figure A.1.1-2: ALDTP site location, development zones layout

A.1.2 Project Impact and Outcome

The impact of the project will be to address the increasing demand of housing in this specific area (support habitation for up to 50,000 people with the complete ALDTP development) with the creation of a new urban model of sustainable development in Bhutan based on economically vibrant, environmental resilient and social inclusive

Specific objectives of this project are:

- To provide protection from floods and erosion corresponding to a threat for Phuentsholing city,
- To avoid encroaching on irrigated agricultural land and unstable steep terrain,
- To be integrated into the fabric of the existing municipality and preserve Bhutan's unique architectural heritage,
- To reduce rural poverty through improved access to markets and economic centers, social, health, and education infrastructure for its inhabitants,
- To diversify the economy from reliance on hydropower,
- To improve energy performance
- To reduce the impacts on climate change for water resources
- To reduce carbon emission
- To create new employment opportunities,
- To generate income

A.2 Implementation arrangement and Consultant assignment

Within the ADB Project agreements, the Consultant understands that the Executing Agency (EA) of the project will be Druk Holding and Investments Limited (DHI), a government owned enterprise. The

implementing agency is be the Construction Development Corporation Limited (CDCL), a subsidiary of DHI specializing in urban and infrastructure development.

CDCL has established a Project Management Unit (PMU) at Thimphu and a project implementation unit (PIU) in Phuentsholing for the sole purpose of implementing the Project. The PIU is headed by a Project Manager and is appropriately staffed. The PIC reports to the Project Manager and support PIU.

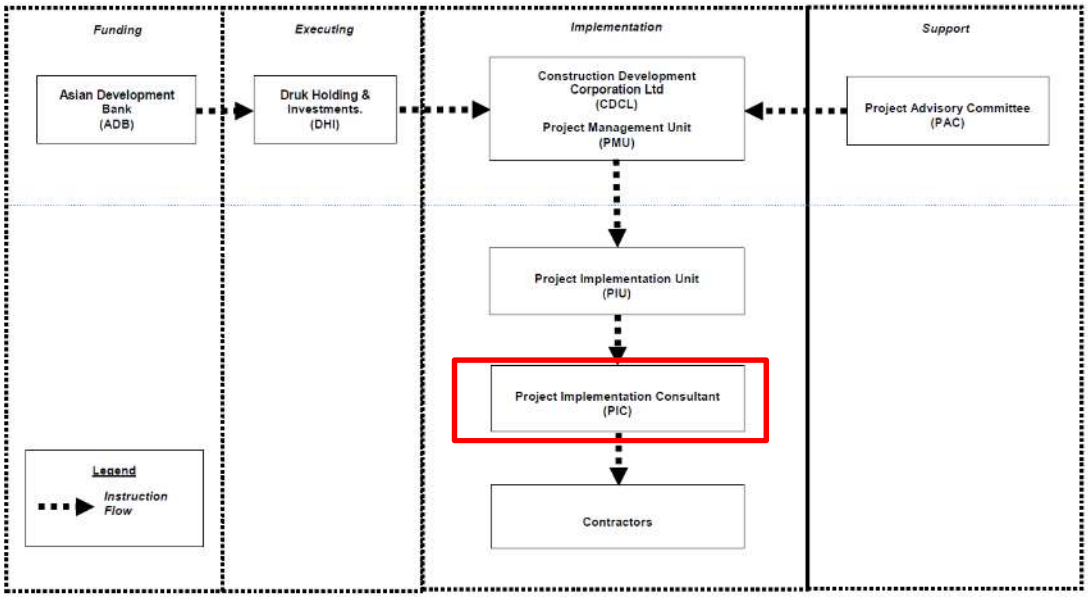


Figure A.2-1: ALDTP (Phase 1) Implementation Arrangements

The Consultant reports to the Project Manager of the PIU. It is anticipated that the CDCL and its PMU and PIU units provide necessary information, reports, practical assistance and guidance to facilitate the execution of the services. The Consultant bases his approach on working in close coordination with the PIU through the counterpart staff assigned for the purposes, in order to ensure liaison with the Government officials and facilitating the consulting services to be delivered.

A.2.1 Understanding of the objectives of the assignment

The key- objectives and responsibilities of the PIC contract are summarized as follow:

(i) review and confirm designs and finalize bid documents of remaining contract packages to be awarded under Phase 1;
(ii) procure, mobilize, manage and supervise all contracts and act as the “Engineer” for Phase 1;
(iii) prepare detailed terms of reference, and assist PIU to recruit, mobilize, and manage studies and surveys under provisional sum items,
(iv) prepare ADB financing and other necessary documents for Phase 2 investments;
(v) provide technical and management advice, as required;
(vi) manage and administer the project financing;
(vii) prepare routine reporting requirements of ADB;
(viii) knowledge transfer to the PIU, township management, and Phuentsholing Thromde

The PIC also assists PIU with preparations, logistics and reporting for missions fielded by ADB, as necessary.

While the PIC services are financed from Phase 1, it also supports all necessary activities for finalizing activities for ALDTP Phase 2 during the contract period.

B. Consultant activities and tasks adjustment

B.1 List of activities

The list of activities detailed in the Consultant proposal was structured to follow the Terms of Reference, "Section 7 – Terms of References" of the bidding documents, and was organized under the heads of the broad tasks of the assignment, and the sub tasks was arranged as groups of functional categories. The tasks to be carried out under each functional category, elaborated in the Work Plan, and which will be followed carried by PIC, are as follows.

Table B.1-1: PIC list of activities

	Activity	Tasks	Deliverables
Task 1 – Project Management	1-1 - Project Administration	a. Project Inception and Meetings b. Development and implementation of Project performance management evaluation system (PPMES) c. Preparation of Quality Assurance Plan (QAP) d. Review Contractor Programme, Critical Path / Gantt Diagram e. Preparation of Risk Management Plan (RMP) f. Establishing a Data transfer system (MIS) g. Preparation of Phase 2 project and loan documents h. Procurement documents, bid evaluation and contract negotiations i. Preparing a Project Completion Report (PCR)	D1.1 to D1.13 as described under Table 4 of the TOR
	1.2 Communications	a. Public relation plan b. Disseminating information c. Organising public relation events d. Developing and Maintaining project website e. Preparing photographic and video diary of the construction works	D1.14 to D1.17 as described under Table 4 of the TOR
Task 2 – Contract Management and Construction Supervision	2.1 - Contract Management	a. Review and Approve Contractor's Program, Equipment and Insurance b. Approve Completed Works c. Advise on Legal and Contractual Problem d. Evaluation of Contractors' Claims and/or deviations from the Contracts e. Assist in Settlement of Contractors' Claims	D2.1 to D2.12 as described under Table 4 of the TOR
	2.2 – Construction supervision – Quantity Control	a. Measure and Certify Quantities b. Adjust Quantities and Update Budget c. Advise PIU on estimated cost to completion d. Cost control	
	2-3 – Construction supervision – Quality Control	a. Inspect the Works b. Test Materials c. Control Workmanship d. Supervise Safety Aspects e. Advise on Technical Problems f. Check Preparation of As-Built Drawings	
Task 3	Management of Environmental and Social Impacts	a. Management of Environmental Impacts b. Management of Social Impacts	D3.1 to D3.2
Task 4	Financial Management and Monitoring	a. Establishing and maintain appropriate fiscal management and monitoring. b. Assisting PMU during the financial Accounting and control systems c. Helping PMU in preparation of annual budget and smooth fund flows from ADB and the government	D4.1 as described under Table 4 of the TOR
Task 5	Commissioning, Operation and Defects Liability	a. Assistance during defects / Damages rectification / repair works b. Preparation of detailed management, operation and maintenance (MOM) procedures	D5.1 to D5.2

B.2 Activities and tasks adjustment

B.2.1 . Task 1 – Project Management

After review of PIC tasks, Consultant confirms that the Consultant's approach, methodology and work elaborated at the stage of the bid preparation, to answer the Terms of References, can be followed, however with some adjustments needed.

The tasks have been reviewed, one by one, and are listed here after, and when adaptation is proposed, a short comment is added.

Activity 1-1 – Project Administration

a) Project Inception and Meetings

No change compared to Consultancy Contract.

b) Project performance management evaluation system (PPMES)

No change compared to Consultancy Contract.

c) Preparation of Quality Assurance Plan (QAP)

After detailing of usual contents of Quality Assurance Plan and of Construction Supervision Manual, it appears that both documents share a majority of documents and procedures, see **Appendix 3** and **Appendix 4**. Since the Construction Supervision manual shall be produce first, to guide Consultant for works supervision, which already started, it is proposed to remove the production of the Quality Assurance Plan, and to includes the missing procedures from the QAP within the Construction Supervision Manual.

d) Review Contractor Programme

No change compared to Consultancy Contract. However, since Contractors works do not overlap. Contractors programmes are reviewed, one after the other, and dealt with in Task 2 "Contract Management and Construction Supervision", see activity "Review and Approve Contractor's Program, Equipment and Insurance".

e) Preparation of a Risk Management Plan

The content of the Risk Management Plan has to be discussed with PIU. As it could concern risks on Project site during implementation, but as well global risks on the Project itself (financing, procurement, schedule…). Usually this last category of risks is debated during then Project preparation phase, and could be included in the PPTA report.

f) Establishing a Data transfer system (MIS)

No change compared to Consultancy Contract.

g) Preparation of Phase 2 project and loan documents

No change compared to Consultancy Contract.

h) Procurement documents, bid evaluation and contract negotiations

No change compared to Consultancy Contract at this stage. But should the extension of Zone A had to be reviewed, and withdrawal of Zone C considered, impact on whole procurement schedule will be significant.

i) Preparation of project completion report (PCR)

No change compared to Consultancy Contract.

Activity 1-2 – Communications

a) Public relation plan

No change compared to Consultancy Contract.

b) Disseminating information

No change compared to Consultancy Contract.

c) Organizing public relations events

No change compared to Consultancy Contract.

d) Developing and Maintaining Project Website

No change compared to Consultancy Contract.

e) Preparing photographic and video diary of the construction works

No change compared to Consultancy Contract.

B.2.2 Task 2 – Contract Management and Construction Supervision

a) Review and Approve Contractor's Program, Equipment and Insurance

No change compared to Consultancy Contract.

b) Approve Completed Works

No change compared to Consultancy Contract t.

c) Advise on Legal and Contractual Problem

No change compared to Consultancy Contract.

Activity 2.2 - Supervision activities – Quantity Control

a) Measure and Certify Quantities

No need for change of Consultant's methodology compared to Consultancy Contract, but adequate staffing is deeply needed in order to perform services properly (see D1.2).

b) Adjust Quantities and Update Budget

No change compared to Consultancy Contract.

c) Advise PIU on estimated cost to completion

No change compared to Consultancy Contract.

Activity 2.3 - Supervision activities - Quality Control

a) Inspect the Works

No change compared to Consultancy Contract, but need of additional staffing (see D1.2).

b) Setting up benchmarks

No change compared to Consultancy Contract. But same remark as previous Activity but in addition, dedicated equipment to be provided (see D1.2).

c) Test Materials

The job descriptions in the TOR for 3 positions involved in material quality control, Engineering Geologist, Geotechnical Engineer, Material Engineer are ambiguous:

- The Geotechnical Engineer (Key Local) duties are mostly those of a Material Engineer;
- The Material/Engineering Geologist (Key – International) duties are those of an Engineering Geologist, but for pre-construction period;
- The Geotechnical Engineer (Non Key – International), are mostly those of a Geotechnical Engineer nut nevertheless with some duties of Material/Engineering Geologist.

It is proposed to clarify the functions and responsibilities of these 3 Experts. In **Appendix 5** is attached proposed new job descriptions of:

- The Engineering Geologist (Key – International*), ex Material/Engineering Geologist*
- The Geotechnical Engineer (Non Key – International), *No name change*
- The Material Engineer (Key Local), *ex Geotechnical Engineer.*

As a result of this clarification:

- The Engineering Geologist would be just needed in case of change or adaption of the foundation design in some location.
- The Material Engineer, as permanent Expert for supervision, must be mobilised since the start of the Contractor Activities.
- The Geotechnical Engineer, as per required, and in some simple cases, could be a substitute to the Engineering Geologist.
- The time allowed to the Engineering Geologist is too high. It is anticipated that at least 12 man-months could be spared on this position.

d) Control Workmanship

No change compared to Consultancy Contract but need of additional staffing (see D1.2).

e) Supervise Safety Aspects

No change compared to Consultancy Contract but need of additional staffing (see D1.2).

f) Advise on Technical Problems

No change compared to Consultancy Contract.

g) Check Preparation of As-Built Drawings

No change compared to Consultancy Contract but need of additional staffing.

B.2.3 Task 3 – Management of Environmental and Social Impacts

Management of environmental impacts

No change compared to Consultancy Contract TOR.

However, in order to monitor properly C-EMP and HSE on regular basis (monthly).

The Environmental Specialist time allowance, on field, is 5.5 months. Removing the 1.5 months needed at the Inception Stage (review of the EIA, SIA and EMP review of C-EMP, prepare format of reports…), it will remain 4 months input to be split on about 55 months duration of services. Hence an average of 3 days a month, which would be just the time needed for mobilization.

But, beside daily Environmental and HSE control done by Site Inspectors, a professional monitoring must be regularly provided on monthly basis. Notwithstanding some others monitoring activities beside the civil works supervision, like the base study of the flora and fauna ecosystem in Zone C, which need regular presence.

Therefore, it is recommended that a additional position as Environmentalist. This position could be attributed to a National Non-Key Expert. **Appendix 6** presents tentative Job Description for Environmental Specialist (Key Expert International) and for Environmentalist (Non-Key Expert National). The time needed for this last position would be 10 to 12 months, for regular intermittent input, one week per month.

Management of social impacts

No change compared to Consultancy Contract.

Grievance Redress Mechanism (GRM)

No change compared to Consultancy Contract.

Gender consultation and participation – Gender Action plan (GAP)

No change compared to Consultancy Contract

B.2.4 Task 4 – Financial Management and Monitoring

Establishing and maintain appropriate fiscal management and monitoring

No change compared to Consultancy Contract.

Assisting PMU during the financial Accounting and control systems

No change compared to Consultancy Contract.

Assisting PMU in preparation of annual budget and management of fund flows

No change compared to Consultancy Contract.

B.2.5 Task 5 – Commissioning, Operation and Defects Liability

Assistance during defects / Damages rectification / repair works

No change compared to Consultancy Contract

Management, operation and maintenance (MOM) procedures

No change compared to Consultancy Contract

B.3 Deliverables

The list of PIC deliverables is presented in **Appendix 1.** The TOR list raised to following comments:

B.3.1 Project Administration

- D-1.3 Monitoring and evaluation manual (MEM).

Content of these reports have not been discussed with PIU. Consultant resources and schedule to produce these reports are still to be evaluated.

- D-1.3 Risk Management Plan.

See comments in Chapter B.2.1 (Activity 1.1) before. Still to be discussed at which level risks are to be considered, and which Authority could act to manage. The Project Risk Management Plan is usually prepared based on guidance given in documents prepared before the Loan Agreement.

- D1.3 Quality Assurance Plan (QAP).

As discussed in Chapter B.2.1 (Activity 1.1) above, it is proposed to merge QAP and Construction Supervision Manual. Then to produce a comprehensive Construction Supervision Manual which integrates the QAP procedures.

- D1.5 PPMES system.

Content of PPMES system is still to discussed between ADB and PIU. Consultant resources and schedule to produce the system are still to be evaluated

B.3.2 Communications

All communication process is control by CDCL. CDCL has already format for all communication supports (including Website and Media publication template).
PIC will assist as required PIU.

B.3.3 Contract Management and Construction Supervision

- D.2.1 Construction Supervision Manual.

Commented here before (see Chapter B.3.1) with Quality Assurance Plan.

- D.2.3 Shift report.

Usually shift reports are those produced at the Contractor level. More-over, PIC is not structured to provide services by shift. When works occur outside normal hours (Sunday, night), Construction Supervision staff will control and include report in Construction Supervision Daily Reports. Daily Report format is included in Construction Supervision Manual

- D.2.3 Weekly report.

Will be produced as part as output of the quality control system for Construction Supervision (see Construction Supervision Manual).

- D.2.4 Monthly Progress Report.

Will be produced as part as output of the quality control system for Construction Supervision (see Construction Supervision Manual, a template of the Monthly Progress Report is presented in **Appendix 9**).

B.3.4 Management of Environmental and Social Impacts

No comments to TOR and Consultancy Contract

B.3.5 Financial Management and Monitoring

No comments to TOR and Consultancy Contract.

B.3.6 Commissioning and Operation

No comments to TOR and Consultancy Contract

B.3.7 Inception Report

Present Inception Report is first deliverable of PIC. It aims to:

(i) confirm, elaborate on, and adjust as necessary the Consultant's approach, methodology and work plan based on information received during the inception phase;

(ii) provide a detailed plan of the Consultant's activities and confirmation and adjustment to the tasks of each expert with further elaboration as required;

(iii) provide a detailed implementation plan for the Project's activities;

(iv) discuss any issues identified during the inception phase;

(v) outline the planned implementation of the provisional items with scopes and costs;

(vi) the contents of the PPMES and the MIS; and

(vii) phase 2 loan documents.

C. Organization and Staffing

C.1 Project organization

C.1.1 Consultant organization

Consulting Firm Association

The Consultant legal entity is a Joint Venture of **Egis International** (France) with **Egis India** (India) in association with **Gyaltshen Consultancy** (Bhutan) as a subconsultant.

The below table shows the strengths of the association, that offers the dual advantage of French expertise and experience in integrated development in over 100 countries coupled with two decades of knowledge and understanding of the Indian and Bhutanese markets. All three firms have previous experience in Bhutan.

Table C.1.1-2 presents the Summary of Consulting Firm Association key strengths.

Table C.1-2: Summary of Consulting Firm Association key strengths

	Egis International	Egis India	Gyaltshen Consultancy
Number of years' experience	68 years	23 years (presence of Egis in India)	22 years
Number of staff	13,800 staff	1,200 staff	15 permanent staff and 20 technical contract staff

Egis International is the leader of the association and as such, shall consequently be responsible for contractual relationships with the Client for the performance of the Services.

Home Office Support and Communications

The Consultant's Team is supported and regularly coordinated through its Headquarter (HQ) based in Paris and its Regional Office based in Bangkok, which provides operational coordination and logistical support on a regular basis and backstopping capability on any issues that would require corporate support.

Project Management

To ensure the successful management of the consultancy services, the Consultant provides experienced team of experts supported by the Head Office. A Project Director, based in Egis regional office, full-time staff of Egis, is appointed for the management of this Project, he is responsible of:

- Keeping a close dialogue relationship with the Client and participating in discussions, as and when required
- Evaluating the progress of the Project, anticipating its evolution and proposing the necessary adjustments
- Taking an active part in the implementation of the Quality Plan of the Project
- Dealing with all contractual, administrative and financial issues, including invoicing and financial control related to the Consultancy Contract.

The Team Leader is the contact person for communications in Bhutan and with the Client. The main roles as Team Leader are:

- Having overall responsibility for the timely delivery and quality of all outputs, in formats that are acceptable to PIU and ADB;
- Managing the relationships with the PIU, ADB, and all other stakeholders;
- Setting-up an effective organizational structure for the PIC. Preparing and implementing all administrative systems and procedures needed to ensure the effective contract management and construction supervision of the contract works in accordance with the scope of works with acceptable international standards;
- Being responsible for overall direction of the PIC team, coordination of inputs, and management of individual specialists;
- Acting as Engineer's Representative for Civil Works contracts ruled by FIDIC General Conditions of Contract.

C.1.2 Liaison with Project Stakeholders

The Consultant is aware of the importance of a transparent, consistent and regular liaison with interested Local Authorities and Stakeholders. In this respect, the Team Leader and authorized core team members will establish and maintain, under PIU supervision, regular communications with ADB, CDCL PIU and PMU and other possibly interested Local Authorities. Under PIU control, a communication channel will be set-up during the initial stages of the Project, in order that stakeholders be included in the decision making process, through regular meetings and consultations.

C.2 Assignment of tasks and Team composition

In order to fulfil the services, PIC has assignment every task listed in the work plan to Consultant personnel (either key expert, or non key-experts), see **Appendix 2**. This tasks assignment to personnel has not been reconsidered during the inception stage of services. But should the PIC team be strengthened with additional Experts, the Task assignment has to be reassessed.

C.2.1 Selection of Key Staff for the Project

The Consultant has set-up a multi-disciplinary team based on the indicative team composition and person-month inputs indicated in TOR.
The task assignment to each Consultant's team member complies with the detailed TOR for each position, and is presented in **Appendix 2**.
It was estimated that the services will require a total of 229 person-months (CDCL counterpart staff excluded):

- 113.5 person-months of International Key Experts
- 22.5 person-months of International Non Key Experts
- 93.0 person-months of National Key Experts

Figure C.2.2-1 here-after presents the staffing schedule proposed by the Consultant with the estimated inputs required to provide services for the next two years.

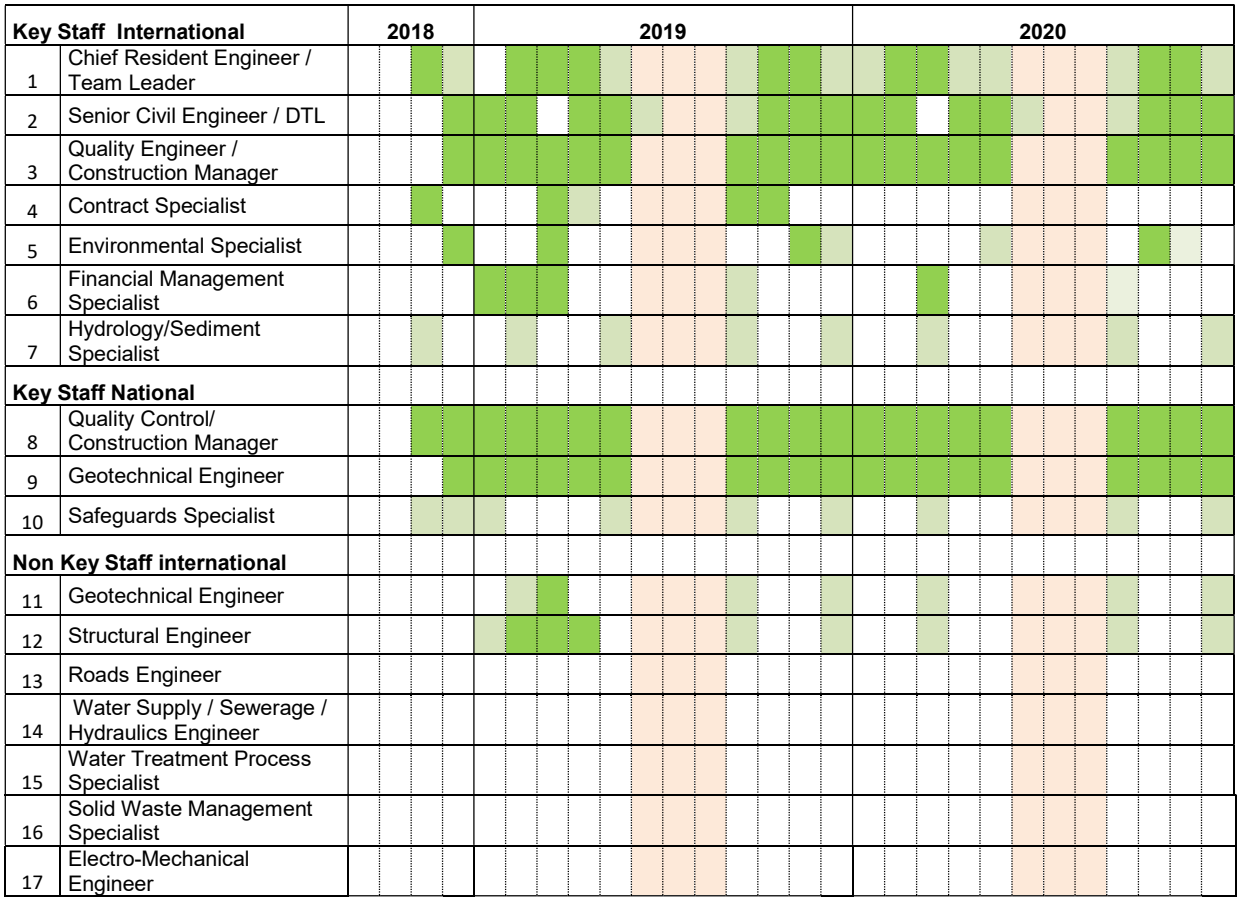


Figure C.2-1: Key staff and Non-Key staff schedule until December 2020

On the overall duration of services (60 months), an average of 4 Key staffs will be permanently present on site.
All Key staff presence is equally split along the duration of services, and their tasks are mostly dedicated to Phase 1 of Project. The Non Key staff are scheduled to be mobilized punctually, only for short period of time, mainly as per Phase 2 needs, but it could be as well during Phase 1if any brief expertise is required.

C.2.2 Technical Office and Support Staff

The PIC provides administrative and support staff to meet the needs of the Phuentsholing field office. According to the TOR, the Consultant provided:

- 1 office manager
- 1 accountant
- 1 assistant office manager / secretary
- 3 computer operators / CAD / MIS / GIS
- 2 office assistant / messengers / guards
- 2 drivers

This represents a total of 600 person-months, therefore a permanent 10 people staff, of whom 8 in the office working place.

C.3 Consultant mobilization

PIC mobilized his first Key Staff (Team Leader and Construction Manager), in parallel with mobilization of part of the Support staff on 29 October 2018. The mobilization schedule of Experts for this end of year is shown in Table C.3-1 hereafter.

Table C.3-1: Consultant Personnel Mobilisation Scheduled in 2018)

Position	Name	Date of mobilization (Bhutan)	
Key Expert			
1. Chief Resident Engineer / Team Leader	Robert **Jeancenelle**	29 October 2018	
2. Senior Civil Engineer / Deputy Team Leader	Edwin **Anggrijatno**	*No yet authorized by Labor Department*	
3. Material Engineer/ Engineering Geologist	Vishwas Raghunath **Rao**	*End November 2018*	
4. Contract Specialist	Lucila **Perlada**	6 November 2018	30 November 2018
5. Environmental Specialist	Surjit Singh **Deepak**	*Mid November 2018*	
6. Financial Management Specialist	Virgilio **Dizon**		
7.Hydrology/Sediment Specialist	John **Field**		
8. Quality Control / Construction Manager[1]	Sonam **Tobgay**	29 October 2018	
9. Geotechnical Engineer	Prithutal **Sharma**		
10.Safeguards and Communications Specialist	Megay **Penjore**	1st November 2018	10 November
Non Key Experts			
11. Geotechnical Engineer	Bosco **Purnomo**		
12. Structural Engineer	Dion **Celso**		
13. Roads Engineer	Nirupam **Singh**		
14. Water Supply / Sewerage / Hydraulics Engineer	Jean-Louis **Carron**		
15. Water Treatment Process Specialist	Jacques **Letessier**		
16. Solid Waste Management Specialist	Christopher **Round**		
17. Electro-Mechanical Engineer	Dominique **Chod**		

The application for a work permit of the Deputy Team Leader, the second permanent PIC expatriate staff, together with the Team Leader, was rejected two times by the Bhutanese Labor Department. Should this difficulty not be solved urgently, the organisation of the PIC, hence its ability to deliver services will be seriously at stake.

[1] Temporary replacement awaiting the mobilization of the Initial Personnel mentioned as Construction Manager, Mr. Tenzin Jamtsho expected to join the PTDP project around mid-June 2019.

D. Implementation of Project's activities

D.1 Current Site Conditions

The pictures in Figure here after shows present site conditions on early November 2018, and before civil works are initiated.

Figure D.1-1: Current site conditions – 8 November 2018

D.1.1 Task 1 – Project Management

Activity 1-1 – Project Administration

a) Project Inception and Meetings

PIC mobilized on 29 October 2018. An Inception meeting was held in PMU at Timphu Office on 2nd November 2018. The Ground Breaking Ceremony, chaired by DHI Chairman, was organized on site on the 5th November 2018.

On 6 November 2018, PIU director introduced in Phuentsholing PIU office, to the CW-01 Contractor's Representatives, the Egis team, and the Engineer's Representative.

From 12 to 20 November 2018, ADB conducted the Inception Mission. PIC attended tripartite meeting (DHI, CDCL, ADB, PIC) on 13 November 2018 in DHI office (Timphu), then Site Visit, where CW-01 Conractor joined, and subsequent meeting on 17 November 2018, in Phuentsholing.

On 26 November 2018, PIU director introduced to Phuentsholing Thromde in thromde office, the PIU team, the CW-01 Contractor's Representatives and the PIC team.

Since 19 November 2018, regular weekly meeting is held with PIU.

Due to lack of personnel, PIC still cannot hold regular meetings with Contractor.

b) Project performance management evaluation system (PPMES)

No activity

c) Preparation of Quality Assurance Plan (QAP) / Construction Supervision Manual

Egis quality management system, is prepared and tailored for every project on the basis of the standard model of Egis International during the initial phase of the Project. It defines the procedures to be followed by the project team to fit the requirements of the quality strategy of the Consultant. The PIC Quality System is conducted in parallel with the Contractors own Quality Control system. The overall quality control of the works is structured as follows:

Table D.1-1: Quality Control of the Works

Control	Responsible	Methodology
Interior	Contractor	Conducted by the Contractor according to its Quality Management Plan (QMP)
Exterior	Consultant	Conducted on behalf of the Employer by the Consultant's supervision team and other organisations to be hired by the Client as described in the Work Plan

The backbone of the Quality Assurance Plan is the Construction Supervision Manual which detail the organisation of the Quality Control of the works. A template of a Construction Supervision Manual to be elaborated for the Project, has been prepared, see in **Appendix 4**.

Among the procedures, some of which documents are already needed, have been initiated, see:

- Example of Construction Supervision document (Integrity Pact) is presented in **Appendix 7**.
- Incoming and outgoing correspondences register in **Appendix 8.**
- Template of Monthly Progress record in **Appendix 9.**

The Construction Supervision Manual described not only the process to be followed for Quality Control, but also for Quantity Control, since some civil works contracts are "ad-measurement" contracts, such is the case of CW-01, where Contractor is paid based on paid items for works actually done, checked and measured.

d) Review Contractor Programme

Commented in task 2 here-after related to Construction Supervision, see Activity 2.1 a).

e) Preparation of a Risk Management Plan

See comment in B.2.1. No activity at present stage and mobilization of Key Personnel is awaited (Deputy Team Leader).

f) Establishing a Data transfer system (MIS)

MIS objective is to facilitate sharing of information between PIU/PMU and PIC, and inside the PIC structure. Hence, when using the software or website under the control of PIC, Egis International will communicates

any official correspondence within the organizational and administration of PIC, with Project Implementation Unit and clients project offices.

This MIS will manage to control the relationship, Coordination and adapt time management, stored and secure filing system at same time sent, share and deliver information to relevant officials in professional manner.

MIS function is to share and control documents anytime from any devices within the system among system users:

- Distribution can be done instantly inside within company, with stakeholders, external members and project team;
- Storage is secured within the system and can be access only by authorized users;
- Manual transmittal of sending /mailing is replaced with digital processes;
- Printing time and cost are reduced by sharing files of any size within the users of the system;
- Access to document is possible from any device at any time anywhere from mobile devices.

Specific module of MIS could aim for a complex Project to control Project performance across cost, schedule, design and the effects of changes to all three. However, this function of MIS has still to be confirmed since it would require either purchase of a software, and its customization, or an in-house development of the product.

Besides software architecture preparation, purchase of hardware is on-going (desktop computer and data center – see Part F of report).

The typical architecture of a MIS system is presented in **Appendix 10.**

g) Preparation of Phase 2 project and loan documents

No activity foreseen at present stage on Inception phase.

h) Procurement documents, bid evaluation and contract negotiations

PIC Contract Specialist has been mobilized on 6 November 2018 and demobilized on 30 November 2018. The Expert assisted:

- to finalize and conclude the procurement process to purchase vehicles and equipment (see Section F of report).
- to comment on Civil Works Contracts documents;
- to prepare risk assessment table comparison between single CW contract or multiple packages for CW-02;
- to list some points to be considered in case of BOOT/BOT scheme;
- the Team Leader to answer first correspondences from CW-01 Contractor;

i) Preparation of project completion report (PCR)

Activity not planned at this stage of Project.

Activity 1-2 – Communications

A Project Sign board for river training works has been prepared and placed on site entrance and at site camp, see template in **Appendix 11.**

j) Public relation plan

Safeguard and Communication Specialist has been mobilized on 1st November 2018, and demobilized on 10 November 2018. Preparation of Draft Public relation plan has to be initiated by PIU, and specialist will assist. Specialist in the meantime focuses his intervention of the safeguard aspect of Project.

k) Disseminating information

Similar comments to j).

l) Organizing public relations events

Similar comments to j). Safeguard and Communication Specialist will be re-mobilized second week of December 2018 to prepare the Stakeholders communication days, on site, scheduled the third week of December 2018.

m) Developing and Maintaining Project Website

CDCL has already set-up a web-site. However, the Project pages need to be developed, and possibly enriched with several functions like hosting grievance record process, works progress presentation, detailed master plan presentation…

At first instance, the Safeguard and Communication Specialist will screen for, analyze and present others land development websites with could serve as example to Project pages on CDCL website.

n) Preparing photographic and video diary of the construction works

First production photo taken, but limited to Contractor installation, since construction has not started. No video diary produced yet.

D.1.2 Task 2 – Contract Management and Construction Supervision

Activity 2.1 - Contract Management and Administration

Contractor CW01 was handed over the site by Employer (CDCL), through a Letter to Proceed on 27 September 2018 (see **Appendix 12**).

No process-verbal of handing over or site conditions record has been made this day. However, following setting out of benchmarks, Contractor carried out a GPS topographic survey of site (per a 2.5m grid), which was completed on 22 November 2018.

Preliminary observation (to be confirmed) by Contractor is that substantial sedimentation occurred in between last site survey (before the 2016 flood) made available in the design drawings, and October 2018.

a) Review and Approve Contractor's Program, Equipment and Insurance

Contractor Programme has been submitted on 6 November 2018, and then detailed on 21 November 2018, following PIC first comments. Main activities schedule is shown in **Appendix 14.**

Here below are the main steps of the inception stage of the Contractor Programme:
Client deliverable
Site availability: 27/09/2018
Project Drawings: 01/11/2018
Assistance from Employer: 28/11/2018
Mobilization
Equipment: 27/10/2018 – 09/01/2019
Equipment Commissioning: 04/12/2018 to 15/02/2019
Engineering
Planning: 27/10/2018 to 28/10/2018
Planning Approval: 11/11/2018 to 19/12/2019
Method Statement: 16/11/2018 to 09/03/2019
Method Statement Approval: 04/12/2018 to 30/03/2019
Site Installation
Area preparation: 01/11/2018 to 25/11/2018
Site Office: 16/11/2018 to 15/12/2018
Client Office: 16/11/2018 to 15/12/2018
Labour Camp: 16/11/2018 to 16/01/2019
Staff Camp: 16/11/2018 to 16/01/2019
Batching Plant: 16/11/2018 to 31/12/2018
BAQC Lab: 16/11/2018 to 14/12/2018
Stone Yard: 16/11/2018 to 14/12/2018
Workshop: 16/11/2018 to 14/12/2018
Reinforcement Yard: 04/12/2018 to 14/12/2018
Completion: 16/01/2019

Contractor proposed to start first physical activities, with the first river training works on 16 November 2016.

However, PIC Team Leader did not approve the Works Schedule and requested a submission (See letter in **Appendix 13**). Main reasons reside in the need to correct the transversal drainage structures. As a result, Contract drawings cannot be considered as Good For Construction (GFC).

Moreover, Contractor is also invited to detail and justify the temporary measures that are proposed against flood risks. Sketch presenting these measures needs to be elaborated, see **Appendix 15.** These points are

developed in chapter E2 here after. Independently from works schedule, the Contractor site installation should be completed for mid-January 2019.

The list of Contractor personnel and equipment as deployed on 29 November 2018 is attached in **Appendix 16.** Here after in figure D.1.2 1, are displayed some pictures of Contractor's installation and initial activities.

Figure D.1-2: Contractor's mobilization – 30 November 2018

b) Approve Completed Works

Not relevant at this stage of works.

c) Advise on Legal and Contractual Problem

No contractual issue has been raised until report edition

Activity 2.2 - Supervision activities – Quantity Control

a) Measure and Certify Quantities

Contractor CW-01 did not conducted any work activity until present date and does not schedule some before end of the year.

However, it must be pointed that PIC team is not staffed and structured adequately to conduct a reliable quantity control (see Section E hereafter).

b) Adjust Quantities and Update Budget

No adjustment of quantities is needed since no quantities are yet certified and no variation (for design change for example) has been introduced.

c) Advise PIU on estimated cost to completion

Since no activity in r) and no adjustment in s) occurred, estimated cost to completion remains unchanged.

Activity 2.3 - Supervision activities - Quality Control

a) Inspect the Works

Consultant is not in position to control adequately quality works due to reduced personnel resources.

b) Setting up benchmarks

Employer procured Contractor a list of existing benchmarks obtained from Phuentsholing Thrombe on 29 November 2018.

Contractor CW-01 established new benchmarks at 18 locations with elevation and compared it with the existing benchmarks, four of it were found with correct coordinates and elevation, which should have been sufficient to set up at least temporary benchmarks.

However, the coordinates system used by Contractor is not the one required by Bhutanese Survey Department (Drukref03). Therefore, Contractor benchmarks have to be re-surveyed (traverse line to be set-up and close), in order to set properly the Project features. The traverse line set-up must be closed the first week of December 2018.

c) Test Materials

Contractor's laboratory is not yet set up, but two containers with laboratory equipment are already delivered on site. Presently, due to lack of resources, Consultant is not in a capacity to check and control this laboratory equipment (type and calibration).

d) Control Workmanship

PIC safeguard Specialist has been introduced to Contractor on 6 November 2018 and conducted his first safety visit.

e) Supervise Safety Aspects

First safety briefing to Contractor conducted by Safeguard Specialist.

This task includes the management of the day-to-day safety precautions adopted on site (helmets, jackets…), the provisions for traffic management and detours, delineation, separation and protection during night and day and during active and off periods on the site. This last point should be dealt with carefully due to intense transit traffic observed during the dry season (which is as well the works season).

f) Advise on Technical Problems

Proposal of location of Contractor facilities in the riverbed was mentioned in the detailed design. Contractor followed this suggestion. When this location is convenient for management of works, it is quite unpracticable, and even hazardous during the monsoon season, unless sound protection structures against river flow be installed (see Section E of report).

g) Check Preparation of As-Built Drawings

No activity at this period of Civil Works contract.

D.1.3 Task 3 – Management of Environmental and Social Impacts

Management of environmental impacts

The Contractor submitted his Environmental Management Plan (C-EMP) on 7 November 2018. Environmental Specialist of PIC is awaited for first week of November 2018 to check the adequation of the content to the Environmental Impact Assessment (EIA). In the meantime, PIC team leader requested the following attachments to be submitted before a comprehensive review be done:

- The Occupational Safety and Health Management Plan;
- The Traffic Management Plan;
- The camp Management Plan;
- The Grievance Redress Mechanism – Contractor contribution.

These attachments were submitted on 30 November 2018. PIC has 21 days to review it.

The PIC Environmental Specialist will also organise the C-EMP monitoring and prepare templates of the environmental part of the Monthly Progress Report and of the Semi-Annual Environmental Monitoring Report.

Management of social impacts

In **Appendix 17** are listed the overall tasks of the Communication and Safeguard Specialist, and first actions conducted.

Grievance Redress Mechanism (GRM)

Still to be set up at this stage. PIC will delegate two personnel at GRM first instance, the Communication and Safeguard Specialist, and the Team Leader (or the Deputy Team Leader).

Gender consultation and participation – Gender Action plan (GAP)

No activity conducted until presently.

D.1.4 Task 4 – Financial Management and Monitoring

Establishing and maintain appropriate fiscal management and monitoring

No activity conducted at this stage. PIC Financial Specialist is awaited early 2019.

Assisting PMU during the financial Accounting and control systems

No activity at this stage. See point hereabove.

Assisting PMU in preparation of annual budget and fund flows management

No activity at this stage. PIC just updated its own consultancy costs for year 2018.

D.1.5 Task 5 – Commissioning, Operation and Defects Liability

Assistance during defects / Damages rectification / repair works

No activity at present stage.

Management, operation and maintenance (MOM) procedures

No activity at present stage.

D.2 Deliverables

Present report, the Inception Report, in its version 2, dated 30 November 2018, is delivered in its final release the first week of December 2018. First draft release as version 1, was submitted on 11 November 2018.

Next report to be submitted will be the Monthly (Works) Progress Report. A standard table of content of Monthly Progress Report (see **Appendix 9)**, for end of December 2018. So far, Contractor activities are limited to camp installation and site survey.

At the same time, the Project Monthly Report to be disseminated to PIU and ADB will be submitted. The salient points checklist to include in the report is shown in **Appendix 18.**

Should the mobilization of the Deputy Team Leader be effective, PIC intend as well to prepare the draft of the Construction Supervision Manual by end of December 2018.

E. Issues identified during Inception Phase

E.1 Implementation arrangement

E.1.1 PIC Staffing

PIC team is properly staffed to provide advice, expertise and assistance to PIU for the overall implementation of Phase 1 and preparation of Phase 2 of Project.

However PIC team appears not completely and adequately fitted to fulfil full responsibility of supervision of civil works contracts, ruled by FIDIC for General conditions of Contract, and moreover, with payment based on “ad measurement”, as it is the case with CW-01.

Such civil works contract is usually supervised with a dedicated team, in which supervision functions are clearly described and shared between the supervision team. Here-below in figure E.1-1 is presented a typical organisation for supervision of a (one) civil works contract, where payment of Contractor is based on “ad measurement”.

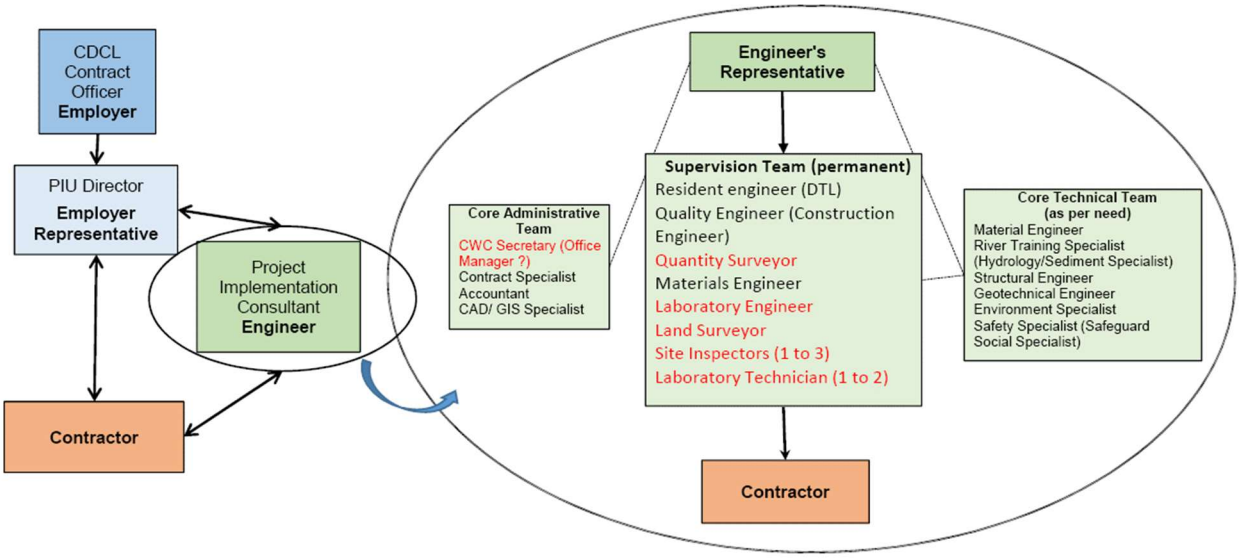


Figure E.1-1: Standard Supervision Structure Organization.

Some positions provided in PIC without or with minor adaptation of the job description are fitted for the purpose of proper supervision:

- Deputy Team Leader, acting as Resident Engineer;
- Construction Manager (usually a Contractor position), acting as Quantity Engineer;
- Materials Engineer (of which tasks assigned in TOR are those of the National Geotechnical Engineer, see Chapter B2.2 – activity 2.3);
- Structural Engineer;
- Contract Specialist, to assist for claims;

But some functions regarding quality control, and mostly the overall process of quantity control cannot be assumed reliably with present structure and staffing.

The following additional personnel would be required:

- For quality control: Laboratory personnel (Technician and Assistant), Land surveyor and Assistant (together with survey equipment[2]);
- For quantity control: Quantity Surveyor, Site Inspectors (2, 3, 4…) depending on the pace and locations of works.
- For Contract administrative management: Civil Works secretary.

[2] Land surveyor, equipment available on Contractor’s contract, in Provisional Sum Item (n°703).

It must be pointed that all these personnel would be national and, Quantity Surveyor excepted, non-key staff. **Appendix 19** presents the job descriptions of the Quantity Surveyor, Laboratory Technician, Land Surveyor and Site Inspector.

Regarding the understaffing of PIC for Construction Supervision, CDCL informed that he would be ready to support PIC in providing through deputation some personnel. CDCL Site Inspector and Land Surveyor have already been deputed to PIC Team Leader respectively on 20 and 22 November 2018.

Such support is appreciated, but it must be done through agreement between PIC and CDCL, in order to define between parties,

- the responsibilities:
  - personal insurance coverage,
  - professional insurance coverage,
  - monthly site allowance,
  - weekdays and night works compensation,
  - logistic (transport, PPE);
- the duration of assignment;
- the list of personnel;
- and the financial conditions.

Usually these matters are dealt with within a delegation or secondment agreement between the two parties.

E.1.2 PIC Permanent Office

On present PIC contract, 12 PIC personnel will be present permanently during a current month (see Section D.1.1). Should the proposal to have additional dedicated personnel for construction supervision be considered, 3 more personnel in office (Quantity Surveyor, Laboratory Technician, Land surveyor) will be added, and a technical room (for survey equipment, site inspectors, possibly temporary sampling) needed.

It has been understood that a 200sqm office will be provided by Contractor, to be shared by PIU. Taking into account the space for a common meeting room, and facilities (kitchen, toilets) the surface of the Consultant premise will be reduced to about 80sqm.

It would be appreciable if Consultant could be provided a more office space, in order to work in more comfortable conditions. Consultant drafted an office layout, of which space would be suitable for both PIU and PIC. PIU submitted it to Contractor on 9 November 2018. No feedback is received yet from Contractor

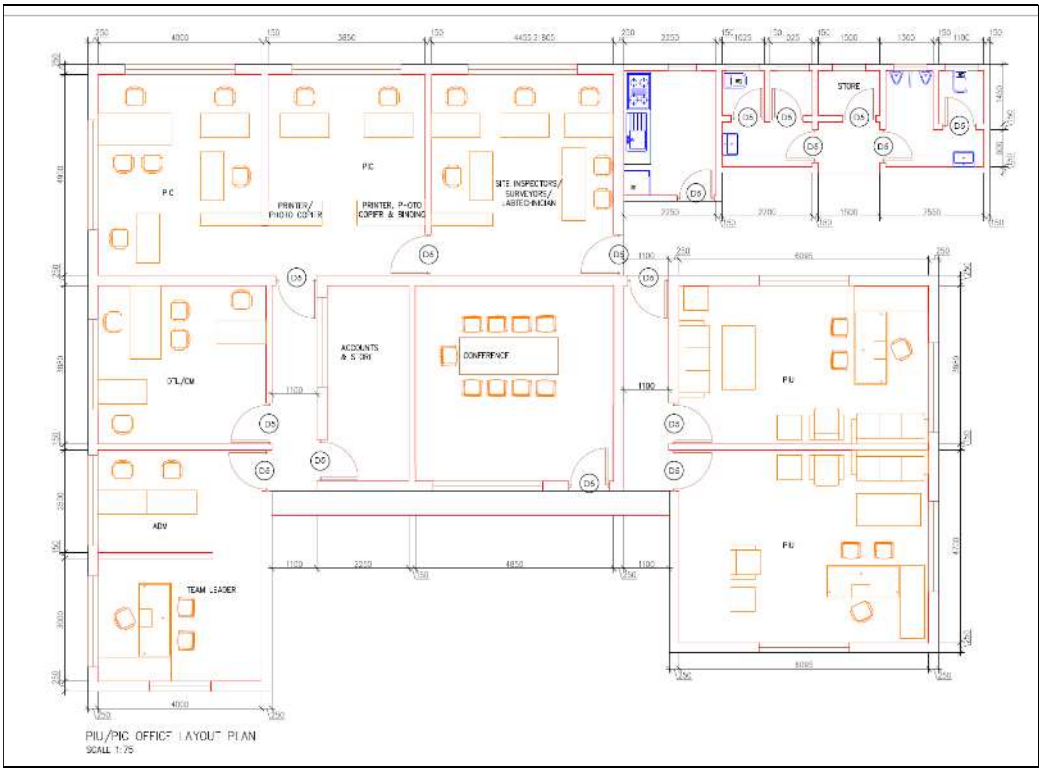
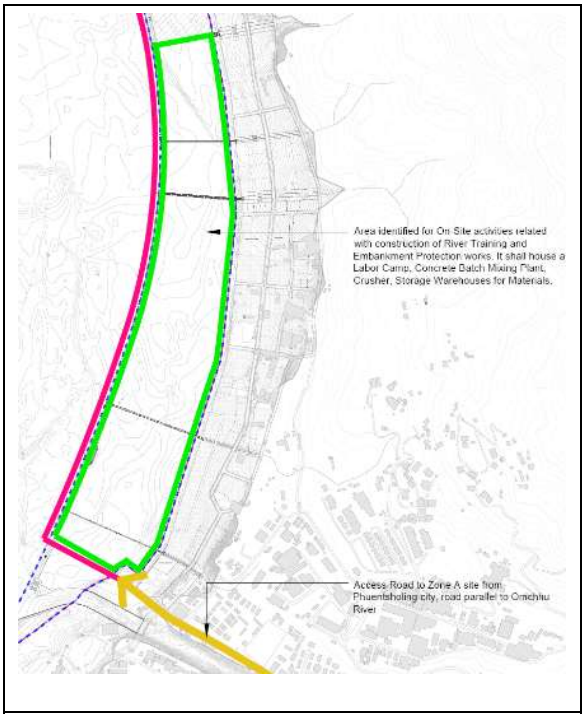


Figure E.1-2: Proposed Office Layout Plan.

E.2 Civil Works contract

E.2.1 Location of Contractor CW01 base camp



Contractor CW-01 started to install his base camp in Zone A, within the flooded area.

This location is quite practical for logistic purpose, and in accordance with design drawings, as it is shown on Figure E.2.1-1.

However, to mitigate risks of flooding during construction stage, sound protection against Amochhu river flows during monsoon have to be built.

Technical proposition, together with hydraulic calculation, have to be proposed by Contractor. At present, Contractor presented a sketch of lay-out of flood protection within a meeting during the meeting held in Thromde office on 268 November 2018, see **Appendix 15**. It has been found insufficient, and anyway shall be substantiated with hydraulic calculation.

Figure E.2-1: Proposal of location of Contractor camp.

Once approved by PIC, the protection works have to be implemented before 2019 rainy season. Thus, it is likely that these protection works will be on the works schedule critical path.

These temporary protection works shall concern not only Contractor's base camp, but as well, the access to camp itself, and the anticipated main works location at start of the rainy season.

E.2.2 Excavation of riverbed to reach training cross-section

Quantities included in CW01 Contract amount to about 3 million cum of materials to be extracted from riverbed and to be use as fill for Zone A embankment. There is no specific provision for excavation/cut in the river bed.

However, firstly, all cut materials from riverbed could not passed the specifications required for fill, and secondly, the average channel section to be realised is about 1000sqm on an overall course of the 4000m of Zone A extension (see Figure E.2.2-1), and probably more upstream to initiate the river channel.

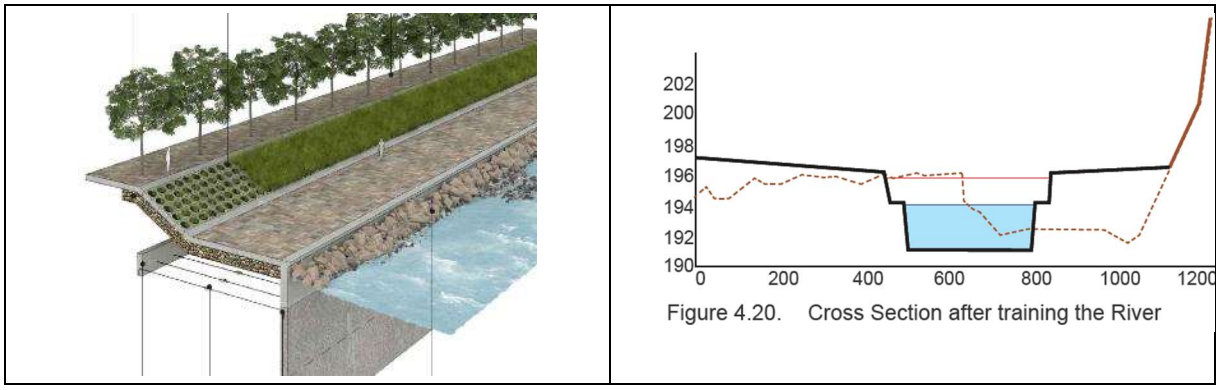


Figure E.2-2: River training cross-section.

In addition, first result of topographic survey shows that 2016 flood brought substantial additional sedimentation. Therefore, it would mean that quantities of material to be removed could reach 5 million cum, to channel the river properly.

During strong flooded episode, it is foreseeable that Amochhu river will drain some bed materials. However, the extension of such natural dredging has to be estimated in order add or not cut/excavation quantities, in

the CW Contract bill of quantities. This estimate could be done by PIC River Training/Sedimentation Specialist once full topographic of site, including river major bed is made available.

E.2.3 Interferences with third parties using Amochhu riverbed

Third parties (materials dealers, ready mix concrete producers) use riverbed during dry season. The main location of their activities stands outside of Zone A, but the generated traffic crosses it at the level of Contractor Camp Installation, as it can be seen from temporary setting-up of Project limit by Contractor. This traffic is quite impressive, more than 100 heavy vehicles have been counted at peak hour, it could even generate traffic jam, inside Zone A (see figure E.2-3).

Figure E.2-3: Traffic through camp site and external vehicles parked

Nevertheless, Contractor has to prepare specific traffic management plan, and urgently block external traffic going through Installation Camp. It is unavoidable that a temporary diversion road be built.

This type of management of relationship with third parties shall be monitored by Employer, with Consultant support.

E.2.4 Temporary flood barrier on North of Zone A embankment

A dike built as temporary flood barrier has been raised after the 2016 flood. This dike is within the Zone A perimeter (see picture in Figure D.1-1). The volume of the barrier is several lakh cum.

Once embankment have to be constructed, the materials of the dyke have to be removed. It could be, either managed under present CW contract, but then under variation, or taken care but Employer.

In such last case, Employer has to state when, giving a period of time, the materials will be removed, in order that Contractor can adapt his work programme to minimise the disturbance.

E.3 Adaptation or change to design

Point E3.1 to E3.3, presenting first conclusions of design and site condition review, has forced the PIC Team Leader to enjoin the Contractor, not only to review his global Works Schedule, but also to suggest a full reshuffling of the implementation of works, section by section.

The aim would be to start construction from North end of zone A, the upstream section, where less disturbance to design are foreseen, but also where flood protection shall start. The PIC letter dated 26 November 2018 requesting revision of schedule is attached in **Appendix 14**

E.3.1 Design of out-falls to be adjusted

Following PPTA report conclusions and PIC assessment, it has been found that all Zone A crossing out-falls design have to be adjusted. Location of outfalls is shown in **Appendix 20.**

Reasons are as follows:

- to integrate all drainage structures from adjacent, and upstream Phuentsholing – Chamkuna Road Project (PCR),
- to add new structure (out-fall n°2A?), to collect water from corresponding drain on Phuentsholing – Chamkuna Road Project (PCR);
- to change ducted out-falls (culverts) n°3, 4, 5 and 6 to open channel to control sedimentation; as recommended following PPTA review;
- to tentatively revise all the culverts and open channels gradient, from 1/450 or 1/500 to as steep as possible (see PIC computation in Table E.3-1 here after).

Table E.3-1: PIC Outfall slope design review

Sl. N°	Description	Length	RL at LAP & PTDP	RL at DW	Lvl Diff	HCP Design Slope	Embank. Lvl	PCR Design Lvl	BC Invert Lvl	Proposed Length	Slope with same exit	Slope with 0.5 m above RB
1	Ducted Outfall 1	279.15	188.75	188.13	0.62	1: 450	192.94	195.00	191.47	425.00	1: 127	1: 150
2	Ducted Outfall 2	261.69	190.37	189.79	0.58	1: 450	194.60	195.66	192.93	385.00	1: 123	1: 146
3	Ducted Outfall 2a			191.88			196.76	196.95	193.87	344.00	1: 173	1: 231
4	Ducted Outfall 3	210.00	193.27	192.80	0.47	1: 451	197.71	198.67	194.84	238.00	1: 117	1: 155
5	Ducted Outfall 4	188.05	193.95	193.53	0.42	1: 451	198.34	199.37	195.79	199.00	1: 88	1: 113
6	Ducted Outfall 5	168.66	195.18	194.80	0.38	1: 450	199.61	200.67	196.69	168.66	1: 89	1: 121
7	Ducted Outfall 6	165.26	196.19	195.82	0.37	1: 450	200.63	201.08	197.51	165.26	1: 98	1: 139
8	Ducted Outfall 7	157.14	196.53	196.18	0.35	1: 450	200.99	202.55	198.97	157.14	1: 56	1: 69
9	Open Outfall 1	158.64	197.27	196.95	0.32	1: 500	201.76	204.00	199.44	158.64	1: 64	1: 80
10	Open Outfall 2	135.77	198.35	198.08	0.27	1: 500	202.89	205.95	201.39	135.77	1: 41	1: 48
11	Open Outfall 3	116.98	199.55	199.32	0.23	1: 500	204.13	208.16	203.6	116.98	1: 27	1: 31
12	Open Outfall 4	69.11	201.22	201.08	0.14	1: 500	205.89	214.23	209.67	69.11	1: 8	1: 9

Acronyms: LAP, Local Area Plan. DW: Diaphragm Wall; Lvl: Level; BC: Box Culvert; RB: River Bed

Source: HCP drawing CS-LAP-11 (11/07/16) and PIC (29/11/18.

E.3.2 Adaptation of design of diaphragm to connect D-wall at North point of Zone A

Project detailed design shows diaphragm wall lay-out, at North of Zone A, and junction point to existing terrain (see Dwg n°ART-ET-01, point B) but there is no detail of the structure proposed to anchor properly the wall to sound rock on adjacent foothill (at Amochhu left bank), or to any permanent unflooded structure. Location of point B is shown in **Appendix 20.**

Process to complete the detailed design at point B would be:

- To conduct geotechnical investigations;
- Possibly, to complement topographic surveys;
- To prepare revised design;
- To compute quantities using CW-01 bill of quantities, possibly to add new pay-items (anchor bars);
- Prepare either a change order (in case of minor changes),
- or a variation order (in case of major change, like new type of works), where Provisional Sum can be used (see Item n°709).

This adaptation of design and the subsequent change to CW-01 Contract have to be done as soon as possible for Contractor to include it in his Works programme, in order that works be implemented before the 2019 rainy season.

E.3.3 Change of site conditions

As already mentioned in Chapter E2.2, it appears that present Site Conditions are not, as per first indication of CW-01 Contractor survey, in accordance with Site Conditions as stated in Tender Documents (Drawing n°BM-EC-01), dated 9 December 2016.

For example, the riverbed elevation, surveyed on 7500m (from Indian border to 7.5 km upstream) by Contractor, using GPS method, shows an average 4.9‰ (4.9 per thousand) slope. When it is reported for same section, 5.5‰ in ALTDP Final IDPR. Then, this is a strong indication that significant sedimentation has been brought by the 2016 flood episode.

Then; not only dredging quantities could be impacted but as well Diaphragm wall design and stability should be confirmed.

E.3.4 Addition of two spurs at Indian border

As per request of the Indian Authorities, two spurs shall be added just before the Indian border, on left bank of the river, hence connected to the diaphragm wall in order to reduced river speed flow before reaching India. The two spurs location is shown in **Appendix 21**.

E.3.5 Connection with Omchhu river

It appears that a section of the Omchhu river, adjacent to eastern limit of Project, is not planned to be channelized, either by PTDP Project or within the near-by ADB funded Phuentsholing Road Bypass Project. This last Project will channelize the Omcchu river from bypass bridge toward upstream.

As a result, there is an about 220m gap of channelization between the two projects. Location of this section is shown in **Appendix 20.**

E.3.6 Realignment of diaphragm wall to increase Zone A surface

DHI Chairman, at Ground Breaking Ceremony, requested to consider the possibility to increase surface of Zone A in gaining space on Amochhu riverbed. The idea is to shift westward, on part of its stretch, the diaphragm wall.

Purpose of the shift would be to increase the embankment surface, and doing this, to allow increase of the land to be developed in Zone A. It would mean as well that Zone C would not be implemented soon and that river training would only be partially done. No Diaphragm wall on Amocchu right bank. An “artist” sketch has been drafted to illustrate the DHI Chairman request, see **Appendix 21.**

CDCL intends to discuss this issue with the detailed designer (HCP). In case this option to move westward the diaphragm wall is technically feasible and economically profitable (taking account the civil works design revision, the reshuffling of the master plan, and the rescheduling of works and global rescheduling of Project), a variation to CW-01 contract would have to be introduced, once changes in quantities and type of works are known. Such possibility is allowed within GCC FIDIC contract (Right to Vary – GCC 13).

Following conclusion of viability of the diaphragm wall realignment, Contractor will be requested to accommodate, or not, his work schedule.

F. Provisional items

F.1 General

This chapter presents the list of support facilities under Provisional Sums. Provisional sums have been included in the consultancy agreement for procurement of various requirements that will be provided for the project.

F.2 Provisional sums items

The scopes and amounts of Provisional Sums Items are summarized in Table F.2-1 hereafter:

Table F.2-1: Scope of provisional sums in PIC Contract

Item	Description	Amount (USD)
Purchase of 2 Vehicles & Motor Cycles	2-Pick-up type and 1- motorbike For national transport needs between project office, construction sites, and for meetings in Thimphu, including O & M (running & Maintenance) of the vehicles.	122 500
Equipment	Computers, software, printers, photocopiers, furniture, GPS power inverter, etc. for field office	10 000
Seminars, Workshops, and Training Sessions	For routine meetings, workshops and training sessions convened by the PIC or PIU.	10 000
Studies, Surveys and Reports	Supporting surveys and specific studies including topographic surveys, geotechnical investigations, laboratory tests, and socioeconomic surveys. Tentatively includes: a) a Biodiversity Monitoring and Benchmarking Survey and (b) preparation of a Flood Management Plan	230 000

F.3 Procurement method/Procedure to be applied

F.3.1 Procurement Method

The Service Vehicles and Office Equipment is procured using the Shopping Procurement Method in accordance with para. 3.5 of the ADB's Procurement Guidelines (August 2013, as amended from time to time).

The Consultants for additional studies will be recruited in accordance with ADB's Guidelines on the Use of Consultants (August 2013, as amended from time to time).

The procurement of Provisional Items for Seminars, Workshops, and Training Sessions will later be decided by the PIU.

F.3.2 Procurement Procedure for Shopping

Purchase of vehicles

The Invitation for Request for Quotations (RFQs) applied was a combination of direct invitations and local advertisement. The assisting PIC initially request quotations directly from more than three suppliers and/or dealers, however, only two suppliers responded when verified.

Advertisement through local newspaper of national circulation will be published on 13 November 2018 **(see Appendix 22).**

The invitation to submit quotations were opened to whoever want to submit provided that they are reputable, well established and are suppliers of the goods being purchased as part of their normal business.

The requests for quotations indicate the deadline for submission of quotes, hence on 18 November 2018, where, to whom and how (procedure) to submit, among other relevant details.

Unit prices for service vehicles are to be quoted EXW (ex-factory, ex warehouse ex show room or off-the-shelf, as applicable) and inclusive of all custom duties, and other taxes. Prices are to be quoted in the local currency (BTN Ngultrum) or in US Dollars.

Only one supplier per type of vehicle has been found substantially responsive and has been recommended for contract award. See letter in **Appendix 22**.

Upon approval by the PIU of the recommendation for award, negotiation (discussions) regarding the amount of contract, schedule of delivery, and submission of required documents will follow accordingly.

It is expected that contract award will be expedited due to the urgency to have these goods (vehicles and equipment) be procured and delivered to the project for immediate usage.

The schedule for vehicles procurement is as follows:

- Advertising on local newspaper: 13 November 2018;
- Deadline for submission a quotation: 18 November 2018;
- Proposal of award of Contract: 30 November 2018;
- Approval of award of Contract: 3 December 2018
- Purchase Order: First week December 2018
- Delivery of vehicles: Second week December 2018.

Purchase of equipment

Invited suppliers and dealers have been asked to submit quotation the 3rd week of October 2018. Three quotations were received. Price quotations has been compared in terms of prices up to the final goods destination, or at works location. Compliance or responsiveness to the required Specifications has been checked.

The Supplier were evaluated as substantially responsive and the Supplier proposing minimum overall evaluated price was recommended for contract award on 1" November 2018.

PIU approved on 22 November 2018 the recommendation for award, but reduced the number of equipment to match actual needs of PIC.

Purchase order, schedule of delivery, and submission of required documents follow accordingly.

The schedule of office equipment procurement is as follows:

- Invitation for quotation: 3rd week October 2018;
- Last quotation submitted: 22 October 2018;
- Proposal of award of Contract: 13 November 2018;
- Approval award of Contract: 22 November 2018;
- Purchase Order: 24 November 2018
- Delivery of office equipment: 7 to 12 November 2018.

In both cases, vehicles and office equipment, total cost of purchase does not exceed the budget that was expected for.

G. PPMES and MIS

G.1 Project performance management evaluation system (PPMES)

PIC is in charge to develop and implement the Project performance management evaluation system (PPMES).

As stated in the TOR, PPMES is a tool which will allow PIU to:
"(a) monitor and evaluate implementation of the project;
(b) identify performance constraints; and
(c) formulate and implement practical measures to address shortcomings
PPMES includes financial management and accounting reporting".

It shall be accessible to the PIU and ADB.

The system should be implemented within the first 6 months of services. PIC did not initiate the implementation of the system of which content shall be discussed with PIU.

Financial Specialist of Consultant will be mobilized as soon as practicable to assist Team Leader to prepare a canvass as base of discussion with PIU.

G.2 Data transfer system (MIS)

PIC is in charge to develop and implement a Management Information System (MIS). The development of the MIS should follow the same schedule as the one of the PPMES, since it should be implemented within the first 6 months of services.

However, PIC intends to develop the install the hardware and develop the software as soon as possible, since it will be used internally by the PIC structure.

The objectives are mainly:

- To facilitate the sharing of information between the different stakeholders, including inside the PIC team;
- To define a suitable standard of communication with all the contractors;
- To monitor and control the costs and financial aspects of the project;
- To enable the Client to follow up the Project almost in real time and anticipate any delays or over costs.

First actions are to prepare the architecture of the MIS (stakeholders, access rights…See **Appendix 10**), to list the type and volume of documents to be shared, the communication method, precise the hardware specifications.

H. Preparation of Phase 2 documents

Phase 2 of Project concerns development of Zone C (on the right bank of the Amochhu river, in front of Zone A) of Project. As for Phase 1, Phase 2 will comprise packages for civil works, goods, and consulting services, based on master plan prepared by the CDCL.

Phase 2 will be subject to Government of Bhutan and ADB approvals.

PIC involvement on Phase 2 would be:

- To review on the detailed designs and advise on improvements;
- To plan if necessary additional investigations, supervise their execution and analyze findings;
- To review and advise on structures (diaphragm walls, retaining structures, road bridges…);
- To prepare financing and other necessary documents to be submitted to ADB;
- To prepare a detailed procurement plan for all necessary goods, works and consulting services packages.

This task is not yet initiated by PIC.

However, should the Zone A extension be considered (see Section E.3 of report), extension of Zone C and subsequently, its urban development master plan, would have to be reviewed. Then, PIC inputs for Phase 2 could be substantially delayed, or abandoned.

I. Summary of report salient points

Consultant Mobilization,

- Time needed for Client to get Labour Ministry approval for foreign experts delays mobilization of experts for those staying more than one month.
- Could be more problematic if Expert visa is rejected.

Deliverable

- Proposal to merge Quality Assurance Plan and Construction Supervision manual.
- Proposal to replace Shift Report by Works Daily Report where works activities are monitored by PIC team.
- Risk management plan: Guidance to be given by ADB/PIU.

Consultant Staffing

- Proposal to redefine task assignments of Material/Engineering Geologist (Key – International), Geotechnical Engineer (Key Local), and Geotechnical Engineer (Non Key – International) in order to clarify Experts tasks and save man-months.
- Proposal to add a National Environmentalist expert, on intermittent, but regular presence, in order to monitor, on monthly base, the Contractor's activities.
- Proposal to staff additional national positions to structure a competent Construction Supervision team:
    - Quantity Surveyor;
    - Laboratory Technician;
    - Land surveyor;
    - Site Inspectors.
- Need to sign secondment/deputation agreement between CDCL and Egis for delegation of personnel.

Civil Works Contract – CW-01

- Good For Construction drawings not approved by Engineer's Representative, since site conditions reported in the Contract Documents differ from those presently surveyed, and because design (outfalls) has to be adjusted.
- Temporary flood protection measures still awaited from Contractor.
- Presence on site of dense heavy vehicles traffic from third parties. This through traffic to be controlled and diverted.
- Setting up of base traverse line of Contractor, and subsequent site survey.

Adaptation/Change of design

- Adjustment of all out-falls (11) geometry, to connect properly adjacent, and upstream, PCR project structures, and to improve functionality with slope increase.
- Addition of one out-fall newly added by PCR project.
- Need for detailed design of northern point of diaphragm wall at up-stream limit of Zone A, to connect existing ground at hill foot.
- Possibly, integrate channelization of Omchhu river in its stretch right upstream adjacent to Project, where about 220 m.
- Addition of 2 spurs on left bank of Amochhu river just before the Indian border, hence at the downstream end of Project.
- Realignment west ward of diaphragm wall on more than half of its extension, in order to increase the surface of the land development area

Appendixes

Appendix 1 - List of PIC Deliverables

Appendix 2 - Tasks assignment and key experts' input

Appendix 3 – Project Management Quality Assurance Plan

Appendix 4 – Draft Table of Content of Supervision Manual

Appendix 5 – Job descriptions Engineering Geologist / Geotechnical engineer and Materials Engineer

Appendix 6 – Job descriptions Environmental Specialist and Environmentalist

Appendix 7 - Example of a procedure – Integrity Pact

Appendix 8 - In & Out Correspondence Register (30 Nov. 2018)

Appendix 9 - Template of Monthly Progress Report

Appendix 10 - MIS system architecture

Appendix 11 – Template Project sign board 50

Appendix 12 – Letter to Proceed (12 Sep.2018)

Appendix 13 - Contractor Main Works Schedule (21 Nov.2018)

Appendix 14 – Request submission of Works Schedule (26 Nov.2018)

Appendix 15 - Contractor Flood Risk Safety Measure Sketch (26 Nov.2018)

Appendix 16 - Contractor Staff and Equipment (29 Nov.2018)

Appendix 17 - Social and Environment detailed tasks requirement

Appendix 18 – Main items of Project Monthly Report

Appendix 19 – Job descriptions Quantity Surveyor, Laboratory Technician, Land Surveyor and Site Inspector

Appendix 20 – Design review main issues

Appendix 21 - Illustration Zone A extension

Appendix 22 – Use of Provisional Items (30 Nov. 2018)

Appendix 1 - List of PIC Deliverables

Task 1 - Program Management		Due Time M : month*
Project Administration		
D-1.1	Inception Report	M1
D-1.2	TOR & RFP for BMBMS (Biodiversity Monitoring and Bench Marking Study) & FMP (Flood Management Plan) /FEWS (Flood Early Warning System) Consultant	M3
D-1.3	MEM (monitoring & evaluation manual), QAP (quality assurance plan) & RMP (risk management plan)	M4
D-1.4	MIS (Management Information System)	M6
D-1.5	PPMES (project performance management evaluation system)	M6
D-1.6	Mid-term Report	M25
D-1.7	Final Report	M60
D-1.8	Monthly Reports	M2, Day 7
D-1.9	Quarterly Reports	M4, Day 15
D-1.10	Briefing Reports	As required
D-1.11	Special Reports	As required
D-1.12	PCR (project completion report)	Project closure
D-1.13	Phase 2 loan documents & bids documents	M50
Communications		
D-1.14	Updated Communications Strategy and Plan	M3, yearly
D-1.15	Media publications	As required
D-1.16	Website	M6
D-1.17	Video presentation	M12, Yearly
Task 2 - Contract Management and Construction Supervision		
D-2.1	Construction Supervision Manual	M2
D-2.2	Health & Safety Manual	M3
D-2.3	Shift Reports	?
D-2.4	Weekly Reports	Weekly
D-2.5	Monthly Progress Reports	M2
D-2.6	Annual Progress Reports	
D-2.7	Health and Safety Reports	Monthly M2
D-2.8	Claim Reports	Per claim
D-2.9	Technical Review Reports	As required
D-2.10	MOM (management, operation & maintenance) manuals	M48?
	MOM CW-01	At TOC
	MOM CW-02	At TOC
	MOM CW-03	At TOC
D-2.11	Tender Documents	As required
D-2.12	Special Reports	As required
Task 3 - Management of Environmental and Social Impacts		
B-3.1	Environmental Monitoring Reports (Semi-annual)	From 3
B-3.2	Social, Gender & Grievance Monitoring & Evaluation Reports (Quaterly then Semi-annually)	From M4
Task 4 - Financial Management and Monitoring		
D-4.1	Financial Management & Monitoring Reports (Quaterly)	From M4
Task 5 - Commissioning and Operation		
D-5.1	Contract Completion Reports	At TOC + 1M
D-5.2	Certificates	As required
D-5.3	Final Reports	At PC + 1M

** From month of beginning of service (November 2018)*

Appendix 2 - Tasks assignment and key experts' input

	Name	Position	Task 1 - Program Management																	Task 2 - Contract Management and Construction Supervision												Task 3 Environmental & Social		Task 4	Task 5 Commissioning & Operation			Total MM
			Project Administration													Communication																						
			D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-1.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	D-2.	B-3.1	B-3.2	D-4.1	D-5.1	D-5.2	D-5.3	
			Inception Report	TOR & RFP BBMBS/FMP	MEM, PAQ & RMP	MIS	PPMES	Mid-term Report	Final Report	Monthly Reports	Quarterly Reports	Briefing Reports	Special Reports	Project Completion Report	Phase 2 documents	Communications Plan	Media publications	Website	Video presentation	Const. Supervision Manual	Health and Safety Manual	Shift Reports	Weekly Reports	Monthly Progress Reports	Annual Progress Reports	Health & Safety Reports	Claim Reports	Technical Review Reports	MOM manuals	Tender Documents	Special Reports	Environmental Monitoring Reports	Social, Gender & Grievance Monitoring & Evaluation Reports	Financial Management & Monitoring Reports	Contract Completion Reports	Certificates	Final Reports	
Key International																																						
1	Robert Jeancenelle	CRE / Team Leader	1		1		0.5	1	1	2	0.5	0.5	0.5	0.5	3					2	1	0.5	0.5	5		1	1	2		2	2			1	1	1	1	34
2	Edwin Anggrijatno	Deputy Team Leader			1	1	2	1	1	3	2	1	0.5	1		1.5	2	1	2.5	1	0.5	2	4	3	1	2	2	2				1						40
3	Vishwas R. Rao	Engineering Geologist													1					1			5.5	5	1		1	5		1	3				1			20
4	Lucila C. Perlada	Contracts Specialist																									1			2								4
5	Surjit S. Deepak	Environmental spec.		1.5			1																									5						7
6	Virgilio V. Dizon	Financial Specialist																																5				6
7	John Field	Hydrology/Sediment Spec.		0.5																								0.5	0.5									2.5
Key National																																						
8	Tenzin Jamtsho	Quality Control Engineer				3														1	1	8	7	1	1	2	3	3			3				2	3	2	40
9	Prithulal Sharma	Geotechnical Engineer													1					0.5		1	7	7	2		1	12		1	6				1			40
10	Megay Penjore	Safeguards & Com. Spec.					1									1	2	1	2							1						3	4					13
Non Key International																																						
11	Bosco Hendro	Geotechnical Engineer													0.5													3.5			2							5
12	Celso V. Dion	Structural Engineer													0.5													2.5										4
13	Nirupam K. Singh	Roads Engineer																										2.5										3.5
14	Jean-Louis Carron	Water / Hydraulics Eng.													0.5													0.5	0.5									2
15	Jacques Letessier	Water Treatment Spec.																										0.5		0.5								2
16	Christopher Round	Solid Waste Spec.																										0.5	0.5									2
17	Dominique Chod	Electro-Mechanical Eng.																										0.5	0.5									2

Appendix 3 – Project Management Quality Assurance Plan

List of QAP procedures and documents

Nature	Code	Description	Date	Index
PP0 : General Quality Assurance Plan				
Procedure	**PP 0**	**QAP : General Procedure**		**0**
Form	PP 0.1	Project Quality Statement		0
List	PP 0.2	List of QAP Documents		0
List	*PP 0.3*	*List of Stakeholders*		*0*
List	*PP 0.4*	*List of Consultant's staff on site*		*0*
Schedule	*PP 0.5*	*Construction Schedule*		*0*
Register	PP 0.6	Definitions and terminology		0
Template	PP 0.7	Procedure template		0
PP1 : General Production Procedures				
Procedure	**PP 1.1**	**Project Management Organization & Delegations**		**0**
Index/List	PP 1.1.1a b	Organization Charts		0
Index/List	PP 1.1.2	Table of Delegation		0
Letter	*PP 1.1.x*	*Employer – Letter of Authority Delegation*		*0*
Letter	*PP 1.1.3*	*Delegated Authority Letter (Typical)*		*0*
Index/List	*PP 1.1.x*	*Job Description – Engineer's Representative*		*0*
Index/List	*PP 1.1.4*	*Job Description - Chief Resident Engineer*		*0*
Index/List	*PP 1.1.5*	*Job Description – Quality Engineer*		*0*
Index/List	*PP 1.1.6*	*Job Description – Quantity Engineer*		*0*
Index/List	*PP 1.1.7*	*Job Description – Material Engineer*		*0*
Index/List	*PP 1.1.x*	*Job Description - Contract & Claims Specialist*		*0*
Index/List	*PP 1.1.8*	*Job Description - Land Surveyor*		*0*
Index/List	*PP 1.1.9*	*Job Description – Laboratory Technician*		*0*
Index/List	*PP 1.1.10*	*Job Description – Site Inspectors*		*0*
Index/List	*PP 1.1.11*	*Job Description - Environmental Specialist*		*0*
Index/List	*PP 1.1.12*	*Job Description - Social & Resettlement Specialist*		*0*
Index/List	*PP 1.1.13*	*Job Description – Structural Engineer*		*0*
Index/List	*PP 1.1.14*	*Job Description - Core Team Specialists*		*0*
Index/List	*PP 1.1.15*	*Job Description - Office Manager*		*0*
Index/list	PP 1.1.16	Inventory of material, equipment, vehicle		0
Procedure	**PP 1.2**	**Reporting**		**0**
Report	PP 1.2.1	Inception Report Framework		0
Index/List	PP 1.2.2	Contractor's Monthly Report Review - Checklist		0
Report	PP 1.2.3	PIC Monthly Progress Report – Framework		0
Report	PP 1.2.3	PIC Quaterly Progress Report – Framework		0
Schedule	PP 1.2.4	Reporting schedule		0
Procedure	**PP 1.3**	**Management of correspondence & communication**		**0**
Template	*PP 1.3.1*	*Letter Engineer ENG to Employer EMP*		*0*
Template	*PP 1.3.2*	*Letter Engineer ENG to Contractor CON*		*0*
Template	*PP 1.3.3*	*Letter Resident Engineer RE to Contractor CON*		*0*
Template	*PP 1.3.4*	*Internal Memorandum*		*0*
Index/List	*PP 1.3.5*	*Incoming & Outgoing Mails Registers*		*0*
Procedure	**PP 1.4**	**Classification Scheme and filing system**		**0**
Index/List	*PP 1.4.1*	*Detailed Filing Index*		*0*
Guidelines	*PP 1.4.2*	*Document Referencing Guidelines*		*0*
Procedure	**PP 1.5**	**Health and Safety**		***0***
Template	PP 1.5.1	Incident Report & Cause Analysis		0
Template	PP 1.5.2	PPE Receipt Slip		0
Guidelines	PP 1.5.3	Health & Safety Risk Assessment Sheet		0
Procedure	**PP 1.6**	**Environmental and Social Control**		**0**
Template	*PP 1.6.1*	*Environmental Checklist –Construction Sites*		*0*
Template	*PP 1.6.2*	*Environmental Checklist – Quarry Operation*		*0*
Template	*PP 1.6.3*	*Environmental Checklist – Crusher plant Operation*		*0*
Template	*PP 1.6.4*	*Environmental Checklist – Concrete batching Operation*		*0*
Template	*PP 1.6.5*	*Environmental Checklist – Precast field management*		*0*
Template	*PP 1.6.6*	*Environmental Checklist – Asphalt Plant Operation*		*0*
Template	*PP 1.6.7*	*Environmental Checklist – Borrow Pits*		*0*
Template	*PP 1.6.8*	*Environmental Checklist – Disposal Sites*		*0*

Template	*PP 1.6.9*	*Social Aspects Check-list*		*0*
Procedure	**PP 1.7**	**Construction Supervision Manual**		**0**
PP2 : Supervision Management Procedures				
Procedure	***PP 2.1***	***Works Start-up***		***0***
Template	*PP 2.1.1*	*Activities and Responsibilities*		*0*
Form	*PP 2.1.2*	*Integrity Pact*		*0*
Procedure	***PP 2.2***	***Management of meetings***		***0***
Template	*PP2.2.1*	*Minutes of Monthly Management Meetings*		*0*
Procedure	***PP 2.3***	***Management of contractor's documents***		***0***
Register	*PP 2.3.1*	*Contractor's Documents Submission Requirements*		*0*
Register	*PP 2.3.2*	*Register of Contractor's Documents & PIC Comments*		*0*
Form	*PP 2.3.3*	*Record of Project Manager 's Comments &Observations*		*0*
Procedure	***PP 2.4***	***Time control***		***0***
Procedure	***PP 2.5***	***Site Surveillance***		***0***
Form	*PP 2.5.1*	*Surveillance Record Sheet (SRS)*		*0*
Form	*PP 2.5.2*	*Site Inspectors Daily Record*		*0*
Form	*PP 2.5.3*	*Site Inspectors Weekly Record*		*0*
Form	*PP 2.5.4*	*Site Instruction (SI)*		*0*
Form	*PP 2.5.5*	*Notice of Construction (NOC) by Contractor*		*0*
Form	*PP 2.5.6*	*Request for Inspection (RFI) by Contractor*		*0*
Form	*PP 2.5.7*	*Registers SRS & SI & Inspection after RFI*		*0*
Procedure	***PP 2.6***	***Completion and Works Take Over***		***0***
PP3 : Quality Management Procedures				
Procedure	***PP 3.1***	***Contractor's Quality Control Plan***		***0***
List	*PP 3.1.1*	*Quality Control Plan*		*0*
Form/Template	*PP 3.1.2*	*Test Report & Survey Report templates*		*0*
Form/Template	*PP 3.1.3*	*Standard Test Forms*		*0*
Guidelines	*PP 3.1.4*	*Control Flowcharts*		*0*
List	*PP 3.1.5*	*Check-lists Works Control Points*		*0*
Procedure	***PP 3.2***	***Works Non Conformity Management***		***0***
Template	*PP 3.2.1*	*Register of Non Conformity Records*		*0*
Form/Template	*PP 3.2.2*	*Non Conformity Product Notification*		*0*
Procedure	***PP 3.3***	***Change Management***		***0***
Form/Template	*PP 3.3.1*	*Change Request Form*		*0*
Procedure	***PP 3.4***	***Approval of sub-contractor's***		***0***
Form/Template	*PP 3.4.1*	*List of subcontractors*		*0*
PP4 : Financial Management				
Procedure	***PP 4.1***	***Cost Management***		***0***
Form/Template	*PP 4.1.1*	*Interim Payment Certificate (Sample)*		*0*
Form/Template	*PP 4.1.2*	*Day-works Sheet*		*0*
Form/Template	*PP 4.1.3*	*Cost Control Summary Chart*		*0*
Internal tool	*PP 4.1.4*	*Cash Disbursement follow-up table & S Curve*		*0*
Procedure	***PP 4.2***	***Variations***		***0***
Form/Template	*PP 4.2.1*	*Variation Order Record Template*		*0*
Form/Template	*PP 4.2.2*	*Variation Order Register*		*0*
Procedure	***PP 4.3***	***Management of claim and disputes***		***0***
Report	*PP 4.3.1*	*Clauses including specific requirements for claim*		*0*
Form/Template	*PP 4.3.2*	*Claims & Dispute Registers*		*0*

In italic are shown the documents which refers to the Construction Supervision Manual

Appendix 4 – Draft Table of Content of Supervision Manual

Chapter 1 - Introduction
1.1. Background
1.2. Purpose of this document
1.3. Definition of the quality assurance framework
Chapter 2 - Project Organization
2.1. Description of the Parties and Stakeholders
2.1.1. The Employer
2.1.2. The Engineer
2.1.3. The Contractors
2.2. Consultant Organization
2.2.1 Organisational Chart of the Supervision Team
2.2.2. Position description and duties
2.2.3. Authorities and Delegation
2.2.4 Overview of the Site Supervision Teams Duties
2.2.5. Due diligence
Chapter 3 – Civil Works Contract Administration
3.1. Documents Submissions and Approvals
3.2. Construction Milestones and Schedules
3.2.1. General
3.2.2. Supply of information to the Contractor
3.2.3. Work Program
3.2.4. Progress Monitoring
3.3. Drawings
3.3.1. Design Drawings
3.3.2. Management of Design Changes
3.3.3. Contractor Shop Drawings
3.4. Sub-Contracting
3.5. Starting of the works
3.6. Financial Management
3.6.1. Introduction
3.6.2. Method of Measurement
3.6.3. Setting Out- Verification of Quantities
3.6.4. Control of Contractor's quantities
3.6.5. Cost Control
3.6.6. Interim Payment Certificate
3.6.8. Variation Orders
3.6.9. Forecast Final Costs
3.7. Compensation Events
3.7.1. General
3.7.2. Notice of Intention to Claim
3.7.3. Recording relevant details
3.7.4. Formal submission of a Claim
3.8. Handing Over and Final Documentation
3.8.1. Recording relevant details
3.8.2. As-Built Drawings
3.8.3. Final Take Off Quantities and Amounts
3.8.4. Final Billing
Chapter 4 - Quality Control Specific Guidelines and Procedures
4.1. Approval of Contractor's Quality Management System
4.1.1. Approve Contractor's QAP
4.1.2. Approve Contractor's laboratory
4.2. Approval of Equipment, Staff, Materials and mix-design
4.2.1. Equipment and Machineries
4.2.2. Contractor's Personnel
4.2.3. Materials and Mix Design
4.3. Construction Methodologies
4.3.1. General
4.3.2. Contents and Approval of Methodologies
4.4. Organisation of PIC exterior quality control
4.5. Implementation of exterior quality control
4.5.1. Quality Control of day-to-day activity
4.5.2. Quality Control of materials
4.5.3. Surveying Guidelines and procedures
4.6. Requests For Inspection (RFI forms)
4.6.1. Submittal of RFIs
4.6.2. Processing of RFIs
4.6.3. Comments
4.7. Site Instruction
4.8. Site Inspection, Daily Reports and Diary
4.8.1. Site Inspection
4.8.2. Daily and Weekly Reports
4.8.3. Site approval and checking procedures
4.9. Management of Non-Conformities
4.9.1. Following actions
4.10. Acceptance of works
4.11. Environmental and Social Control
4.11.1. Introduction
4.11.2. Pre-Construction / Early Construction Period Activities
4.11.3. Environmental Monitoring Program
4.11.4. Daily Control
4.11.5. Grievance Redress Mechanism
4.12. Health and Safety
4.12.1. Worker's Safety
4.12.2. Traffic Management
Chapter 5 - Project Coordination
5.1. Meetings
5.1.1. Weekly Meetings
5.1.2. Meetings with Employer
5.1.3. Monthly Progress Meetings
5.2. Reporting
5.2.1. Daily Report
5.2.2. Weekly Report
5.2.3. Monthly Progress Report
5.2.4. Quarterly Progress Report
Chapter 6 - Management of communications
6.1. Communication schedule
6.2. Matrix of Communication
6.3. Management of Correspondence
6.3.1. Incoming correspondence
6.3.2. Outgoing correspondence
6.3.3. Types of correspondence
6.4. Filing System
6.4.1. Team Leader's Office
6.4.2. Resident Engineer's Office
Annexes
Annex 1: Tasks Assignments
Annex 1A: Chief Resident Engineer Tasks Assignment
Annex 1B: Resident Engineer's Task Assignment
Annex 1C: Quality Engineer's Tasks Assignment
Annex 1D: Quantity Surveyor's Tasks Assignment
Annex 1E: Structural Engineer's Task Assignment
Annex 1F: Engineering Geologist Tasks Assignment
Annex 1G: Geotechnical Engineer Tasks Assignment
Annex 1H: Material Engineer Tasks Assignment
Annex 1I: Hydrology/Sedimentation Spec. Tasks Assignment
Annex 1J: Environmental Specialist: Tasks Assignment
Annex 1K: Safeguard Specialist Tasks Assignment
Annex 1L: Land Surveyor Task Assignment
Annex 1K: Laboratory Technician Tasks Assignment 62
Annex 1M: Site Inspector Tasks Assignment
Annex 1K: Office Manager Tasks Assignment
Annex 1L: Accountant Tasks Assignment
Annex 1L: Civil Works Secretary Tasks Assignment
Annex 1L: Civil Works Secretary Tasks Assignment
Annex 2: Letter of delegation (FIDIC2010 harmonised)
Annex 3: Template Integrity Pact
Annex 4: Guidelines for approval of Contractor's QAP
Annex 5: Control Plan
Annex 6: Forms prepared by the Engineer
Annex 6A: Minutes of Monthly Management Meeting
Annex 6B: Template of Monthly Progress Report
Annex 6C: Daily Report
Annex 6D: Weekly Report
Annex 6E: Environmental Checklist
Annex 6F: HSE Checklist
Annex 6G: Site Instruction
Annex 6H: Notice of Construction
Annex 6I: Request For Inspection
Annex 6K: Site Measurement
Annex 6L: Surveillance Record Sheet
Annex 6M: Registers

Appendix 5 – Job descriptions Engineering Geologist / Geotechnical engineer and Materials Engineer

Job Description - Engineering Geologist

Position :	**Engineering Geologist**					
The Post is involved with the following contracts and phases:						
Packages	**C1**	**C2**	**C3**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Engineering Geologist undertakes overall management of quality control related to the Construction Works. His main duties are:

A/ Before the construction period:

- Managing and control of the in-situ investigations;
- Logging of drill holes and trenches to international best practice standards;
- Inspecting, photographing and ensuring proper storage of drilled cores;
- Selecting drilled core samples to undergo laboratory testing;
- Evaluating and commenting on the results of laboratory and in-situ tests;
- Deciding when the required maximum drilling depth has been reached;
- Mapping rock outcrops with tectonic logging of discontinuity planes;
- Evaluating all findings and establishing geological sections for each structure with the results of tectonic logging and permeability testing;
- Carrying out geological and geotechnical mapping and analysis;
- Incorporating the results of geophysical exploration (if any) into the geological sections;
- Drawing conclusions and writing a final report about the geotechnical conditions;
- Evaluating and commenting on Contractor's tender documents with respect to geotechnical aspects;
- Supporting the preparation of Phase 2 investments by advising on the results of the borehole investigations, in-situ and laboratory tests, for the planned works.

C/ During the construction period

- Assisting the Geotechnical Engineer(s) in the design review for permanent works and review of Contractors temporary support proposals;
- Provide technical backstopping on designs, technical standards and specifications

Assisted by:

- Materials Engineer;
- Geotechnical Engineer;
- Laborartory Technician

Reports to:

- Chief Resident Engineer/Team Leader, and in his absnece to the :
- Resident Engineer/Deputy Team Leader

Job Description – Geotechnical Engineer

-

Position :	**Geotechnical Engineer**

The Post is involved with the following contracts and phases:

Packages	**C1**	**C2**	**C3**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Geotechnical Engineer duties include, but are not limited to, the following:

- Supporting the Material Engineer (National), as necessary;
- Reviewing and commenting the available detailed designs, stability and seismic hazard analyses, and on the various types of construction materials;
- When needed during construction, prepare and control in-situ investigations;
- Working with the Material Engineer and the Engineering Geologist to establish the need for foundation treatment measures and the availability of suitable local construction materials and review the appropriate material parameters to be applied in the analysis and design of the works;
- Reviewing design for permanent works and Contractor's temporary support proposals;
- Assisting Engineering Geologist to carry out geological and geotechnical mapping and analysis;
- Incorporating the results of geophysical exploration (if any) into the geological sections;
- Assist Material Engineer to recording rock and soil conditions as the work progresses;
- Regularly review the geotechnical conditions at the sites;
- Drawing conclusions and writing a final report about the geotechnical conditions;
- Training of PIU staff.

Assisted by:

- Material Engineer
- Laboratory Technician

Reports to:

- Resident Engineer
- Quality Engineer

Job Description - Materials Engineer

Position :	**Materials Engineer**

The Post is involved with the following contracts and phases:

Packages	**C1**	**C2**	**C3**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Material Engineer duties include, but are not limited to, the following:

- Overall materials quality control and quality administration/ assurance;
- Specify and monitor quality assurance plans and quality control tests being conducted in all packages;
- Working with the Engineering Geologist and the Geotechnical Engineer to establish the need for foundation treatment measures and the availability of suitable local construction materials and review the appropriate material parameters to be applied in the analysis and design of the works;
- Provide protocols for material testing; assist with test formats, procedures of quality control tests;
- Verify and approve material test sources, supply and testing methods;
- Monitoring all instrumentation and testing activities, as required;
- Undertake test check of construction material samples
- Supervising in-situ testing;
- Supervise laboratory and in-situ compaction tests for both concrete mixes and fill materials and determine the density at optimum water content for each fill material;
- Verify and approve the quality control test reports;
- Provide technical backstopping on designs, technical standards and specifications
- Ensure that the Contractor provides adequate quantities of material for construction;
- Review details including the foundation treatments, embankment design and zoning, seepage control measures, etc.;
- Checking the Contractor's equipment, machines and personnel and recommend additional resources as needed;
- Checking the Contractor's screening plant on proper grain size gradations, and storage facilities;
- Ensuring that the Contractor keeps the fill material at optimum moisture content before and during filling and compacting;
- Checking the obtained densities after compaction and instruct the Contractor to correct their process, if the specified criteria are not obtained;
- Recording rock and soil conditions as the work progresses;
- Regularly review the geological and geotechnical conditions at the sites;
- Monitoring preparation of as-built drawings, for materials sourcing and quality control.

Assisted by:

- Laboratory Technician

Reports to:

- Quality Engineer, and in his absence to the
- Resident Engineer

Appendix 6 – Job descriptions Environmental Specialist and Environmentalist

Position :	**Environmental Specialist**					
The Post is involved with the following contracts and phases						
Packages	**CW-01**	**CW-02**	**CW-03**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Environmental Specialist duties includes, but are not limited to, the following:

- Reviewing the EIA, SIA and EMP and the conditions of approval of NEC;.
- Reviewing C-EMP and HSE for individual construction contracts. Check compliance with IEE, EMP and EARF requirements;
- Ensure understanding of the EMP and domestic environmental laws and regulations requirements particularly on the required clearances and permits;
- Ensure that each contractor has suitably experienced personnel in the key environmental safeguards positions and that these personnel are mobilized within one month of Contract Award;
- Advise the Contractor on how to comply with requirements to address non-compliance
- Conduct environmental site induction training to Contractor, as per need
- Prepare template for environmental and HSE chapter of PIC Monthly Progress Report
- Check and assist CRE for managing Contractor's claims for additional cost to address environmental impact
- Prepare a detailed TOR for the propose baseline study and monitoring BMBMS of flora and fauna ecosystem in Zone C
- In consultation with each contractor in Zone A prepare an agreement on baseline monitoring locations and responsibility for collection and input to the Project GIS;
- Review bidding documents prepared for each contractor in Zone A and ensure that all safeguards requirements from the EIA and NEC approval are included;
- Prepare the semi-annual environmental monitoring reports (SAEMP)
- Assist the Resident Engineer with regard to environmental issues.

Reports to:

- Resident Engineer, and in his absence to the
- Chief Resident Engineer

Coordinate action with

- Communication and Health & Safety Specialist

Job Description – Environmentalist

Position :	**Environmentalist**

The Post is involved with the following contracts and phases

Packages	**CW-01**	**CW-02**	**CW-03**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Environmentalist is responsible for

- Assisting to review the EIA, SIA and EMP and the conditions of approval of NEC;.
- Assisting to review the C-EMP and HSE for individual construction contracts and to deck compliance with IEE, EMP and EARF requirements;
- Review of sub-plans required in the EMP ;
- Assisting to ensure understanding of the EMP and domestic environmental laws and regulations requirements;
- Ensure contractors secure necessary permits and clearances ;
- Monitoring C-EMP, including HSE issues, on monthly basis ;
- In case, preparing notice of Non-Compliance;
- Advising the Contractor on how to comply with requirements to address non-compliance;
- Conduct environmental site induction training to Contractor, as per need ;
- Prepare environmental chapter of PIC Monthly Progress Report;
- Assisting CRE for managing Contractor's claims for additional cost to address environmental impact;
- Assist to prepare a detailed TOR for the propose baseline study and monitoring BMBMS of flora and fauna ecosystem in Zone C
- Supervising the implementation of baseline study in Zone C
- Assiting to prepare semi-annual environmental monitoring reports (SAEMP)
- Assist the Resident Engineer with regard to environmental issues and HSE issues.

Reports to:

- Environmental Specialist or,
- Resident Engineer, and in his absence to the
- Chief Resident Engineer

Coordinates action with

- Safeguard Specialist

Appendix 7 - Example of a procedure – Integrity Pact

Project	Phuentsholing Town Development Project
Funding	ADB
Employer	CDCL
Engineer	Egis International

Quality Assurance Plan

Procedure PP 2.1.2,

Form of Integrity Pact

We the undersigned, as the authorized representative of the company or companies stated below in relation to the construction of the CW01 Works to be carried out Phuentsholing, Chukha, Bhutan certify that:

1. We have not, and will not, in anyway be involved in corrupt, collusive, coercive, fraudulent, obstructive, or illegal activities with any other party in relation to the construction process, implementation and completion of the above works;
2. We will report to the relevant authorities if we become aware of any indication of corrupt, collusive, coercive, fraudulent, obstructive or illegal activities with any other party in relation to the construction process, implementation and completion of the above works;
3. We undertake to act all the times in an honest, transparent and professional manner, and to devote our best efforts to achieving the best possible result at all stages, during the construction process, implementation and completion of the above works;
4. If we violate any of undertaking of this Integrity Pact, we are prepared to accept any moral sanction, administrative sanctions, to pay compensation and/or to face criminal charges in accordance with the relevant regulations.

   For and on behalf of the:

Engineer	**Contractor**
1/ Name : In the Capacity of: PIC Team Leade Signed:	1/ Name : In the Capacity of: Project Manager Signed:
2/ Name : In the Capacity of: Site Supervision Engineer Signed:	2/ Name : In the Capacity of: Site Operational Manager Signed:
3/ Name : In the Capacity of: Site Supervision Engineer Signed:	3/ Name : In the Capacity of: Site Engineering Manager Signed:
4/ Name : In the Capacity of: Quality Engineer Signed:	4/ Name : In the Capacity of: Site Administration Manager Signed:

Appendix 8 - In & Out Correspondence Register (30 Nov. 2018)

Appendix PP 1.3.7a - Outgoing correspondences

PIC Ref n°	From	To	Date sent	Date received	Copy to	Attach (N°)	Subject
PIC/EMP/TL/2018/001	PIC, TL	PM, CDCL	06.Nov.2018	06.Nov.2018	PIC Members		Mobilization of Experts
PIC/EMP/TL/2018/002	PIC, TL	PM, CDCL	12.Nov.2018	12.Nov.2018	PIC Members	6 copies IR	Submission Inception Report (V01 - Draft)
PIC/CW01/CRE/2018/003	PIC, CRE	PM, CWO1	16.Nov.2018	16.Nov.2018	PIU, PM		Temporary export of equipment
PIC/EMP/TL/2018/004	PIC, TL	PM,CDCL	16.Nov.2018	16.Nov.2018	PIC Members		Mobilization/Demobilization of National Personnel
PIC/CW01/CRE/2018/005	PIC, CRE	PM, CWO1	17.Nov.2018	17.Nov.2018	PIU, PM	Information Board	Project Information Board
PIC/CW01/CRE/CS/2018/006	PIC, CRE	PM, CWO1	17.Nov.2018	20.Nov.2018	PIU, PM		CAR Policy
PIC/CWO1/CS/TL/2018/007	PIC, CRE	PM, CWO1	20.Nov.2018	20.Nov.2018	PIU, PM	Provisional Sums Items & Specifications	Request for quotation for procurement of provisional Sums items
PIC/EMP/CONT/TL/2018/008	PIC, TL	PM, CDCL	22.Nov.2018	22.Nov.2018	PIC Members		Civil Works Contract CW01 – Request of documentation
PIC/EMP/TL/2018/009	PIC, TL	PM, CDCL	22.Nov.2018	22.Nov.2018	PIC Members		Change RJ work permit destination
PIC/CWO1/QLE/TL/2018/010	PIC, TL	PM, CWO1	22.Nov.2018	23.Nov.2018	PIU, PM & PIC Members		Method Statement for Site Installation and Prefab Installation
PIC/CW01/CRE/2018/011	PIC, CRE	PM, CWO1	22.Nov.2018	23.Nov.2018	PIU, PM & PIC Members		Submission of Contractor's Environmental Management Plan (CEMP)
PIC/CWO1/CRE/2018/012	PIC, CRE	PM, CWO1	23.Nov.2018	23.Nov.2018	PIU, PM		Provision of electricity main supply line to /near the site with transformer from Bhutan Power Corporation (BPC) Grid
PIC/CWO1/CS/TL/2018/013	PIC, TL	PM, CWO1	23.Nov.2018	26.Nov.2018	PIU, PM & PIC Members		Submission of Workplan
PIC/CWO1/CRE/2018/014	PIC, CRE	PM, CWO1	26.Nov.2018	26.Nov.2018	PIU, PM		Submission of Cash Flow & S- Curve
PIC/ADM/2018/015	PIC, TL	BoB	26.Nov.2018	26.Nov.2018	PIC TL	Delegation of Authorities from Egis International	Requesting for operating Egis International Account No: 100230587 & 100232926
ASI/2018/118	ASI/PD	PD, CDCL	26.Nov.2018	26.Nov.2018	PIC TL, Gyaltshen		Work Permit for foreign personnel
PIC/CWO1/CRE/2018/16	PIC, CRE	PM, CWO1	26.Nov.2018	28.Nov.2018			Notice Inviting for Operating Egis Quotations for Procurement of Provisional Sum Items
PIC/CWO1/CRE/2018/017	PIC, CRE	PM, CWO1	27.Nov.2018	27.Nov.2018	PIU. PM		Submission of Contractor's Method Statement for Survey Works
PIC/CWO1/CS/TL/2018/018	PIC, TL	PM, CWO1	27.Nov.2018	27.Nov.2018	PIU, PM & PIC Members		Quality AssurancePlan/Project Quality Plan
PIC/CWO1/CRE/2018/019	PIC, CRE	PM, CWO1	28.Nov.2018	28.Nov.2018	PIU, PM	RFI Form	Submission of Quality Control Formats
PIC/CWO1/CRE/2018/020	PIC, CRE	PM, CWO1	29.Nov.2018	29.Nov.2018	PIU, PM, PIC, QLE		Submission of Work Schedule
PIC/CWO1/CS/TL/2018/021	PIC, CRE	PM, CWO1	29.Nov.2018	29.Nov.2018	PIU, PM & PIC Members		Quality AssurancePlan/Project Quality Plan (Bis
PIC/ADM/TL/2018/022	PIC, TL	BoB	29.Nov.2018	29.Nov.2018			Request for USD in Cash fro Expat
PIC/EMP/TL/2018/023	PIC, TL	PM, CDCL	30.Nov.2018	30.Nov.2018	QLE		Adaptation of Design for River Trainingworks on Zone A
ASI/2018/119	ASI/PD	PD, CDCL	30.Nov.2018	30.Nov.2018	PIC TL, Gyaltshen		Mobilization Environmental Specialist
ASI/2018/123	ASI/PD	PD, CDCL	30.Nov.2018	30.Nov.2018	PIC TL, Gyaltshen		Procurement of Vehicles

Appendix PP 1.3.7b - Incoming correspondences

Ref n°	From	To	Letter Date	Date received	Copy to	Attach (N°)	Subject
T-6463/43/5357	CONT CW01	CDCL	17.July.2018		PIC, TL		Submission of Performance Bank Guarantee
CDCL/2018/PTDP/CW-01/15/2932	CDCL	CONT CW01	12.Sept.2018		PIC, TL		Letter to proceed, Contract No. ALDTP-CW-01
CDCL/2018/PTDP/PIC/14/2944	CDCL	PIC	17.Sept.2018				Letter to proceed
CDCL/2018/PTDP/PIC/14/2977	CDCL	PIC	01.Oct.2018				Consultant's Mobilization
AFC/6462/RRC/013	CONT CW01	CDCL	11.Oct.2018		PIC, TL	Project work plan	Submission of project workplan for PDTDP
CDCL/2018/ID/PTDP/PIC/14/3021	CDCL	PIC	11.Oct.2018				Temporary Replacement of Quality Control/Contruction Manager
CDCL/2018/PTDP/PIU/01/08	CDCL	PIC	03.Nov.2018	03.Nov.2018		Annexures 1 to13	Submission of hard copies of intergrated detailed project (IDPR) report of PTDP
AFC/6462/RRC/018	CONT CW01	PIC	06.Nov.2018	06.Nov.2018		Work plan	Submission of work plan
AFC/6462/RRC/019	CONT CW01	PIC	06.Nov.2018	06.Nov.2018		Organizational chart	Submission of Project Organizational chart
AFC/6462/RRC/020	CONT CW01	PIC	07.Nov.2018	07.Nov.2018		Statement for Instaltion Works	Submission of Method Statement for Installation Work
AFC/6462/RRC/021	CONT CW01	PIC	07.Nov.2018	07.Nov.2018		Project Qaulity Plan	Submission of Quality Assurance Plan
AFC/6462/RRC/022	CONT CW01	PIC	07.Nov.2018	07.Nov.2018		Contractor's Enviromental Manaement Plan	Submission of Enviromental Management Plan
AFC/6462/RRC/023	CONT CW01	PIC	07.Nov.2018	07.Nov.2018		Statement for Survey Works	Submission of Method Statement for Survey Works
AFC/6462/RRC/024	CONT CW01	PIC	07.Nov.2018	07.Nov.2018			Mobilization of Equipment for PTDP, Phuntsholing, Bhutan-Temporary Exports Equipments
AFC/6462/RRC/025	CONT CW01	PIC	09.Nov.2018	09.Nov.2018		Draft Contractor's All Risk (CAR) policy from RICB	Submission of Draft Contractor's All Risk (CAR) Policy
AFC/6462/RRC/026	CONT CW01	PIC	10.Nov.2018	10.Nov.2018			Submission of Cash Flow and S-Curve
CDCL/PTDP/2018-19/04/10	CDCL	PIC	20.Nov.2018	20.Nov.2018			Deputation of Site Supervisor
CDCL/PTDP/2018-19/04/12	CDCL	PIC	20.Nov.2018	20.Nov.2018			Approval for mobilization of Keys Experts
CDCL/2018/PTDP/PIU/05/14	CDCL	CWO1	21.Nov.2018	21.Nov.2018	PIC, TL		Appointment of Employer's Representrative
CDCL/2018/ID/PTDP/PIU/3157	CDCL	PIC	22.Nov.2018	22.Nov.2018	PIC, TL		Purchase of Office Equipment
AFC/6462/RRC/029	CONT CW01	PIC	21.Nov.2018	22.Nov.2018			Zone A to B Gradient Details and Zone A Part Plan-) 01 to 08- Longitudinal Sections- at Diaphragm Wall and Upper Walkway-
CDCL/2018/PTDP/PIU/04/16	CDCL	PIC	22.Nov.2018	22.Nov.2018			Deputation of Site Surveyor
AFC/6462/RRC/030	CONT CW01	PIC	23.Nov.2018	23.Nov.2018			Provision of Vehicle under item No. 102 of BOQ Bill no 1- General Items
AFC/6462/RRC/031	CONT CW01	PIC	23.Nov.2018	24.Nov.2018		Quotation for Provisional Sum items	Notice inviting quotation for procurement of provisional sum items
AFC/6462/RRC/032	CONT CW01	PIC	24.Nov.2018	24.Nov.2018		Contractor's All Risk Policy	Submission of Contractor's All Risk (CAR) Policy
AFC/6462/RRC/033	CONT CW01	PIC	24.Nov.2018	24.Nov.2018		Contractor's Plants & Machinary Policy	Submision of Contractor's Plants & Machinary Policy
AFC/6462/RRC/034	CONT CW01	PIC	26.Nov.2018	26.Nov.2018		Quality Control Formats	Submission of Quality Control Formats
AFC/6462/RRC/035	CONT CW01	PIC	26.Nov.2018	26.Nov.2018		Work Schedule	Submission of Work Schedule
AFC/6462/RRC/036	CONT CW01	PIC	26.Nov.2018	26.Nov.2018		Quotation and Comprehensive Statements	Quotations and Comparative Statements for Provision of Electricity Main Supply line to/neat the site with transformer from
AFC/6462/RRC/037	CONT CW01	PIC	27.Nov.2018	28.Nov.2018			Regarding Intimation of Leave of Project Manager
AFC/6462/RRC/038	CONT CW01	PIC	27.Nov.2018	27.Nov.2018		Method Statement For Guide Wall, Diaphragm Wall	Submission of Method Statement for Guide Wall, Diaphragm Wall and In - situ Civil Works
AFC/6462/RRC/RRC/039	CONT CW01	PIC	28.Nov.2018	28.Nov.2018		Mix design Sheets & Culculations	Submission of Concrete Trail Mix Designs
CDCL/2018/PTDP/PIU/04/17	CDCL	PIC	29.Nov.2018	29.Nov.2018		7 Documents	Civil Works Contract CWO1- Request Documentation
AFC/6462/RRC/RRC/042	CONT CW01	PIC	30.Nov.2018	30.Nov.2018		Folder w/ 4 Annexures	Submission Annexure I to IV to C-EMP

PTDP: Phuntsholing Township Development Project
CDCL: Construction Development Company Limited
PMU/PIU: Project Management Unit / I
EMP: Employer
CONT: Contractor CONT CW01: AFCONS
ADB: Asian Development Bank (Funding Agency)
ADM: Other Parties (utilities, Bank...)

ASI: Egis Asia Department
PD: Project Director
PIC: Project Implementation Consultant
CRE/TL: Chief Resident Engineer / Team Leader
RE: Resident Engineer
QLE: Quality Control Engineer

Appendix 9 - Template of Monthly Progress Report

No.	DESCRIPTION	ENTRY	DATE FIRST ENTRY	ACTION BY WHOM	DATE REQUIRED
0.0	Safety Moment				
1.0	**PIC'S ESTABLISHMENT**				
1.1	PIC Staff	- any new staff / people away on leave etc - visitors [who, when, for what purpose]			
1.2	PIC Office	- has it been built / temporary facilities / once built is it being maintained / communications; telephone, email			
1.3	Transportation	- any problems with the number, maintenance of vehicles			
1.4	PIC QAP / Construction Supervision Manual	- status / any revisions ?			
1.5	Weather Conditions	- describe prevailing conditions and those during the month. - days recorded as "rain days"			
2.0	**CONTRACTOR'S ESTABLISHMENT**				
2.1	Project Management	- contractor's management / is the Construction Manager OK / any problems with number or ability of contractors staff.			
2.2	Manpower	- has the contractor furnished the manpower schedule in their monthly report - are the number and ability of workforce adequate - review mobilisation schedule – is the manpower in accordance with such			
2.3	Plant and Equipment	- has the contractor furnished the manpower schedule in their monthly report - are the number and ability of workforce adequate - review mobilisation schedule – is the manpower in accordance with such			
2.4	Quarry / Crusher	- what is the status of the quarry, licence etc [how much material extracted this month] - what is the status of the crusher [name type production capacity]			
2.5	Pre-casting Yard	- what is the status of the Yard [type product / production capacity] - calibration / forms / weigh scales			
2.6	Borrow Pits / Disposal Sites	- status of approval / any new submittals			
2.7	Other	_____			
3.0	**GENERAL REQUIREMENTS**				
3.1	Possession of Site	- Area given Land or Yard given			
3.2	Obstructions				

No.	DESCRIPTION	ENTRY	DATE FIRST ENTRY	ACTION BY WHOM	DATE REQUIRED
[a]	Utilities [electrical poles etc]	number identified for relocation – status relocation			
[b]	Cultural properties	- ditto -			
[c]	Community properties	- ditto -			
[d]	Project affected persons	- have they been identified / are they in the register / compensation assessment / payment made / relocation – date [attach relevant tables]			
3.3	Contract Insurance	is it in place / premiums paid / evidence submitted			
3.4	Safety	- any NCR / CAR issued - accidents register created / any serious accidents			
3.5	Maintenance of Site Road	- pot hole fillings / timely / quality - grading			
3.6	Environment	- implementation of the C-EMP - any NCR / CAR issued			
3.7	Social [Grievance Redressed]	- any grievances registered during the month / Grievance Committee meetings [when, what cases heard]			
3.8	Design	- design submissions / Shop drawings submission - design / shop drawings reviews - site instructions issues - variations instructed			
3.9	Survey	- establishment of TBM's / Permanent BMs - Location D-wall, others work main items - cross sections of river and riparian land - buildings			
4.0	**OPERATIONS**	**For each task, describe target for the month versus achievement / if not OK why not / remedial action / time scale / + quality of that work. / shortage of material supply or production.**			
4.1	1. General Items				
4.2	2a. River Training Works				
4.3	2b. Embankment Works				
4.4	2c. General Earth Filling				
4.5	2d. Promenade Finishing				
4.6	2e. Irrigation & Landscape				
4.7	Provisional Sum				
4.8	Dayworks				
5.0	**QUALITY ASSURANCE**				
5.1	Contractor Quality Assurance Plan & Quality Control Plan	- status / revisions / method statements / procedures			

No.	DESCRIPTION	ENTRY	DATE FIRST ENTRY	ACTION BY WHOM	DATE REQUIRED
5.2	Material Source Approval [& mix designs]	- any new applications			
5.3	Materials Testing	- functioning OK / laboratory equipment / technicians - test frequency			
5.4	Inspection	- are there enough inspectors / are they doing their job properly. - are the checklists being filled in properly			
5.5	Non Conformance Register	- new NCR reported [internal] - new NCR reported [external]			
5.6	Corrective Action Report	- new CAR reported [internal] - new CAR reported [external]			
6.0	**FINANCIAL**				
6.1	Interim Payment Statements	- latest submittal / correct format / supporting documentation			
6.2	Interim Payment Certificates	[i]- - corrections implemented – submittal dates			
		[ii]			
6.3	New Unit Rates				
6.4	Claims				
[a]	Extension of Time				
[b]	Financial				
6.5	Disputes				
6.6	Arbitrations				
7.0	**CONTRACTUAL**				
7.1	Contract Monthly Reports	- are they being submitted on time / format			
7.2	Progress	- discuss overall progress each item - problems causing delay			
7.3	Programme	– record when the latest programme submitted and current version number – based on 7.2 does it require updating.			

Signatures:

PIC		Contractor	PIU
Prepared by Resident Engineer	*Checked by* Chief Resident Engineer	*Approved by* Site Manager	*Received by* Project Manager
Date:_____	Date:_____	Date:_____	Date:_____

Appendix 10 - MIS system architecture

Implementation procedures using MIS

Standard formats and reference will be used to implement the Management Information System (MIS), in particular related to the Quality Assurance plan will be guided and maintain through the Management information system.

The MIS system architecture will have to process:

1. Data Capturing
2. Data storage
3. Processing
4. Information and distribution
5. Report generation

A set of MIS software modules is shown in the Figure App-8-1 here-after.

Source: Aconex

Figure App-10-1: MIS Software possible modules

Software specifications.

Software application is identified based on the requirement of the Projects and work flow activities. Once the application is confirmed and procured from the company till project completion, the supervision and coordination plan is done through this application. The MIS features is accessible to all the authorized users using its application, all the officers involved in this communication will be using the passwords, and rights to access information will be granted in accordance to roles and responsibilities of the Agent. The Project activities to be considered will be those described in the Quality Assurance plan (QAP).

Some of the highlights of the software application to be use by Egis International, PIC would be:

1/ Access of data and capturing of information

Official letters, reports, documents and files being received will be captured and store in the MIS. The system will be monitored of any correspondence received and sent acknowledgement to designated or authorized officers of the PIU and clients offices parties.

Description of data and documents to be captured as per the QAP. Data capturing designated Officers:

- Office/Administrative Manager (PIC)
- IT in-charge (PIC)
- Assistant Office/Administrative Manager - MIS System Coordinator (PIC)

2/ Processing and distribution

Any source or information documents or letters being stored and captured in the MIS is accessible to authorized officers from PIC, PIU and clients offices, as per their rights to access.

Designated Monitoring and controlling Officers for dispatch of data captured/stored in MIS: Resident Engineer/ Deputy Team Leader (PIC).

3/ Report Generation/Filing system

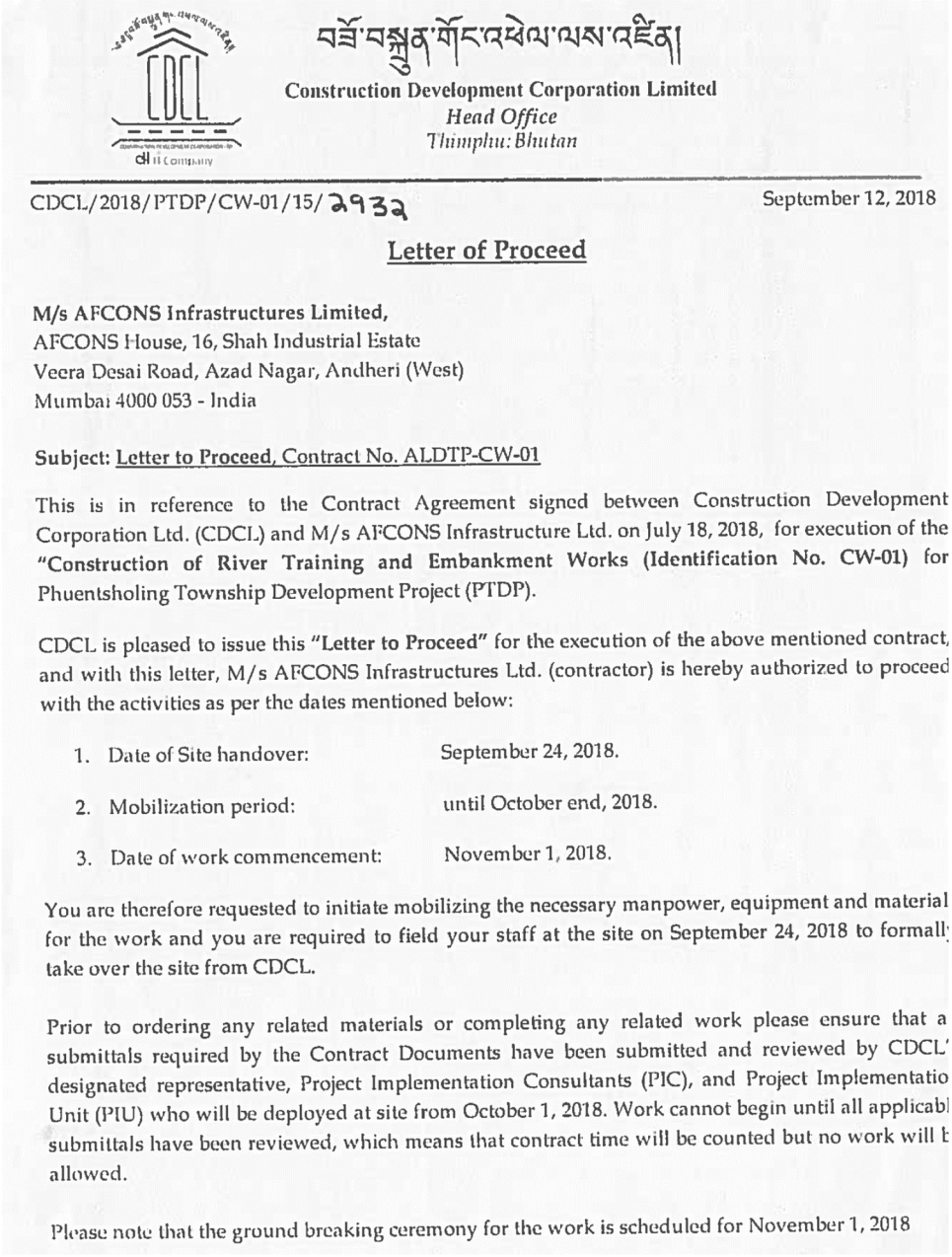
The operation of coordination and communication will be completed in the MIS system, and MIS will seek for generation of report, letter or documents for filling management. It will print it and stored in the files manually for future reference and auditing purposes.

Software identification (besides in-house development):

Example of feature a MIS Software (Aconex, E-builder, Precore, WorkflowMax, Skysite)

Appendix 11 – Project sign board at site camp

Appendix 12 – Letter to Proceed (12 Sep.2018)



བཟོ་བསྐྲུན་གོང་འཕེལ་ལས་འཛིན།
Construction Development Corporation Limited
Head Office
Thimphu: Bhutan

CDCL/2018/PTDP/CW-01/15/ ২৭৩২ September 12, 2018

Letter of Proceed

M/s AFCONS Infrastructures Limited,
AFCONS House, 16, Shah Industrial Estate
Veera Desai Road, Azad Nagar, Andheri (West)
Mumbai 4000 053 - India

Subject: Letter to Proceed, Contract No. ALDTP-CW-01

This is in reference to the Contract Agreement signed between Construction Development Corporation Ltd. (CDCL) and M/s AFCONS Infrastructure Ltd. on July 18, 2018, for execution of the **"Construction of River Training and Embankment Works (Identification No. CW-01)** for Phuentsholing Township Development Project (PTDP).

CDCL is pleased to issue this **"Letter to Proceed"** for the execution of the above mentioned contract, and with this letter, M/s AFCONS Infrastructures Ltd. (contractor) is hereby authorized to proceed with the activities as per the dates mentioned below:

1. Date of Site handover: September 24, 2018.
2. Mobilization period: until October end, 2018.
3. Date of work commencement: November 1, 2018.

You are therefore requested to initiate mobilizing the necessary manpower, equipment and material for the work and you are required to field your staff at the site on September 24, 2018 to formall take over the site from CDCL.

Prior to ordering any related materials or completing any related work please ensure that a submittals required by the Contract Documents have been submitted and reviewed by CDCL' designated representative, Project Implementation Consultants (PIC), and Project Implementatio Unit (PIU) who will be deployed at site from October 1, 2018. Work cannot begin until all applicabl submittals have been reviewed, which means that contract time will be counted but no work will b allowed.

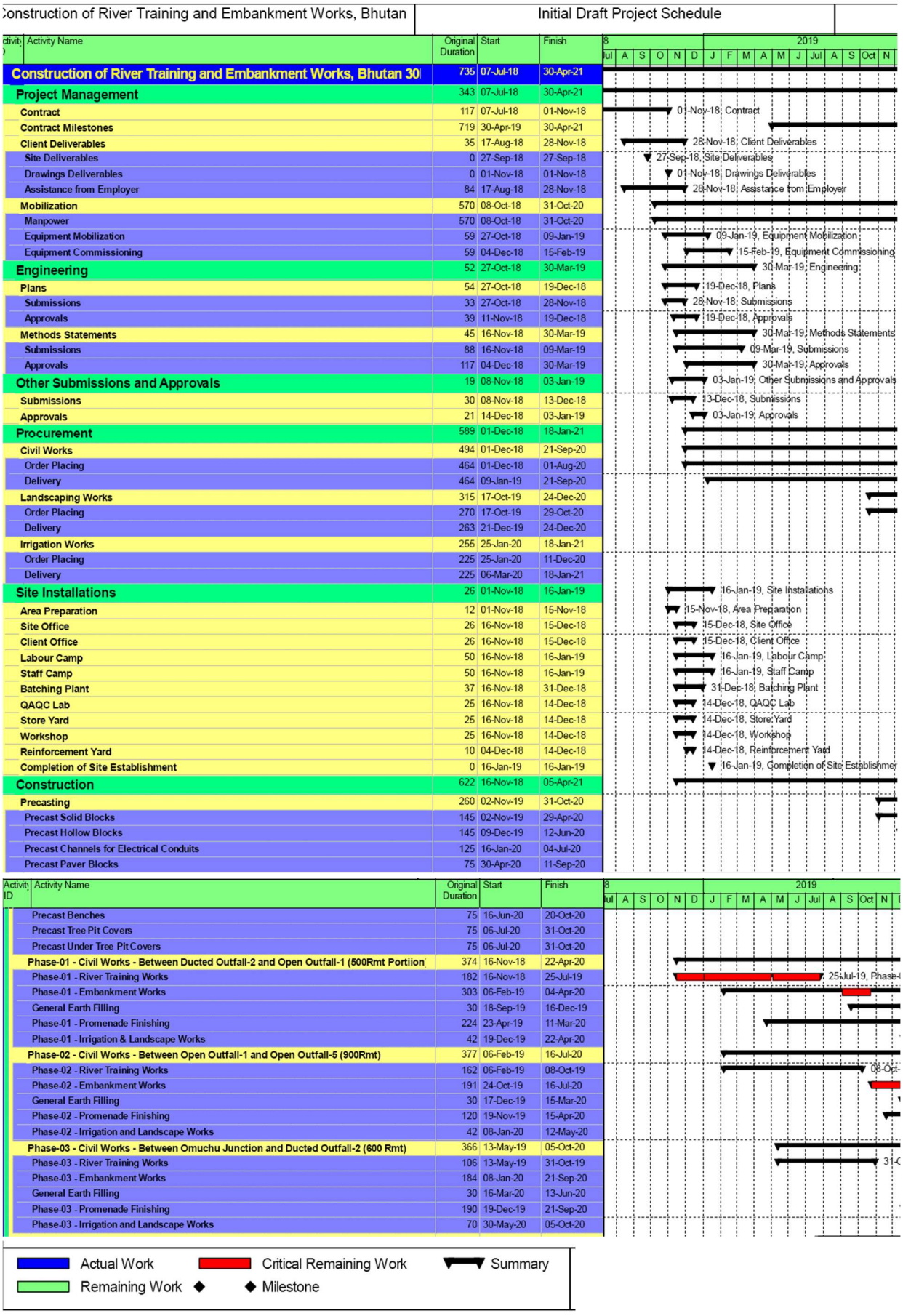
Please note that the ground breaking ceremony for the work is scheduled for November 1, 2018

Sincerely,

(Phuntsho Gyeltshen)
Chief Executive Officer

Copy to:
1. Dasho CEO, DHI, for kind information
2. Director, DEC, for information
3. Director, DCS, for information
4. Project Director/GM, ID for information and necessary action.

Appendix 13 - Contractor Main Works Schedule (21 Nov.2018)



Appendix 14 – Request submission of Works Schedule (26 Nov.2018)

egis | Gyaltshen Consultancy | **Phuentsholing Township Development Project**
Project Implementation Consultant

EGIS International
Phuentsholing Office: Flat n°7, Lyonpo Kuenzang Dorji Building
Near Consulate Office of India
Phuentsholing, Chukha

Our Ref: PIC/CW01/CRE/2018/020
Date: 29 November 2018

Your Ref.: AFC/6462/RRC/026
Date: 26th November 2018

Mr. R. Ravichandran
Project Manager
Afcons Infrastructure, Ltd.

Subject: **Submission of Work Schedule**

Dear Mr. Ravichandran,

This is to acknowledge the receipt of your letter ref: AFC/6462/RRC/035 dated 26th November 2018 regarding the submission of Work Schedule along with documents. This letter follows your first submission of Work Plan as attachment to your letter AFC/6462/RRC/018 dated 6th November 2018.

You will find here with our comments:

- As mentioned in our previous letter (PIC/CWO1/TL/2018/013 dated 23rd November 2018) answering to your 6th November 2018 submission, the CW01 Tender Documents drawings cannot be considered as "Good for Construction" for reason that Site Conditions are not, as per first indication of present survey, in accordance with Site Conditions as stated in Tender Documents (Drawing n°BM-EC-01).
- Moreover, PIC initial review of Tender Drawings concludes that design of most (if not all) cross-drains within the Zone A must be corrected:
  - to integrate drainage structure from adjacent, and upstream Pheuntsholing – Chamkuna Road Project (PCR), including an additional structure (out-fall2A?);
  - to change ducted out-falls (culverts) n°3, 4, 5 and 6 to open channel to control sedimentation; and,
  - possibly to re-adjust all the culverts and open channels gradient, from 1/450 to as steep as possible.

From above consideration, it must be understood that your work schedule, which starts with first phases, phase 1 and phase 2 of construction, in the middle of Project (between ducted out-fall n° 2 and ducted out-fall n°5) must be reordered.

Therefore, the Section A, 0.5km diaphragm wall and Section B, 2.0km diaphragm wall/river training, to be achieved respectively 180 days and 365 days from Commencement Date cannot be located between ducted drain n° 1 and ducted drain n° 2.

However, since North of Zone A design, between Open Outfall n°1 and North end of the Project, is mostly fixed, you are suggested to revised the global construction schedule. Hence Section A starting from North point of Zone A, has to be considered.

You are enjoined to submit a revised and appropriate Work Schedule. This Work Schedule shall be presented in parallel with proposed temporary works, needed as safety measures, to protect site and installation against flood risk.

We also expect you to produce as soon as practicable a detailed updated topographic survey, controlled by our Land Surveyor, of the Northern part of Zone A.

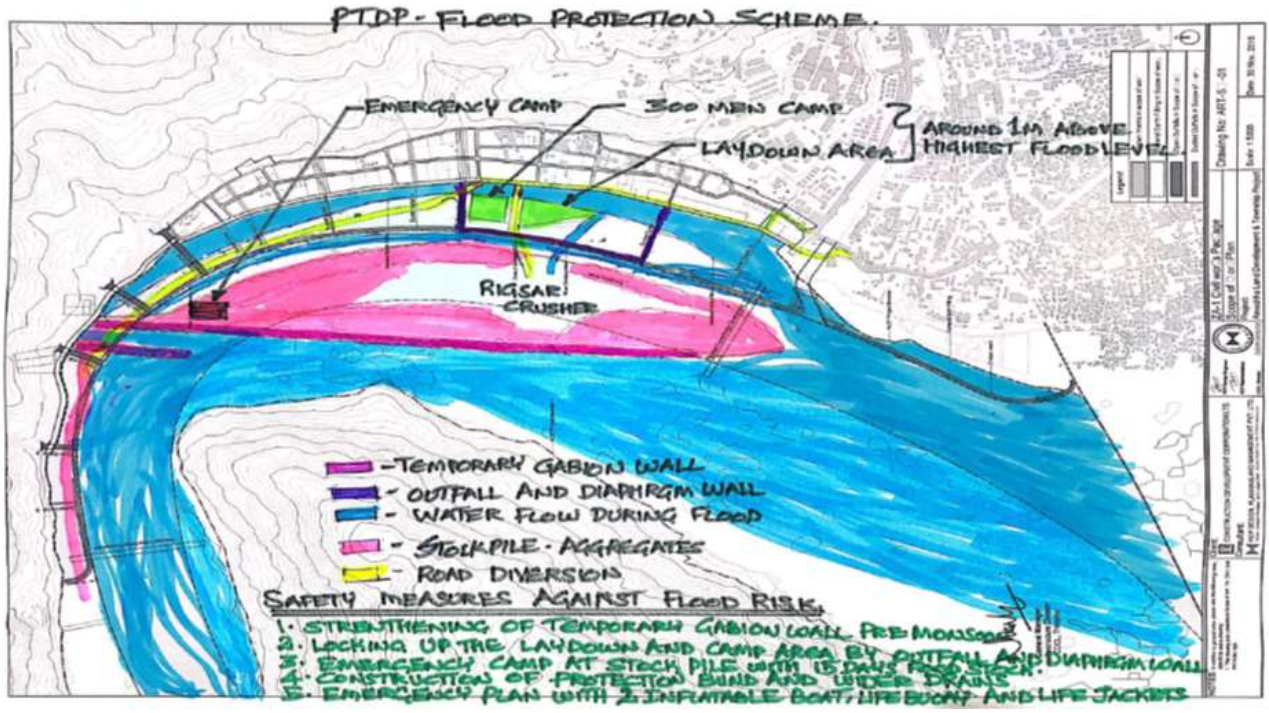
Yours Sincerely,

Egis International Gyaltshen

PIC Team Leader
Robert Jeancenelle

Cc:
1. *PIU (Mr. Kamal Dhakal, Project Manager)*
2. *PIC (TL, QLE)*

Appendix 15 - Contractor Flood Risk Safety Measure Sketch (26 Nov.2018)



Appendix 16 - Contractor Staff and Equipment (29 Nov.2018)

DAILY MANPOWER REPORT

Project : Phuentsholing Township Development Project, Bhutan
Client / Owner : Construction Development Corporation Limited, CDCL
PMC : M/s Egis International in JV with Egis (India)
Contractor : AFCONS Infrastructure Limited

Progress Till Date: 28-11-2018
Reporting Date: 29-11-2018
DPR No. : 23

Sl. No.			Description	UOM	Day Shift	Night Shift	Total for the day	Remarks
I			MANPOWER					
	A		Management Staff					
		1	Project Manager	No	1		1	
		2	RCM/Sr.Mgr/Mgr/Dy.Site Mgr	No	1		1	
		3	Sr. Engineer/Site Engineers	No	2		2	
		4	QA/QC Managers / Engineers	No	3		3	
		5	Safety Mgr. / Engineers / Supr.	No	3		3	
		6	Contract /QS/Planning/MIS	No	4		4	
		7	Surveyor Managers / Engineers	No	4		4	
		8	Admin / Accounts/IT	No	3		3	
		9	CPE	No	2		2	
		10	Supervisors /JTE/GTE.	No	1		1	
		11	Autocad Draftsman	No				
		12	Store/ time keeping	No				
		13	Foreman	No				
		14	Camp Supervisor	No				
			Sub-Total - Staff	No	24		24	
	B		Labour - Skilled	No				
		1	Mason	No	15		15	
		2	Welder	No	8		8	
		3	Excavator Operator	No	1		1	
		4	Electrician	No	1		1	
			Sub-Total - Skilled	No	25		25	
	C		Labour - Unskilled	No				
		1	Helpers	No	55		55	
		2	Security Guard	No	1	2	3	
		3	Office Boy	No	2		2	
			Sub-Total - Unskilled	No	58	2	60	
			Total Manpower (B+C) (Skilled & Unskilled)	No	83	2	85	
			GRAND TOTAL=A+B+C (Including Staff)	No	107	2	109	

DAILY EQUIPMENT REPORT

Project : Phuentsholing Township Development Project, Bhutan
Client / Owner : Construction Development Corporation Limited, CDCL
PMC : M/s Egis International in JV with Egis (India)
Contractor : AFCONS Infrastructure Limited

Progress Till Date: 28-11-2018
Reporting Date: 29-11-2018
DPR No. : 23

Sl.No			Description of Equipment	UOM	Planned	Received till Yesterday	Received Today	Cum.Received till date	Remarks
II			EQUIPMENT						
	1		**Diapharm Wall Equipments :**						
		1	Hydraulic Rig - D Wall B 250	No	2				
		2	Grab-600 mm & 15m L Kelly	No	2				
		3	RH 6	No	3				
		4	Drum Cutter	No	2	1		1	
		5	Winch with A Frame- F15	No	2	2		2	
		6	Stop end extracting set	No	2				
		7	Polymer Mixing Plant	No	2				
		8	Cross Chisel	No	2				
	2		**Concreting Equipments :**						
		1	Twin Shaft Batching Plant- 30 cum/Hr.	No	1	1		1	
		2	Cement Silo- 100 T	No	2				
		3	Stationary Concrete Pump -Sp 1800	No	1				
		4	Concrete Needle Vibrator 40mm	No	8	8		8	
		5	Concrete Needle Vibrator 60mm	No	4	4		4	
		6	Transit Mixer - 6 cum	No	4	4		4	
		7	Low Pressure grout pump	No	2	2		2	
		8	Sand Screening & Washing Plant-50 DPH	No	1				
	3		**Cranes :**	No					
		1	Crawler Crane - D Wall- 80 T	No	1				
		2	Crawler Crane - D wall- 40 T	No	3				
		3	Mobile Crane - Insitu-40 T	No	1				
		4	Pick & Carry -15 T	No	2	2		2	
	4		**Earth Moving Equipments :**						
		1	Dozer-D6h	No	1				
		2	Tractor Dozer	No	1				
		3	Vibro Roller-10 Ton	No	1	1		1	
		4	Hyd. Excavator -Long Boom-Ex 200	No	1	1		1	
		5	JCB - 3d Loader Excavator	No	2				
		6	Dumper- 25 T	No	2				
		7	Plate Compactor	No	4				
	5		**Compressors :**						
		1	Compressor- 300 CFM	No	2	1		1	
		2	Compressor - Polymer Mixing Plant-300 CFM	No	2				
	6		**Generator :**	No					
		1	Generator - Backup 1- 160KVA	No	1				
		2	Generator - Backup 2- 82.5 KVA	No	2	1		1	
		3	Tranformer Generator -160 KVA	No	1				
		4	Generator - 20 KVA	No		1		1	
		5	Generator - 25 KVA	No		1		1	
		6	Generator - 40 KVA	No		1		1	
		7	Generator - 125 KVA	No		1		1	
	7		**Laboratory Equipment :**						
		1	Laboratory Equipment Set (CTM)	No	1	1		1	
	8		**Survey Instrument :**						
		1	Total Station	No	2	2		2	
		2	Digital Global Positioning System (DGPS)	No	1				
		3	Set (3 Units)	No	1				
		4	Auto Level	No	3	3		3	
	9		**Workshop Equipment :**						
			Workshop Equipment Set	No	1	1		1	
	10		**General :**						
		1	Lighting Mast	No	5	3		3	
		2	Water Tanker-10 KL	No	1				
		3	Water Pump Sp4l- 15 HP	No	2				
		4	Dumper General-25 T	No	1				
		5	Trailor - Rebar Supply-40 T	No	2				
		6	Flat Top Truck-20T	No	2				
		7	Reinforcement Cutting Machine-C55	No	4	1		1	
		8	Reinforcement Bending Machine-P32	No	4	1		1	
		9	Welding Transformer-Upto 600 Amps	No	4	1		1	
		10	Weigh Bridge-100 MT	No	1	1		1	
		11	Diesel Bowser-10 KL	No	1				
	11		**Transportation Vehicles :**						
		1	Bus- 20 Seater	No	2				
		2	Car-Small	No	3	1		1	
		3	Jeep	No	5	3		3	
		4	Ambulance	No	1				

Appendix 17 - Social and Environment detailed tasks requirement

Social and Environment detailed tasked requirement – Comments at Safeguard Expert Inception

Tasks	Action	Comments
Prepare and implement an overall Communications & Consultation Plan (CCP) which includes sub plans on community relations, labour and employment and project induced in-migration (PIIM) also referred to as Influx.	Prepare CCP in consultation with PIU	
Ensure that all recommendations from the environmental impact assessment (EIA) and safeguard requirements report are incorporated in the design and civil work specifications prepared for implementation under the Project	Review of bidding documents by both Env. And Safeguard specialists	
Mobilization of environmental and social safety officers by contractors in a timely manner so that there is adequate time to prepare the contractors' environmental management plan (CEMP) and safety security and health plan (SSHP).	Site visit and verification with the contractor by both Env. and Safeguard specialists	Meet the environmental and social safety officer/s in person and prepare a timeline
Ensure that contract documents include aspects to monitor impacts associated with construction works and other works. Agree with the contractors on the responsibilities for routine monitoring at agreed locations even outside the designated contractors' area and those within the Contractors" area and clarify where responsibility may be unclear.	Review contract documents and interaction with the contractor's responsible persons	
Ensure that both PIU and the Contractor carry out baseline monitoring of agreed variables at the agreed locations during the mobilization period.	Review baseline monitoring variables and follow up	
Review the mitigating measures to PIU for approval of the CEMP and SSHP prepared by contractors to ensure that all contractors including sub-contractors prepare comprehensive plans to address all environmental and social impacts associated with construction and other works to support the contractors" activities. The CEMP and SSHP should also include monitoring requirements in relation to performance and the provision of required monitoring data that should be done by the contractors and their sub-contractors.	Review of the documents prepared by contractors and follow up at the work site by both Env. and Safeguard specialists.	
Supervision by the Supervising engineer guided by the environmental and social specialists to ensure quality control of monthly progress reports and enforce penalty provisions for persistent non-conformance.	Review of periodic documents and give guidance by both Env. and Safeguard specialists	
Supervise the implementation of CEMP and SSHP and ensure claims on costs for implementing the CEMP and SSHP are well documented and recorded in the Project GIS.	Documentation review submitted by the contractors	
Conduct site visits to monitor implementation of the CEMP and SSHP and recommend contractor on updating CEMPs and SSHPs based on changing field conditions and accordingly inform relevant agencies and field staff.	Conduct periodic site visits	
Prepare biannual monitoring report to be submitted by PIU to ADB. The report should be based on: a) contractor's monthly report; b) site monitoring on implementation of recommendation from EIA report on both social and environmental impacts related with the project; and c) findings from routine consultation. The monitoring report should also provide recommendations to improve and strengthen the CEMP and SSHP;	Preparation of reports by both Env. and Safeguard specialists	
Lead problem solving in close coordination with other PIC team members, PIU or Contractors on any incident, grievance or complaint due to civil works and other activities related with civil works	Co-ordination with PIU in problem solving	Include other relevant stakeholders

Tasks	Action	Comments
In case of an incident involving unexpected environmental impact, prepare remedial actions in close coordination with contractors, and prepare necessary reports that will be submitted by PIU to DHI, relevant government agencies and ADB;	Environmental expert	
Conduct routine public consultations throughout the project implementation: a) to inform public on potential environmental impacts and social impacts (e.g. health related with pollution, HIV, human trafficking, forced labour), the planned mitigation measures as well as mitigation measures that have taken place; b) to gather public concerns and discuss how to effectively address their concerns; and c) to encourage participation of women in operation and maintenance activities of completed works;	Interaction with the contractors' workers in person and gather the facts on social issues.	
Supervision of the Biodiversity Monitoring and Bench Marking Study (BMBMS). The baseline study of flora & fauna of the entire project site has been completed. Only the baseline data of elephant migration within Zone C has to be collected.	Environmental expert	
Assist PIU in establishing and operating a central Grievance Redress Mechanism within the PIU to respond to stakeholder enquiries, supervising implementation of a Communications and Community Relations Plan, and in managing incidents and grievances reported by the community;	Coordinate establishment of GRM and develop a GRM forms for easy follow up.	
Supervise and monitor the implementation of gender action plan (GAP), if any, as well as prepare routine report on implementation of the GAP. Organize and coordinate gender awareness training for the PIU. Coordinate with PIU to conduct awareness programs amongst key stakeholders if necessary	Review baseline document and see if GAP is a concern	
Conducting on-the-job training for PIU staff on improving integration of social and gender mainstreaming features into future project design and implementation of infrastructure and operation and maintenance aspects of sites and services and providing on-the-job or on-site advice and training to contractors where necessary (such as when there are changes in personnel of contractors or when CEMP or SSHP is not being followed properly) to ensure proper implementation of the overall EMP.	Interaction with PIU and contractors social and safeguard officers and provide guidance to them plus follow up at the sites.	
Ensure compliance with social impact mitigation requirements of civil works contracts, and providing information to PIU on those processes in the monthly progress reports.	Site visits and interaction with the contractors	
Assisting in preparing a photographic and video diary of the construction works throughout the entire duration of the Project showing construction activities, progress, and interviews with DHI, PIU, PIC, contractors, government and Thromde staff, and stakeholders.	Ensure that critical construction phases and captured by PIC for compilation and submission to ADB.	Anyone of the PIC team can capture these events including the Safeguard Specialist
Traffic management. There is going to be a lot of traffic in and around the project area and crossing the project are (materials dealer, ready mix concrete, traffic towards Samtse, adjacent road construction project, local people travelling to areas nearby, picnickers, tourist etc.) In order not to disturb the project activities proper traffic management needs to be in place.	Co-ordinate with the Royal Bhutan Police (RBP) and the Road Safety and Transport Authority (RSTA) as and when such need arises.	Contractor first has to secure his base camp and access to works site in providing diversion route for third parties users.
Medical facilities for PIU, PIC, Contractors and workers. There is a general hospital in Phuentsholing which caters to the medical needs of Phuentsholing population. However is cases of emergencies and serious accidents patients may need to be referred to better medical facility centres which is either the Thimphu National Referral Hospital or the Indian town of Siliguri. Arrangements need to be in place for such emergencies.	Co-ordinate with the Phuentsholing general Hospital for referral procedures, and possible transfer toward others medical facilities.	Specific procedures for PIC personnel to be set-up within QAP system.

Appendix 18 – Main items of Project Monthly Report

As per TOR: *Project Monthly Report must be concise mainly tabular report with 4-page maximum, summarizing monthly progress of the project, implementation, status and highlighting any critical issues that require client or, ADB support with resolving.*
On agreement with the PIU and ADB, these may be submitted electronically only.

Item to be listed

Critical issues

A general and Financial

A.1 Adjustment of design

A.2 Financial Status of PTDP Civil Works, Goods & Consultancy Contracts

B Implementation of Civil Works

B.1 Signed Contracts data / On going Procurement

B.2 Updated work programmes

B.3 Cost control summary table

B.4 Status of variation orders

C. Works Quality Control

C.1. General Testing activities

C.2. Quality Control Activities

C.3. Non Conformances

D. Environmental Aspects

D.1. Site Visits

D.2. Contractors - Environmental Management Plan monitoring

E. Health and Safety Aspects

E.1 Accident prevention

E.2. HIV / AIDS Prevention

E.3 Traffic Safety

F. PIC Organization and Personnel Activities

F.1. Consultant Staffing

F.2. CS Team Activities

F.3 Core Team activities

G. Social Safeguard and communication

G.1 Grievance Redress Mechanism

G.2 Communication action (website, events…)

H. List of the Workshops, Seminar and particular meeting

Appendix 19 – Job descriptions Quantity Surveyor, Laboratory Technician, Land Surveyor and Site Inspector.

Job Description – Quantity Surveyor

Position :	**Quantity Surveyor**					
The Post is involved with the following lots and phases:						
Packages	**CW-01**	**CW-02**	**CW-03**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	Yes	No	No			

Duties and responsibilities:
The Quantity Surveyor duties are amongst others, but not limited to: ■ Review & check the Contractor's estimate of the cost to complete, based on the developed designs. ■ Update the cost to complete estimate on a three monthly basis. ■ Measure and certify quantities; ■ Signe Contractor's Statement (as per BOQ Items) for completed works every month; ■ Keep records of work and materials on site, for payment purposes. ■ Assist to Prepare Instructions and variation orders, and in claim analysis, if any; ■ Assist the Resident Engineer in preparing weekly and monthly progress reports; ■ Responsible in production of Daily Diaries and Manuals related to measurement, if any; ■ Organisation of Survey / Measurement Control; ■ Organize survey team to re-establish reference points; ■ Verify setting out; ■ Set out measurement control system; ■ Inspect the works; ■ Maintain and update progress records; ■ Maintain and update plant / equipment records; ■ Maintain and update stockpiles / deliveries records; ■ Revise plans, documents, specifications and issue instructions (if so required); ■ Check as-built drawings; ■ Carry out tests on completion; ■ Prepare taking-over certificates.
Assisted by:
■ Land Surveyor ■ Technical Officer
Reports to:
■ Resident Engineer,
Coordinate action with
■ Quality Engineer

Job Description – Laboratory Technician

Position :	**Laboratory Technician**

The Post is involved with the following contracts and phases

Packages	**CW-01**	**CW-02**	**CW-03**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Laboratory Technician duties include, but are not limited to, the following:

- Provide support inputs to the Quality Engineer, Materials Engineer and Resident Engineer during Project implementation
- Control the setting up of the materials testing laboratory, in order that all testing carried out by the contractor is in accordance with the testing procedures specified in the Specifications
- Participate to testing undertaken by the Contractor's laboratory or the external laboratory;
- Assist the Quality Engineer and Materials Engineer to analyse quality control test data and the contractor's proposed designs as appropriate;
- Analyse the specification or test result of the proposed materials submitted by the contractor;
- Participate and assist the Quality Engineer to concrete testing and other testing carried out by the contractor, to ensure that requirements are followed
- Assist the Materials Engineer with the verification of the contractor's sources of construction materials and procedures for material sampling and testing
- Assist the Quality Engineer and Materials Engineer with the verification of the contractors' materials quality
- Assist the Quality Engineer and Materials Engineer with the verification of and proposing any modifications to the contractor's activities relating to the standard testing and sampling that will be carried out throughout the period of construction;
- Assist the Quality Engineer with the verification of the Contractor concrete production plant and asphalt concrete trial mixes to ensure that all concrete grades produced fully meet the specifications;
- Assist the Quality Engineer with the verification of the contractor's works to assess and determine the need for adjustment of the works and designs specified in the Contracts;

Reports to:

- Quality Engineer,
- Material Engineer,
- Resident Engineer

Assisted by

- Laboratory Assistant

Job Description – Land surveyor

Position :	**Land Surveyor**

The Post is involved with the following contracts and phases:

Packages	**CW-01**	**CW-02**	**CW-03**			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Land Surveyors duties include, but are not limited to, the following:

- Checking of the Contractor's setting out.
- Adjusting the design information to match actual site conditions.
- Maintaining as-built records to allow checking of the Contractor's records.
- Providing survey information to others (Quantity Surveyor, Site Inspectors, Experts, etc.) to assist them in their work.
- Provide survey information to the Quantity Surveyor to assist him in the measurement of work done for payment purposes.
- Setting up survey points to monitor existing structures, etc., that may be impacted by the works.

Assisted by:

- Land Surveyor Assistant

Reports to:

- Resident Engineer
- Quantity Surveyor

Job Description –Site Inspector

Position :	**Site Inspector**
Location :	
Name :	

The Post is involved with the following lots and phases:

Packages	CW-01	CW-02	CW-03			
Construction Period	Yes	Yes	Yes			
Maintenance Period	No	No	No			

Duties and responsibilities:

The Site Inspector duties include, but are not limited to, the following:

- Collect the site daily records for all activities, weather condition records and contractor resources mobilisation (equipment, plant and labour), which are to be made available at the end of each day's work:
- Check and sign the Contractor's diary reports;
- Conduct joint measurement of the work and assist in bill verification;
- Control and supervise the Contractor's Requests For Inspection
- Perform all technical controls and other checks defined as the hold points or determinant phases in the quality control procedures.
- Monitor the laboratory and site tests programme in liaison with the Laboratory Technician / Materials Engineer
- Oversee implementation of quality assurance plans and quality control tests;
- Verify the conformity of the works execution against the drawings and contract specifications.
- Monitor and supervise the Contractor's traffic management operations
- Monitor the Contractors temporary works, and ensure that all temporary works are completely removed when they are no longer required;
- Provide information requested by the Quantity Surveyor for the Interim Payment Certificates.
- Ensure environment and health and safety compliance
- Report to the assistant resident engineers regarding the results of inspections and technical issues

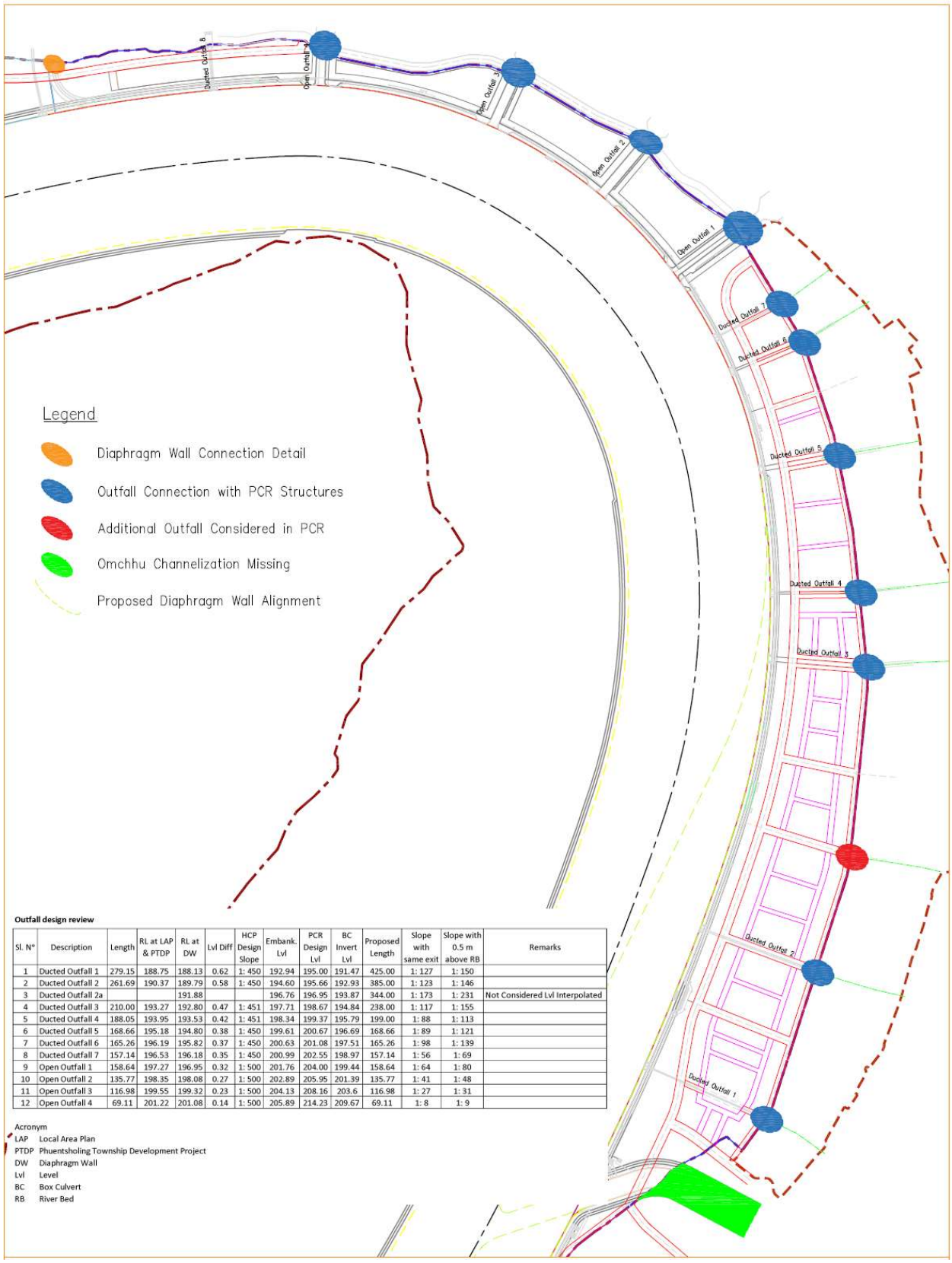
Assisted by:

- Land Surveyor
- Laboratory Technician

Reports to:

- First to Quantity Surveyor, then to :
- Resident Engineer
- Quality Engineer
- Materials Engineer

Appendix 20 – Design review main issues



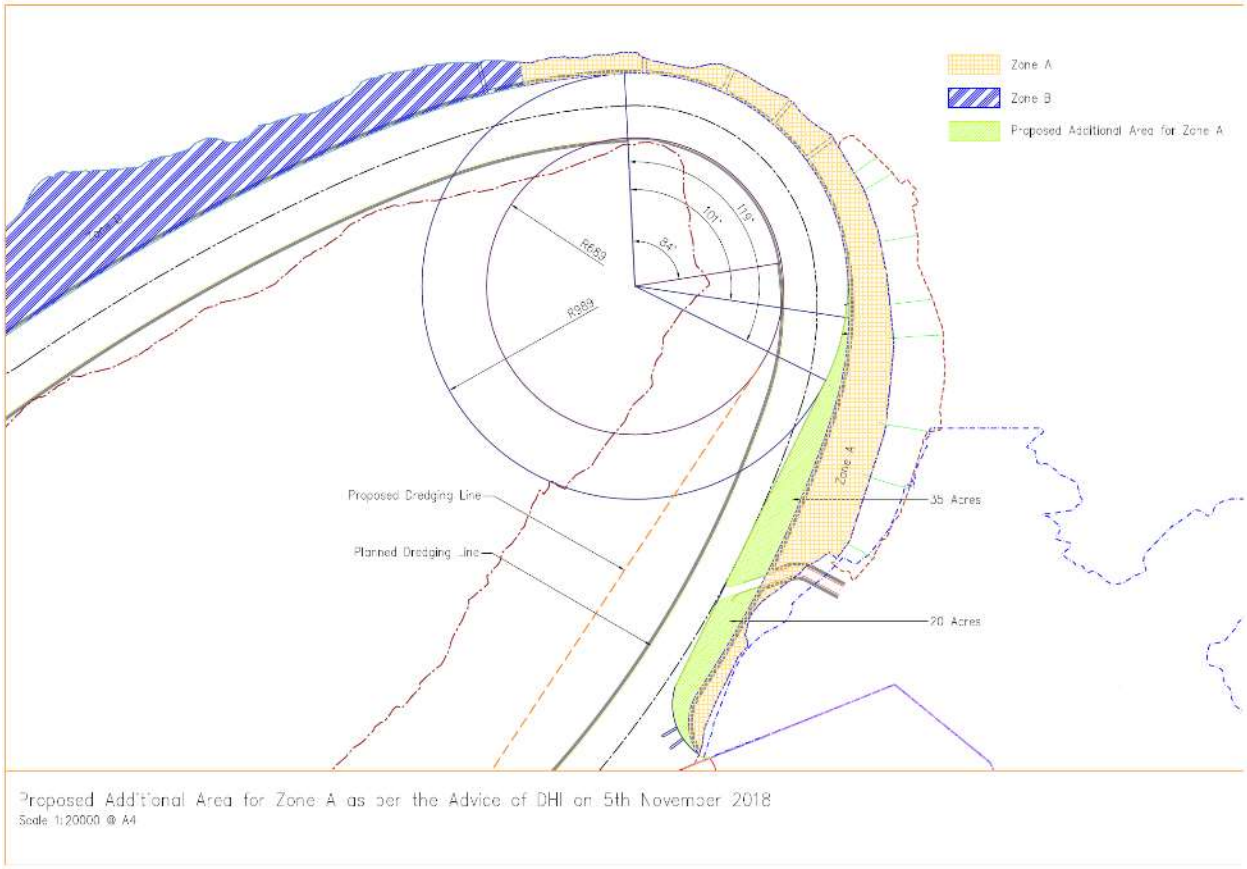
Outfall design review

Sl. N°	Description	Length	RL at LAP & PTDP	RL at DW	Lvl Diff	HCP Design Slope	Embank. Lvl	PCR Design Lvl	BC Invert Lvl	Proposed Length	Slope with same exit	Slope with 0.5 m above RB	Remarks
1	Ducted Outfall 1	279.15	188.75	188.13	0.62	1: 450	192.94	195.00	191.47	425.00	1: 127	1: 150	
2	Ducted Outfall 2	261.69	190.37	189.79	0.58	1: 450	194.60	195.66	192.93	385.00	1: 123	1: 146	
3	Ducted Outfall 2a			191.88			196.76	196.95	193.87	344.00	1: 173	1: 231	Not Considered Lvl Interpolated
4	Ducted Outfall 3	210.00	193.27	192.80	0.47	1: 451	197.71	198.67	194.84	238.00	1: 117	1: 155	
5	Ducted Outfall 4	188.05	193.95	193.53	0.42	1: 451	198.34	199.37	195.79	199.00	1: 88	1: 113	
6	Ducted Outfall 5	168.66	195.18	194.80	0.38	1: 450	199.61	200.67	196.69	168.66	1: 89	1: 121	
7	Ducted Outfall 6	165.26	196.19	195.82	0.37	1: 450	200.63	201.08	197.51	165.26	1: 98	1: 139	
8	Ducted Outfall 7	157.14	196.53	196.18	0.35	1: 450	200.99	202.55	198.97	157.14	1: 56	1: 69	
9	Open Outfall 1	158.64	197.27	196.95	0.32	1: 500	201.76	204.00	199.44	158.64	1: 64	1: 80	
10	Open Outfall 2	135.77	198.35	198.08	0.27	1: 500	202.89	205.95	201.39	135.77	1: 41	1: 48	
11	Open Outfall 3	116.98	199.55	199.32	0.23	1: 500	204.13	208.16	203.6	116.98	1: 27	1: 31	
12	Open Outfall 4	69.11	201.22	201.08	0.14	1: 500	205.89	214.23	209.67	69.11	1: 8	1: 9	

Acronym

LAP	Local Area Plan
PTDP	Phuentsholing Township Development Project
DW	Diaphragm Wall
Lvl	Level
BC	Box Culvert
RB	River Bed

Appendix 21 - Illustration Zone A extension



Appendix 22 – Use of Provisional Items (30 Nov. 2018)

A. Vehicles procurement

ADVERTISEMENT

NOTICE INVITING QUOTATIONS

Egis International intends to purchase vehicles for the Phuentsholing Township Development Project.

i. **1-2499 cc. Isuzu D-max S-CAB or equivalent**
ii. **1-2400 cc Toyota Hilux GUN 125R equivalent.**

Interested suppliers/dealers may contact **gcyfinance@gmail.com** or call **02-324226** for more details. The deadline for submission of quotations is on **November 18, 2018**.

Unit price should be quoted in U.S Dollars for supply and delivery to Phuentsholing and inclusive of value added tax (**VAT**)/ Green Tax only.

egis

Contact: Nicolas MORICE
Tel.: +33 1 39 41 42 05
E-mail: nicolas.morice@egis.fr
Your reference(s):
Our reference(s): ASI/2018/123
Project no.: URNA08807

Mr. Tshering Dupchu
Project Director
Construction Development Corporation Ltd.
Thimphu, Bhutan

Bangkok, 30th November 2018

Ref: **Phuentsholing Township Development Project (PTDP)**
Consultancy Services for Project Implementation Consultant (PIC)
Contract No: PTDP-PIC-1

Subject: **Procurement of Project Vehicles**

Dear Sir,

Following our letter ref. ASI/2018/108 dated 29th October 2018 and subsequent advice from CDCL and ADB, we have issued a public request for quotations through an advertisement published in the national daily newspaper Kuensel on 13th November 2018 (attached to this letter, for your perusal).

In response, we received three quotations (also attached to this letter), hereafter summarized:

Bidder	Vehicle	Price excl. taxes (Eq. USD)	Taxes (Eq. USD)(1)	Price incl. taxes (Eq. USD)
Bhutan Isuzu Motors	Isuzu D-max S-CAB	14,027.52(2)	556.34(2)	**14,583.86**(2)
Singye Agencies	Mahindra Scorpio Double Cabin S10 4WD	12,121.60	1,212.16	**13,333.76**
	Mahindra Scorpio Double Cabin S10 2WD	11,052.80	1,105.28	**12,158.08**
State Trading Corporation of Bhutan Ltd.	Toyota Hilux GUN125R	30,931.27	4,998.17	**35,929.44**

(1): including Green Tax but excluding Bhutan Sales Tax and Custom Duty
(2): based on an exchange rate of 1 USD = 71 BTN

The quotation from Singye Agencies is considered not responsive as it does not refer to the specified type of vehicle.

Other quotations are acceptable even though we received only one quotation for each type of vehicle (this was expected as there is only one single retailer active in Bhutan for each brand, as mentioned in our above-mentioned letter).

As a result, we propose to procure the following vehicles:

Supplier	Vehicle	Quantity	Price excl. taxes (Eq. USD)	Taxes (Eq. USD)(1)	Price incl. taxes (Eq. USD)
Bhutan Isuzu Motors	Isuzu D-max S-CAB	1	14,027.52(2)	556.34(2)	**14,583.86**(2)
State Trading Corporation of Bhutan Ltd.	Toyota Hilux GUN125R	1	30,931.27	4,998.17	**35,929.44**

(1): including Green Tax but excluding Bhutan Sales Tax and Custom Duty
(2): based on an exchange rate of 1 USD = 71 BTN

These vehicles will be procured using the dedicated provisional sum of USD 122,500 included in our Contract.

We look forward to your approval.

Yours sincerely,

Egis International * Egis International *

Nicolas MORICE
Deputy Regional Director, Asia-Pacific
Egis International

Cc: Robert Jeancenelle, Chief Resident Engineer / Team Leader, Egis International
Sonam Yuden, Managing Director, Gyaltshen Consultancy

Attachments:
- Advertisement published in the national daily newspaper Kuensel on 13th November 2018
- Quotation from STCBL for Toyota Hilux
- Quotation from Singye Agencies for Mahindra Scorpio
- Quotation from Bhutan Isuzu Motors for Isuzu D-Max

B. Office Equipment procurement

Contact: Nicolas MORICE
Tel.: +33 1 39 41 42 05
E-mail: nicolas.morice@egis.fr
Your reference(s):
Our reference(s): ASI/2018/116
Project no.: URNA08807

Mr. Tshering Dupchu
Project Director
Construction Development Corporation Ltd.
Thimphu, Bhutan

Bangkok, 13th November 2018

Ref: **Phuentsholing Township Development Project (PTDP)**
Consultancy Services for Project Implementation Consultant (PIC)
Contract No: PTDP-PIC-1

Subject: **Purchase of Office Equipment**

Dear Sir,

Following our mobilization, and in accordance with the provisions of our contract, we intend to proceed with the procurement of Office Equipment for the Project.

We propose to use part of the dedicated provisional sum of USD 10,000 included in our Contract to purchase this equipment.

We have prepared a list of the required equipment with quantities and specifications, and we have obtained corresponding quotations from 3 different suppliers, as attached.

Please also find attached a comparison table summarizing the quotations received.

Based on this comparison, we recommend selecting the lowest responsive supplier, Hungrel Enterprise.

We look forward to receiving your approval on the above request so that we can proceed with purchasing the equipment.

Meanwhile we remain at your disposal for any related information.

Yours sincerely,

Egis International

Nicolas MORICE
Deputy Regional Director, Asia-Pacific
Egis International

Cc: Robert Jeancenelle, Chief Resident Engineer / Team Leader, Egis International
Sonam Yuden, Managing Director, Gyaltshen Consultancy

Attachments:
- Comparison table summarizing the quotations received
- Quotation from Hungrel Enterprise
- Quotation from Tathagatha Enterprise
- Quotation from Jigden Enterprise

Egis International
Registered Office : 15, avenue du Centre - CS 20538 Guyancourt - 78286 Saint-Quentin-en-Yvelines cedex - France
Tel.: +33 1 39 41 40 00 – Fax standard : +33 1 39 41 57 57 - www.egis-group.com
Corporate Capital EUR 17 826 120 - SIRET : Versailles 582 132 551 001 74 - SIREN : 582 132 551 - R.C.S. Versailles
Intra-Community VAT identification number FR 62 582 132 551 - Code APE (NAF) 7112B

ITEM DESCRIPTION	Qty	Unit	Rate in BTN			Amount in BTN		
			Hungrel Enterprise	Tathagatha Enterprise	Jigden Enterprises	Hungrel Enterprise	Tathagatha Enterprise	Jigden Enterprises
Desktop Computer: Processor: 8th Generation Intel® Core™ i5/Intel® Core™ i7 Memory: 4-8GB DDR4 2666MHz Hard Drive: 2.5" - 3.5" 1-2TB SATA/SSD Hard Drive Graphics Card: 2-4GB AMD Radeon Graphics Display Screen: 19" - 23" LED/LCD Monitor Operating System: Windows 10 Home/Proffessional Pre-installed Softwares: MS Office 2016; Anti-Virus; Adobe Professional	3	Sets	65 000	68 900	69 300	195 000	206 700	207 900
Desktop Computer: Processor: 8th Generation Intel® Core™ i3-81000/8th Generation Intel® Core™ i5-8400 Memory: 4-8GB DDR4 2666MHz Hard Drive: 2.5" - 3.5" 500GB - 1TB SATA/SSD Hard Drive Display Screen: 19" - 23" LED/LCD Monitor Operating System: Windows 10 Home/Proffessional Pre-installed Softwares: MS Office 2016; Anti-Virus; Adobe Professional	1	Sets	48 000	53 900	52 000	48 000	53 900	52 000
Laptop Computer: Processor: 8th Generation Intel® Core™ i3/Intel® Core™ i5 Memory: 4-8GB DDR4 2666MHz Hard Drive: 2.5" - 3.5" 1-2TB SATA/SSD Hard Drive Graphics Card: 2-4GB AMD Radeon Graphics Display Screen: 14" - 15" LED/LCD Operating System: Windows 10 Home/Proffessional Pre-installed Softwares: MS Office 2016; Anti-Virus; Adobe Professional Carrying case	1	PIECES	49 500	53 900	69 900	49 500	53 900	69 900
Heavy Duty Photocopy/Printer Machine: SYSTEM REQUIREMENTS Type: Desktop Printer / Copier / Scanner Copy Resolution - Scan: Main: 600 dpi × Sub: 600 dpi Print: 1,800 dpi (equivalent) × 600 dpi Gradation: 256 Memory Capacity (Std./Max.): 2 GB/4 GB Original Type: Sheets, Books, Objects Max. Original Size: A3 (11" × 17") Output Size: Main unit: A3 to A5, 11" × 17" to 8-1/2" × 11", 5-1/2" × 8-1/2", 8" × 13"*1, 16K, 8K Bypass Tray: A3 to A5, B6*2, A6*2, 11" × 17" to 5-1/2" × 8-1/2", 8" × 13" *2, 16K, 8K, Postcard (A6 (4" × 6" Card)), Envelope*3, Label sheet, Tab paper Image Loss: Max. 4.2mm or less for top edge (5 mm for thin paper), Max. 3.0mm or less for bottom edge, Max. 3.0mm or less for right/left edges *A loss of 4.2 mm each during printing. Warm-Up Time*4 (23°C, std. voltage) * The time required to start printing when both the main power and sub-power switches are turned from OFF to ON.: 20 sec. or less * The time required to star t printing when the main power switch is ON and the sub-power switch is turned from OFF to ON.: 15 sec. or less Copy Speed (A4): 28 ppm Paper Capacity(80 g/m2): Tray 1 - 500 sheets (up to B4); Tray 2: 500 sheets (up to A3) Multiple Bypass Tray: 100 sheets (up to A3) Max. Paper Capacity (80 g/m2)*3,600 sheets; Multiple Copy: 1 to 9,999 sheets Auto Duplex: A3 to A5*2, B5*7, 11" × 17"*2 to 5-1/2" × 8-1/2"*2, 7-1/4" × 10-1/2", 8" × 13"*2, 16K, 8K*2 Print Type: Embedded CPU: ARM Cortex-A7 Dual-core 1.2GHz Memory: Shared with the copier Print Speed: Same as Copy Speed (when using the same original) HDD:Shared with the copier Print Resolution: 1,800 dpi (equivalent) × 600 dpi	1	Unit	195 000	205 900	215 000	195 000	205 900	215 000
Medium Duty Photocopy/Printer Machine: SYSTEM REQUIREMENTS System memory standard (MB): 128 MB Interfaces standard: USB 2.0, 10Base-T/100Base-TX Ethernet (optional); Wi-Fi 802.11b/g (optional) Network protocols: TTCP/IP (IPv4; IPv6); HTTP; SNMP Automatic document feeder: (optional) Reverse type; up to 70 originals; A5-A3 35-128 gsm simplex; 50-128 gsm duplex Paper size: A5 - A3; Customized: 90-297 x 140-432 mm; Printable paper weight (g/m²): 64-157 gsm Paper input capacity (sheets): Standard: 350 sheets; max.: 1,350 sheets Paper trays standard: Tray 1: 250 sheets; A5-A3; Manual Bypass: 100 sheets; A5-A3; Automatic duplexing: (optional) A5-A3; 64-90 gsm Finishing modes (optional): Group; sort; crisscross Output capacity (w. finisher): Max.: 250 sheets Copy/print volume recommended (monthly): 5,000 pages Copy/print volume max. (monthly): 15,000 pages Toner lifetime Black: Up to 12,000 Power consumption: 220-240 V / 50/60 Hz; less than 1.3 kWh System dimensions: (WxDxH, mm), 607 x 570 x 458 mm (without options) System weight: (kg): 25-30 kg	1	Unit	98 000	112 900	98 500	98 000	112 900	98 500
A3 Color Printer: Print Method: On-demand inkjet (Piezoelectric) Maxinum Print Resolution: 5760 x 1440 dpi (with Variable-Sized Droplet Technology) Minimum Ink Droplet Volume: 1.5pl Print Direction: Bi-directional printing, Uni-directional printing Nozzle Configuration: 90 per colour (Cyan, Light Cyan, Magenta, Light Magenta, Yellow, Black) Draft, A4 (Black / Colour): Up to 15ppm / 15ppm Photo Default:10x15cm/4x6" - Approx. 45 sec per photo (Borderless) *1 Number of Paper Trays: 1 Standard Paper Input Capacity: Up to 100 sheets, A4 Plain paper (75g/m2) Up to 30 sheets, Premium Glossy Photo Paper Output Capacity: Up to 50 sheets, A4 Plain paper Up to 20 sheets, Premium Glossy Photo Paper Maxinum Paper Size:12.95 x 44" Paper Sizes: A3+, A3, B4, A4, A5, A6, B5, 10x15cm (4x6"), 13x18cm (5x7"), 16:9 wide size, Letter (8.5x11"), Legal (8.5x14"), Half Letter (5.5x8.5"), 9x13cm (3.5x5"), 13x20cm(5x8"), 20x25cm(8x10"), Envelopes: #10(4.125x9.5") DL(110x220mm), C4 (229x324mm), C6(114x162mm) Paper Feed Method: Friction feed Standard Connectivity: USB 2.0 Standard Capacity Black (Photo Print): 8,700 pages - T6731 Supported OS and Applications: Windows XP / Vista / 7 / 8 / 8.1 / 10 Mac OS X 10.5.8 or later	1	Unit	45 000	65 900	78 500	45 000	65 900	78 500
AUSTOR Network attached storage (NAS): AS6102T 4 TB x 2 = 8 TB SATA3 3.5"/2.5" Hard Disk Drive. [Brochure and Specification Attached] Package Contents: AS6102T Unit x 1, Installation CD, AC Power Cord with AC Power Adapter, RJ-45 LAN cable (Cat 5e) Screws. Weight: 3.18 Kg/7.01 lbs, SIze: 304 (H) x 285 (W) x 195 (D) mm	1	Unit	61 600	55 900 Rate for 4 TB not	112 000 Rate for 6 TB not	61 600	55 900	112 000
Digital Camera - Canon/Sony/Nikon/Fuji-Film with movie recording features 12-21 MP; 8-32 GB SD Card Soft Carrying Case	1	Unit	39 000	54 900	49 000	39 000	54 900	49 000
				TOTAL Amount	(Nu.)	731 100	810 000	882 800
		TOTAL Amount		(USD) [@ 1USD = 73.2351 Nu]		9 982,92	11 060,27	12 054,33

བཟོ་བསྐྲུན་གྲོང་འཕེལ་ལས་འཛིན།
Construction Development Corporation Limited
Head Office
Thimphu: Bhutan

CDCL/2018/ID/PTDP/PIU/ 3157 November 22, 2018

Egis International, (Lead),
Egis India Consulting Engineers Pvt. Ltd. (JV),
Gyaltshen Consultancy (Sub-Consultant)

Project: Phuentsholing Township Development Project (PTDP)
Consultancy Services for Project Implementation Consultant (PIC)
Contract No: PTDP - PIC-1

Ref: Purchase of Office Equipment

Dear Mr. Nicolas,

We are in receipt of your letter dated November 13, 2018 regarding purchase of office equipment for PIC from the provisional sum. The letter also contains your proposed item list with quotation from three suppliers.

The PIU team discussed with the PIC at field office and recommended to purchase the following as per current office requirement:

Item No.	Equipment	Proposed Qunty.	Approved Qunty.	L1 Supplier
A	Desktop Computer	3	2	Hungrel Enterprise
B	Desktop computer (higher specs)	1	1	Hungrel Enterprise
D	Heavy Duty photocopy printer machine	1	1	Hungrel Enterprise
F	A3 Colour Printer	1	1	Hungrel Enterprise
G	Austor Network attached storage (Backup Hard drive)	1	1	Tathagtha Enterprise

Comparative sheet provided by your office is attached for ready reference. Total value of the above items comes to **Nu. 473,900.00** (USD - 6,470.00 @ 73.2351).

In view of the above you may proceed with the purchase of above approved items from the lowest quoted suppliers.

Sincerely,

Tshering Dupchu
Project Director, PTDP/GM, ID
CDCL

Copy to:
1. Director, DEC, CDCL for information.
2. Project Manager, PTDP for information and necessary action.