

Environmental Monitoring Report

Annual Report
September 2021

Bhutan: South Asia Subregional Economic Cooperation Road Connectivity Project

Alay Land Custom Station (Phuentsholing Thromde)

Prepared by the Phuentsholing Thromde for the Government of Bhutan and the Asian Development Bank.

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BHU: SASEC Road Connectivity Project

Alay Land Custom Station (Phuentsholing Thromde)

CURRENCY EQUIVALENTS

(As of 30 September 2021)

Currency unit	–	Bhutanese Ngultrum
Nu. 1.0	=	\$ 0.0131
\$ 1.00	=	Nu. 76.1

ABBREVIATIONS

ADB	-	Asian Development Bank
BOD	-	Biological Oxygen Demand
CFO	-	Chief Forestry Officer
DO	-	Dissolved Oxygen
DOR	-	Department of Roads
DOT	-	Department of Trade
DOUDES	-	Department of Urban Development and Engineering Services
ECR	-	Environmental Conservation Regulations (2002)
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
ESM	-	Environmental and Safety Manager
ESC	-	Environmental and Safety Consultant (PMU)
ESO	-	Environmental and Safety Officer (PT)
IEE	-	Initial Environmental Examination
MOWHS	-	Ministry of Works and Human Settlements
PT	-	Phuentsholing Thromde
PMU	-	Project Management Unit
PM10	-	Particulate Matter
RGOB	-	Royal Government of Bhutan
ROW	-	Right of way
SPS	-	ADB Safeguard Policy Statement (2009)
TOR	-	Terms of Reference
TSPM	-	Total suspended Particulate Matter

WEIGHTS AND MEASURES

ha	-	Hectare
km	-	Kilometer
m	-	Meter

NOTES

In this report, "\$" refers to US dollars

CONTENTS

I.	EXECUTIVE SUMMARY	1
II.	PROJECT DESCRIPTION.....	2
	A. Alay Land Customs Station	2
	1. Project Scope.....	2
	3. Project Implementation Progress	4
	4. Construction Approach and Methodology.....	4
	5. Project Cost / Implementation Schedule.....	4
	6. Project Categorization.....	4
III.	SAFEGUARDS COMPLIANCE	5
	A. Compliance to Financing Agreement (Special Operations).....	5
	B. Compliance to Project Administration Manual	8
	C. Compliance to the Civil Works Contract Agreement	11
IV.	MONITORING ACTIVITIES UNDERTAKEN	12
VII.	CONCLUSION	18
	PHOTO LOG OF AIR AND NOISE MONITORING EQUIPMENT.....	19
	Annex- 1 (Environmental Clearance Certificate)	20

LIST OF TABLES

Table 1:	Work item, contractor's schedule, date of award and completion date.....	3
Table 2:	Status of Compliance to Environmental Provisions of the Financing Agreement	5
Table 3:	Status of Compliance to Environmental Provisions of the Project Administration Manual	9
Table 4:	Status of Compliance to Environmental Provisions of the Civil Works Contract Agreement	11

LIST OF FIGURES

Figure 1:	Site Layout of Alay Land Custom Station	2
Figure 2:	Location of Air Monitoring Station.....	12
Figure 3:	Air monitoring equipment	19
Figure 4:	Noise monitoring equipment.....	19

I. EXECUTIVE SUMMARY

1. The Royal Government of Bhutan (RGOB) has requested the Asian Development Bank (ADB) to provide financing to facilitate investments to support the Pasakha Access Road (PAR) and Land Custom Station (LCS) at Alay. The Department of Roads (DOR) in the Ministry of Works and Human Settlements (MoWHS) will implement the widening and rehabilitation of PAR, while LCS construction will be done by the Phuentsholing Thromde¹(PT).
2. The Phuentsholing Thromde (PT) is the implementing agency and the development of Land Customs Station (LCS) at Alay will be carried out through PMU that will be established as part of the project management. Under Phuentsholing Thromde “PMU”, there will be one PIU for LCS construction. The project managers of PIUs will be responsible for ensuring the compliance of environmental conditions of the project. There will be one Construction Supervision Consultant (CSC) and its organization and functions will be like the one stated in the following section.
3. Once completed, it will be handed over to the Regional Revenue and Customs Office (RRCO) under the Ministry of Finance.
4. On the 1st of February 2021 the Phuentsholing thromde awarded the construction of the Alay Land Customs Station (LCS) to M/s Chhimi RD Construction Pvt. Ltd. under contract number: PT/Contracts/2020/ALCS/01. The contract price was Nu. 40,409.013.57 (Ngultrum Forty Million Four Hundred Nine Thousand Thirteen and Chetrum Fifty-Seven) and the contract period is 6 months from the date of signing the contract.
5. The project is classified as Category B for environment following the ADB’s Safeguard Policy Statement (2009), as no significant impacts are envisioned and any minor impact could be mitigated by adopting simple mitigation measures
6. Environmental Clearance has been obtained from the National Environment Commission Secretariat (NECS). The Environment clearance for the Alay Land customs was issued on 26 July 2019 and is valid up to 27/07/2024 (Refer to **Annex- 1**).
7. This is the first environmental report prepared for Alay Land Customs (ALCS) after award of the Civil Contract on 1 February 2021. As of September 2021, the overall progress of the ALCS is 25%. The environmental management plan of the project has been monitored and implemented on a day-to-day basis by their respective Environmental Focal Persons from both Contractor’s side and Construction Supervision Consultants.

1. The proposed site for Alay Land Custom Station (LCS) is situated on the West Bank of the Bhawanihora River which borders India. Initially, the LCS was proposed to be constructed over the 2.4ha of reclaimed land. During the initial phase of the study no road, site markings and buffers were considered. After taking into consideration all the above mentioned, the LCS as of now is proposed to be constructed over the 1.82ha of reclaimed land.
2. Civil works included the construction of prefabricated structures for service building and security house as per the layout plans and embracing traditional Bhutanese features. Works also include the construction of RRM retaining wall around the area to provide protection to the LCS. Other works include drainage works, steel gates, truck parking and footpath, a pavement from international boundary, internal pavement works, water supply and sanitation work, high mast lighting system and a 250 KVA sub-station.
3. The proposed Land Custom Station (LCS) at Alay is aimed at providing customs import and export clearing services.

4. The scope of work for ALCS project including Contractor's details are provided in **Table 1**.

Table 1: Work item, contractor's schedule, date of award and completion date

SN	Work item	Name of Contractor	Contract award date/start date	Contract completion date
1.	Prefab Service Building & Security House.	M/s Chhimi RD Construction Pvt. Ltd	1 February 2021	Original was 31 July 2021. Extended up to 04 December 2021. (Extension-1)
2.	RRM Wall			
3.	Drainage System & Steel Gate			
4.	Truck Parking Area, Pavement Connection from International Border & Internal Pavement Works			
5	Water Supply System			
6	High Mast Lighting system & Electrical Substation			

2. Implementation Arrangement

5. The Phuentsholing Thromde (PT) under the Ministry of Works and Human Settlement (MOWHS) is the implementing agency for ALCS. Phuentsholing Thromde the Project Implementation Unit (PIU) will be administering the projects and will be responsible for the day-to-day operation of Northern ALCS.

6. Project Manager (PM) from the PIU will be the environmental focal person for the PT at the PIU level, who is responsible for ensuring the compliance of environmental conditions of the project. Construction Supervision Consultant (CSC) support the PIU.

7. Construction Supervision Consultant (CSC) includes Team Leader (the Engineer), Quantity Surveyor (QS), Environmental Specialist (ES), Resettlement & Social Specialist (RS), and Resident Engineer (RE) and Survey Engineer (SE).

8. QS/RE and SE are the main persons who will carry out the daily monitoring of construction works; and ensure the implementation of environmental mitigation measures as prescribed in the EMP, by the Construction Contractor (CC).

9. Environment Specialist (ES) carries out intermittent environmental compliance monitoring of the project to ensure the environmental mitigation measures or conditions are adequately addressed. ES is responsible for compiling and submitting the annual environmental monitoring report to the PT through PIU, and to the ADB.

10. A District Environmental Committee (DEC) consists of Dzongkhag planning officer, Dzongkhag Forest officer, Dzongkhag land record officer, Dzongkhag agriculture officer, Dzongkhag environmental officer, and Dzongkhag Engineer. The District Environmental Officer (DEO) is district official of NECS.

11. DEC is responsible for issuing Environmental Clearance to some project activities mandated to the committee and for checking compliance of the projects to which it issues EC periodically. As part of its regular activities, NECS gives general training and orientation to DEOs before sending them to districts. These orientations focus mainly on Bhutan's environmental requirements.

3. Project Implementation Progress

12. Work Progress as of 30th September 2021 is 25.5%

4. Construction Approach and Methodology

13. ALCS construction is being carried out in an environment-friendly manner following the principles of balance cut and fill. Excess excavated materials are disposed of in the pre-identified location approved by Phuentsholing Thromde in environmentally appropriate manner.

5. Project Cost / Implementation Schedule

14. The total quoted cost for ALCS is Nu. 40,409.013.57 (Ngultrum Forty Million Four Hundred Nine Thousand Thirteen and Chetrum Fifty-Seven) project started on 1st February 2021, and the initial contract period was 6 months from the date of signing the contract and now extended up to 4 Dec-2021.

6. Project Categorization

15. The Project is classified as category B for environment as per ADB's Safeguard Policy Statement (2009) as no significant impacts are envisioned. Any general impacts could be mitigated by applying simple mitigation measures.

III. SAFEGUARDS COMPLIANCE

A. Compliance to Financing Agreement (Special Operations)

16. The environmental safeguard requirements are indicated in the Financing Agreement (Grant Number 0400-BHU) between ADB, and the Kingdom of Bhutan. These financing agreement provisions and compliance status are provided in **Table 2**.

1.

Table 2: Status of Compliance to Environmental Provisions of the Financing Agreement

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
1	Schedule 4. Item 6(a): Conditions for awards of contracts 6. The Beneficiary shall ensure that no Works contract which involves environmental impacts is awarded until: (a) The relevant environmental authority of the Beneficiary has granted the final approval of the EIA and/or IEE; and (b) The Beneficiary has incorporated the relevant provisions from the EMP into the Works contract.	Complied. The EC was accorded as per IEE on 19 July-2019 while the civil works contract commenced on 1 Feb-2021. Complied. The EMP prepared and submitted by the Contractor has been approved for implementation which is being monitored from time to time.
2	Schedule 5. Item 2: Counterpart Funds 2. The Beneficiary shall make available the Loan and Grant proceeds to the Project Executing Agencies under appropriate arrangements acceptable to ADB and shall provide or cause each Project Executing Agency to provide, as necessary, respective counterpart staff, land, facilities, and funding required for timely and effective implementation of the Project, including, without limitation, any funds required (a) to meet any shortfall between cost and revenues for the O&M of Project facilities; (b) to mitigate unforeseen environmental or social impacts; and (c) to meet any additional costs arising from design changes, price escalation in construction costs and/or unforeseen circumstances. The Beneficiary shall cause the relevant Project Executing Agency to make the resources thus required available on an annual basis for each fiscal year.	Complied. The counterpart funding from the RGOB is being disbursed timely for compensation to the affected parties. The Project Coordinator and Project Manager have been appointed as counterpart staff to the project

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
3	<p>Schedule 5. Item 5: Environment</p> <p>5. The Beneficiary shall ensure, or cause the relevant Project Executing Agency to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Beneficiary relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the EIA, the IEE, the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.</p>	<p>Complied.</p> <p>The compliance requirements regarding social and environmental safeguards, health, and safety and EMP are being satisfactorily complied.</p>
4	<p>Schedule 5. Item 9: Human and Financial Resources to Implement Safeguards Requirements</p> <p>9. The Beneficiary shall make available, or cause the Project Executing Agencies to make available, necessary budgetary and human resources to fully implement the EMP and the RP.</p>	<p>Complied.</p> <p>Project Manager and the Project Engineer from PT monitor the site from time to time on regular basis.</p>
5	<p>Schedule 5. Item 10: Safeguards – Related Provisions in Bidding Documents and Works Contracts</p> <p>10. The Beneficiary shall ensure, or cause the Project Executing Agencies to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) Comply with the measures relevant to the contractor set forth in the EIA, the IEE, the EMP, the RP and any indigenous peoples plan (to the extent they concern impacts on affected people during design and/or construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report.</p> <p>(b) Make available a budget for all such environmental and social measures.</p>	<p>Not applicable. No indigenous people are located within project premises.</p> <p>Complied. The required funds for environmental and social measures are being disbursed on a need basis. Impacts on Environmental, resettlement or indigenous peoples are not anticipated.</p> <p>No effect on the road and agricultural land. To be implemented upon project completion since this is a reclaimed land.</p>

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
	<p>(c) Provide the Project Executing Agency with written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during design, construction, implementation, or operation of the Project that was not considered in the EIA, the IEE, the EMP, and the RP.</p> <p>(d) Adequately record the condition of roads, agricultural land, and other infrastructure prior to starting to transport materials and construction; and Reinstatement pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p>	
6	<p>Schedule 5. Item 11: Safeguards Monitoring and Reporting</p> <p>11. The Beneficiary shall do the following or cause the Project Executing Agencies to do the following:</p> <p>a.) Submit annual Safeguards Monitoring Reports to ADB for disclosure on ADB's website and disclose relevant information from such reports to affected persons promptly when requested.</p> <p>b.) If any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the EIA, the IEE, the EMP, and the RP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan.</p> <p>c.) No later than 3 months from award of the first Works contract, engage or cause to be engaged qualified and experienced external experts or qualified non-governmental organizations under a selection process</p>	<p>N/A (no unanticipated risks have been experienced so far)</p> <p>N/A (no major environmental or social issues are anticipated in the project that warrants engagement of external expert)</p> <p>N/A (there has been no breach in compliance so far)</p>

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
	and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process for environment, resettlement, and indigenous peoples (if any), and facilitate the carrying out of any verification activities by such external experts; and d.) Report any actual or potential breach of compliance with the measures and requirements set forth in the EMP and the RP promptly after becoming aware of the breach.	

B. Compliance to Project Administration Manual

17. The Project Administration Manual¹ (PAM) describes how the Phuentsholing Thromde, Department of Roads, and Ministry of Works and Human Settlements will implement the project and deliver the results on time, with quality, within budget, and in accordance with government and Asian Development Bank (ADB) policies and procedures.

18. The PAM is mandatory and serves as the main document describing implementation details. The status of implementing the environmental safeguards requirements set out in PAM is provided in **Table 3**.

Table 3: Status of Compliance to Environmental Provisions of the Project Administration Manual

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
1	Schedule VIII. Item 31: Categorization 31. The Alay Land Custom Station is category B. Initial Environment Examination (IEE) reports have been prepared.	100% Complied
2	Schedule VIII. Item 32: Implementation of Environmental Management Plan. 32. PT will ensure that all environment safeguard requirements under the project will be implemented as required by the IEE for ALCS been prepared.	Complied as per detailed design.
3	Schedule VIII. Item 33: 33. The EMP is a plan for implementation and monitoring of environmental mitigation and enhancement measures during project construction and operation. Specific measures with details on the location, time and responsible agency for implementation and monitoring is given in the EMP. Mitigation measures for implementation during the construction stage is implemented by the contractor and during the operation stage by PT through PIU. The Environmental Specialist in the consulting services for both the PT subprojects will support PT to guide and monitor the implementation of EMPs by contractors. An Environmental Focal Person (EFP) will be appointed under PT. Similarly, an EFP will be appointed at the site level under the consulting services for conducting day to day monitoring of EMP implementation. An EFP will also be appointed by the contractor for each contract package to ensure proper implementation of the EMP.	Complied. Environmental Focal Person (EFP) has been appointed from consultant site Inspector and from Contractor Project Engineer
4	Schedule VIII. Item 34: 34. The EMP includes the collection of baseline data on air and noise quality during the pre-construction stage. The	Complied. The air and noise monitoring equipment were procured, and air and noise monitoring are being conducted every few months.

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
	Environmental Specialist in the consulting services will be responsible for procuring the monitoring equipment and organizing training on the operation of the equipment by the supplier for the EFP under the PIUs, consulting services and contractors before the start of construction works. The Environmental Specialist in the consulting services will be responsible for the baseline data collection on air, noise, and water quality before construction works begin, during construction and during early stages of operation as given in the EMP. After the construction works are over, the monitoring equipment will be handed over to PT for use by the EFP for other projects. An initial coordination cum training workshop will be organized by PT with technical support from consulting services and ADB as necessary.	
5	Schedule VIII. Item 35: 35. All required clearances such as the environmental clearance and forestry clearance must be obtained by the PIUs before the start of construction works for all project components.	Complied. All the necessary environmental clearances are obtained by PMU before starting construction works.
6	Schedule VIII. Item 43: Grievance Redress Mechanism 43. A grievance redress mechanism will be established to receive and facilitate the resolution of concerns, complaints and grievances of affected people and relevant agencies on the social and environmental performance of the project in a time-bound and transparent manner. The project-specific GRM is not intended to bypass the government's own redress process, rather it is intended to address project-affected people's concerns and complaints promptly, making it readily accessible to all segments of affected persons and is scaled to the risks and impacts of the project.	GRM has been established. If there are project-affected people, they can approach to PMU and the Dzongkhag Land Committee.

SN	Environmental Provision	Compliance Status
		Alay Land Custom Station
7	Schedule VIII. Item 44: Monitoring and Reporting 44. Implementation of the EMP will be monitored by PIUs with the support of consulting services. For environment safeguards, records on implementation of the mitigation measures on-site will be maintained by the contractor. Based on these records and spot checks of at least once a month by PIUs and consultants, monitoring reports will be compiled by the Environmental Specialists in consulting services on a semi-annual basis. If there are any changes in the design or alignment, the EMP and RP of the respective subproject will be updated to account for any additional or new impacts. Further, the need for revising the IEE reports will also be reviewed and confirmed in discussion with ADB	Complied. The reporting system is being followed by the Contractor and the process is being followed for compiling the environmental monitoring report.

C. Compliance to the Civil Works Contract Agreement

Table 4: Status of Compliance to Environmental Provisions of the Civil Works Contract Agreement

SN	Description	Compliance Status
		Alay Land Custom Station
1	Orientation for Contractors, Workers on environmental and social management	Orientation for contractor and worker on the environment was conducted.
2	Loss of vegetation	No tree is there. Hence no loss of vegetation.
3	Drainage and Hydrological Impacts	Complied
4	Procurement and storage materials	Complied
5	Solid waste management	Complied
6	Noise and Dust pollution	Complied
7	Excavation and disposal	Complied

1. Result and Interpretation of Air Quality Monitoring

20. The monitoring of ambient air quality was carried out in one location within the ALCS premises. The location tested was within the NEC's required permissible limits.

i.) The test was within the permissible limits because there was watering within the location and dusts along the roads and from construction sites are all settled. Another reason could be due to the outbreak of COVID-19, the border between India and Bhutan have been closed for the past few months, and recently opened. Due to this reason vehicle movement has dramatically reduced the number of vehicles on the road. Most factories are also operating at 50% capacity which is not causing as much pollution in comparison to the past years.

2. Mitigation Measures

21. The air pollution test conducted at the one location along the ALCS is within the permissible limits.

22. Even though there has been a drastic reduction in construction activities and vehicle movement, but with the ongoing project activities, it is ensured that the contractors continue sprinkling around the project area when required, if any project vehicles are entering or exiting Bhutan with materials the contractor is to ensure that it is covered in tarpaulin, and light construction materials such as cement, and sand are to be covered with tarpaulin at project areas.

3. Noise Quality Monitoring

Table 6: Noise Level Monitoring (Dba) for ALCS

SN	Location	Date	Day (dBA)	Night (dBA)	Environmental Standard for Industrial Area	
					Day (dBA)	Night (dBA)
1	Near Staff Parking	20/09/2021	74	73.5	75	65

4. Result and Interpretation of Ambient Noise Level Monitoring

23. Ambient noise measurement was carried out in one location along the ALCS project activity site. The analysis shows that noise level for ALCS is within the permissible limits during the daytime, but are slightly high during the night time.

24. The noise level during night might have been due to the test being taken right near the camp site, where the main source of noise could be from the people living there and the activities within the camp. The ALCS is located right near the main highway to and from Phuentsholing to Pasakha, so it could also be due to movement of vehicles from private vehicles, trucks, and buses from the factories nearby. There are other natural factors such as heavy wind and animals which could be another contributing factor. All the noise caused by manmade activities are temporary and will not have long term impact.

5. Mitigation Measures

25. The noise pollution test conducted at the one location along the ALCS premises, is within the permissible limit except for the high noise level during the evening hour.

26. Even though there has been a drastic reduction in construction activities and vehicle movement, but as the project continues to progress, the contractors are to ensure that work does not continue beyond the Bhutan Government approved time, and no construction or sound making activities to take place after work hours without legal permission from the Client and the RGoB. During work hours project vehicles are discouraged to honk unnecessarily to not cause any disturbance to the neighboring communities.

V. COMPLIANCE TO ENVIRONMENTAL CLEARANCE

27. The Environmental Compliance of ALCS project is prepared as per terms and conditions of EC and implementation of Environmental Management Plan (EMP) of the project. **Table 7** contains the compliance requirements and the status compliance of ALCS

Table 7: Alay Land Custom Station's Compliance with the Terms and Conditions of the Environmental Clearance

SN	Compliance Requirement	Status
I. GENERAL		
1	The holder shall comply with provisions of the National Environmental Protection Act 2007, Environmental Assessment Act 2000 and its Regulation 2016, Waste Preservation and Management Act of Bhutan 2009 and its Regulation 2016, and the Water Act of Bhutan 2011 and its Regulation 2014	Construction is going on as per the mentioned laws. The site is monitored by the Dzongkhag Environmental Officer, PT as well as the site supervisor from the consultant firm. Total earth excavation is 16,608 Cum and disposed quantity is 13286 Cum.
2	The holder shall ensure that construction activities are in line with Initial Environmental Examination report submitted for EC	Construction is as per the IEE submitted and as per the Environmental Clearance issued
3	The holder shall ensure that local communities, properties, and any religious, cultural, historic, and ecologically important sites are not adversely affected by the activities	The construction does not affect any sites of this nature.
4	The holder shall restore the damage of any public or private properties caused by the activities	No damage caused to public or private properties so far. Any damages caused to private properties will be discussed and the damages will be restored. Any damages caused to public properties will be reported to relevant authorities and damages will be restored.
5	The holder shall inform NECS and any other relevant authorities of any unanticipated or unforeseen chance-find of any precious metals or minerals or articles, that have economic, cultural, religious, archaeological, and/or ecological importance	Such incident has not yet occurred. If such an incident occurs, NECS and relevant authorities will be informed.
6	The holder shall erect a signboard at the take-off point of the main entry of the activities stating the name of the activities and contact address	Safety signboards are at strategic locations which necessitate specific warning signs.
II. ENVIRONMENTAL STANDARDS		

SN	Compliance Requirement	Status
7	The holder shall comply with the existing Environmental Standards	
III. IMPORT AND USE OF SECONDHAND EQUIPMENT		
8	The holder shall ensure that import and use of second-hand equipment and machineries are strictly prohibited.	No second-hand equipment was used at the site. All required equipment's were purchased and were all found to be in good condition.
IV. WATER USE AND MANAGEMENT		
9	The holder shall ensure that activities does not disrupt the water flow and pollute the water bodies	The ALCS project area is along the Bhawanijhora stream which is not a perennial source, still then the actual construction site is completely secured with the boundary wall. Moreover, there isn't any spills with disruptive materials which pollutes the stream.
10	The holder shall ensure that 30 meters or 100 feet buffer is always maintained from the water resources	The ALCS site is more than 50m from the stream.
V. WASTE PREVENTION AND MANAGEMENT		
11	The holder shall manage wastes generated from the activities (activity site, labour camps, offices etc.) with the application of 4R (reduce, reuse, recycle, responsibility) principle and other environmentally friendly methods of waste management	Two pits of 1.5 x1.0x1,0 m are made for organic & non - organic waste, with sufficient refuse bins within site camps and offices. Tarpaulin are used to cover lightweight materials at site.
12	The holder shall ensure that import and use of hazardous wastes are strictly prohibited	The project does not require any use or import of hazardous materials. Thus, such waste will not be generated.
VI. MANAGEMENT OF EXCAVATED MATERIALS AND RUN-OFF		
13	The holder shall dispose off excess excavated materials at the pre-identified approved dumpsite only	Excavated materials around 16,608 cum are disposed at disposal site shown by the Thromde management near Bhawanijhora stream.
14	While doing excavation the holder shall put necessary shoring at side to avoid erosion.	Necessary measure like construction of RRM wall around the construction site along with drains and laying of Hume-pipes are placed to mitigate the erosion and to take care the runoffs.
VII. MONITORING AND REPORTING		
15	The holder shall ensure that the effective day-to-day monitoring of the EC terms and conditions	Contractor has appointed Safety Officer. From PIU, PM

SN	Compliance Requirement	Status
	are carried out by the environmental unit or designated environmental focal person	takes care of safety issues and from CSC side Environmental Focal Person monitors this
VIII. RENEWAL AND MODIFICATION		
18	The holder shall ensure that renewal of this EC is processed at least three (3) months prior to its expiry along with a copy EC and a report on the implementation of its terms and conditions	Yes
19	The holder shall obtain prior approval from NECS for any modification to the existing proposal / application	There has been no modification in proposal so far.
IX. RESERVATION		
20	The NECS may stop the activity or impose additional terms and conditions, as maybe deemed necessary	N/A
20	The EC shall be subject to periodic review and modifications as per Article 25 of the EA Act 2000, without any liability on the part of the Royal Government	N/A
21	The holder may adopt best practices in executing these terms and conditions to avoid adverse environmental impacts.	N/A

VII. CONCLUSION

28. The Environmental management study revealed that construction impacts are predictable and manageable through the implementation of mitigation measures. Detailed design for ALCS is being prepared by the design consultant (procured by PT) and a contractor is engaged for construction. Institutionalization of environmental compliance monitoring shall be carried out.

29. The development of the Land Customs Station at Alay is expected to:
- ease traffic congestion inside Phuentsholing town (currently all vehicles to and from India passes through the only border crossing at Phuentsholing);
 - reduce travel distance for heavy trucks (travelling through Jaigaon bypass road)
 - reduce transportation cost
 - reduce fuel consumption and thereby lower greenhouse gas emission
 - reduce vehicular noise and exhaust pollution
 - allow smooth and faster trading between India and Bhutan, leading to better economic out of the country

30. Further, under the current project, climate change adaptation measures should be implemented since there are major threats to ALCS. The erosion, landslide, and debris flow from the upstream or catchments of Bhawanihora stream during the monsoon seasons have affected hectares of prime land within Bhutan and damaged the down aquatic life altogether. The project proposes to carry out catchment area management and slope protection works with civil and bioengineering applications. Also, the project will carry out river training and flood protection works along the Bhawanihora stream. All these activities will result in an improvement of the downstream aquatic environment and prevent flood damages.

31. The main purpose of developing the allay LCS is to decongest the traffic in Phuentsholing core town area and dovetailing of the import/export customs services for Pasakha bound traffic. The construction of ALCS at allay pasakha will help in providing customs, immigration and cargo handling for goods and people travelling in and out of Bhutan.

PHOTO LOG OF AIR AND NOISE MONITORING EQUIPMENT



Figure 3: Air monitoring equipment



Figure 4: Noise monitoring equipment

Annex- 1 (Environmental Clearance Certificate)



ཀྲུལ་ཡོངས་མཐའ་འཁོར་གནས་སྤངས་ལྷན་ཚོགས།
དཔལ་ལྷན་འབྲུག་གཞུང་།

National Environment Commission

Royal Government of Bhutan



NECS/EACD/Dzo-Chukha/3751/2019/ 1529

July 26, 2019

Environmental Clearance

In accordance with Section 34.1 of the Environmental Assessment Act 2000 and Section 34 of the Water Act 2011, this Environmental Clearance (EC) is hereby issued to **Phuentsholing Thromde** for the construction and operation of **Alay Land Customs Station** at **Alay Domestic Airport** measuring **4.4 acres** under **Phuentsholing Thromde, Chukha Dzongkhag** with the following terms and conditions:

I. General

The holder shall:

1. comply with provisions of the National Environment Protection Act 2007, Environmental Assessment Act 2000 and its Regulation 2016, Waste Prevention & Management Act of Bhutan 2009 and its Regulation 2016, The Water Act of Bhutan 2011 and its Regulation 2014 and Revised Regulation on the Control of Ozone Depleting Substances (ODS) 2008;
2. ensure that construction and operation of station is in line with Initial Environmental Examination report and Environment Management Plan submitted for EC;
3. ensure that local communities, properties and any religious, cultural, historic and ecologically important sites are not adversely affected by the construction and operation of station;
4. restore the damage of any public or private properties caused by the construction and operation of station;
5. inform NECS and any other relevant authorities of any unanticipated or unforeseen chance-find of any precious metals or minerals or articles, that have economic, cultural, religious, archeological, and/or ecological importance; and
6. erect a signboard at the take-off point of the main entry of the station stating the name of the station and contact address.

II. Environmental standards

The holder shall comply with the existing Environmental Standards 2010.

III. Import and use of secondhand equipment and ODS

The holder shall:

1. not import and use secondhand equipment and machineries; and
2. not use ODS are in line with the Revised Regulation on the Control of ODS 2008.

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IV. Protection and management of water resources

The holder shall:

1. ensure that construction and operation of station does not disrupt the water flow and pollute the water bodies; and
2. ensure that 30 meter or 100 feet buffer is maintained from the water resources at all times.

V. Waste prevention and management

The holder shall:

1. manage wastes generated from the construction and operation of station (project site, labour camps, offices etc.) with the application of 4R (Reduce, Reuse, Recycle, Responsibility) principle and other environmentally friendly methods of waste management; and
2. ensure that import and use of hazardous wastes are strictly prohibited.

VI. Management of excavated materials, industrial waste, and run-off

The holder shall:

1. dispose excess excavated materials generated during construction of the station only at the pre-identified approved dumpsite; and
2. put appropriate measures to avoid erosion and landslides.

VII. Management of raw materials and finished products

The holder shall ensure appropriate measures are put in place for handling and storage of raw materials to avoid fugitive emissions.

VIII. Implementation plan

The holder shall prepare a detailed implementation plan focusing on the implementation of terms and conditions of this EC and submit to NECS within three (03) months from the date of issue of this EC.

X. Monitoring and reporting

The holder shall:

1. ensure that the effective day-to-day monitoring of the EC terms and conditions are carried out by the environmental unit or designated environment focal person;

XI. Renewal and modification

The holder shall:

1. ensure that renewal of this EC is processed at least three months prior to its expiry along with a copy EC and a report on the implementation of its terms and conditions; and

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2. obtain prior approval from NECS for any modification to the existing proposal/application.

Reservation

1. The NECS may stop the activity or impose additional terms and conditions, as may be deemed necessary; and
2. The EC shall be subject to periodic review and modifications as per Article 25 of the EA Act 2000, without any liability on the part of the Royal Government.

The holder may adopt best practices in executing these terms and conditions to avoid adverse environmental impacts.

Failure to comply with any of the above terms and conditions shall constitute an offence and the proponent shall be liable in accordance to the Environmental Assessment Act 2000 and/or existing environmental laws.

Validity:

This EC is issued with valid from 26/07/2019 until 25/07/2024 only.


 (Phento Tshering)
DIRECTOR

To,
 Phuentsholing Thromde
 Chukha Dzongkhag

Copy to:

1. Dasho Dzongdag, Dzongkhag Administration, Chukha for kind information.
2. Dasho Thrompoen, Phuentsholing Thromde, for kind information.
3. Dzongkhag Environment Officer, Dzongkhag Administration, Chukha for compliance monitoring.
4. Guard-file, Dzo-Chukha, NECS for record.



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