Environment Screening Report

Of

Regional Plant Protection Laboratory, Hariharbhawan, Lalitpur, Kathmandu

NIRTTP

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Chapter 1: Introduction

Project Description

World Bank / NIRTTP review mission January 25-29, 2016 has assured to Plant Protection Directorate (PPD) to provide funding for the construction of Regional Plant Protection Laboratory (RPPL) situated in Hariharbhavan, Lalitpur, Kathmandu. The lab building was severely damaged by the earthquake that struck during April 25, 2015.The building is formally housed the laboratories is damaged beyond repair and need to be demolished and replaced with a new building.This construction will help to deliver efficient plant protection services and to meet the Sanitary and Phyto-Sanitary (SPS) requirements that facilitate to promote international trade. Building of proposed laboratories will be two and half stories with both SPS and Regional laboratories will be located in the same building. The SPS lab will run on the ground floor and regional lab will run on the first floor. The upstairs will be used for the purpose office to RPPL.

Project Proponent

The proponent of the project is Plant Protection Directorate under Department of Agriculture.
The name and address of the proponent is as follows:

Plant Protection Directorate,
Department of Agriculture,
Ministry of Agricultural Development.
Email:rppl14@gmail.com
Phone: 01-5536462

Description of the Project

The proposed building is situated at Hariharbhawan near minister quarter premises at Lalitpur. A two storey building of Regional Plant Protection Laboratory was constructed in2797.86 sq.ft plinth area with total compound area of 5799.04 sq ft. The building was made of brick in mud mortar and the age of the building is more than approx 70 years. Most of the materials, (masonry unit and mortar) is deteriorated due to the time duration. Since the building is well beyond the 50 years life span, it is advisable that the building is to be demolished. *(Detail Damage Evaluation Report, 2016).*

Over-view of major key activities

Existing two storey building of Regional Plant Protection Laboratory at Hariharbhawanhas been damaged beyond repair; hence the building shall be demolished and debris shall be disposed off safely on approved disposal site and new building shall be constructed at same location. The major activities of the overall project comprise;

- Demolition of existing two storey building

- Transportation and safe disposal of debris
- Transportation of construction material
- Stockpiling of construction material
- Construction of building
- Site clearance after the completion of construction

Need for the project

Agriculture is the mainstay of the country. This sector plays prime role in the trade and economic development of the country. About 65.5% of the population in the country is engaged in the Agriculture. Agricultural crops have been prone to damage due to harmful insect pests, diseases, weeds, nematodes, rodents from time immemorial. Outbreak of insect pests & disease is common phenomena in commercial agriculture. Government of Nepal has given top priority in various plan periods for Plant Protection Sector. ThePPD is designed as the Government agency responsible for the formulation of the plant protection policies and involves in the implementation of the Plant Protection activities. The laboratory established under PPD supports in fulfilling activities and programs of the directorate in controlling the use of pesticidesand plant quarantine etc. Establishment of laboratory will support in agricultural development of the countrymaintaininghealthy agro products and further enhances in trade of thehealthy agro products.

Expected benefits from the project

The activities of RPPL have been badly affected since destructive earthquake of 25th April, 2015 as its laboratory building was damaged.The main work carried out by the RPPL is to provide diagnostic services of the insect pests and diseases occurred in the agricultural crops and recommend the eco-friendly techniques to manage them. Therehas been producing bio-pesticides in a small scale and testing about its efficacy in the farmers' field.It is expected that all the lab activities will be re-established with the establishment of laboratory.

Previous Studies

A detail damage assessment of RPPL has been carried out recently by Hegina Engineering Consultant Pvt. Ltd. Final evaluation report has been submitted to PPD. The study recommended demolishing the building of RPPL.

Chapter 2: Methodology Adopted for Environment Screening Exercise

Objectives of the Environment Screening Exercise

The main objective of the Environment Screening exercise is;

- to establish the thresholds for key features of a project;

- to establish the level of environmental assessment required (required IEE or EIA as per Schedule 1 and 2 of Environment Protection Rules, 2055 or detail study not required);
- to understand environmental issues related to the project before they are considered for implementation and
- toassist in decision making process.

Methodologyadopted for Environment Screening Exercise

A checklist is developed and used for screening exercise. The checklist used for the study is attached herewith in the Annex section. The methodology comprises visual inspection of the project site and its surrounding area. The inspection was based upon checklist for the identification of significant environmental impacts with its implementation. Photographs around the building premises were also taken for the record.

Project Influence Area

The laboratory building is situated at the Hariharbhawan a city center of the valley and is surrounded by other government offices. A hundred meter surround area from the existing building can be considered as direct influence area for the demolition and construction of new building.

Types and sources of data collection

RPPL site visited for the inspectionand the collection of data. Finaldetail damage evaluation report of RPPL prepared by a consultant can also be considered as another source of data collection.

Chapter 3: Baseline Environmental Conditions

Natural Environment

The site is office block and is surrounded by several other office buildings. The front wall of the site is demolished by earthquake. 4m width black top road existed in the from the RPPL building.

Biological Environment

No any forest and protected area existed around and near the site. No any wildlife is existed. Only few planted trees are existed within the site premises.

Physical and Socio-economic Environment

No any sources of air, water and noise pollution is existed near the site. The source of noise is only from the plying of vehicles. No any permanent residential buildings are existed substantially. Flow of people are more only during office hours. A vulnerable old building is attached with the RPPL building on its back.

Chapter4: Assessment of Key Environmental Impacts

Potential environmental impacts with its associated project activities are presented in the following table.

Project Activity	Types of Impact/Risk	Impact Assessment	Measures to mitigate impact
Demolition of damaged building • Drilling of roofs and column • Destruction walls, doors and windows • Cutting and collection of iron bars • Storage of demolition wastes before transportation • Storage of reusable of bricks • Transfer of debris • Disposal of debris	Air/ dust pollution	With increase in movement of demolition activities and vehicles carrying demolition wastes and drilling equipments will create air pollution during demolition and excavation.	The Contractor shall keep all demolition debris in controlled area and sprayed with water mist to reduce debris dust in order to maintain air quality. During drilling / wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site. The surrounding environment (other office premises and roads) shall be kept free of debris to minimize dust.
	Noise	Noise will also be generated with the use of drilling equipments and plying of vehicles carrying demolition wastes.	The Contractor shall minimize the generation of noise with the operation of engines and mechanical equipments as far as possible. The Contractor shall avoid construction works generating noise during night hours.
	Pressure on public utilities	Additional pressure on the public utilities such as toilets during demolition.	One toilet shall be allocated to workers near the site in order to avoid haphazard use on other adjoining offices.
	Occupational health and safety, health hazard and risk of accidents	Laborers might encounter occupational health and safety, health hazard and accidents during demolition if proper safety gears are not provided.	The Contractor shall ensure first aid facilities available at all times at the construction site. The contractor shall maintain safety and protection against accidents during demolition of the building. The Contractor shall provide whatever is required by the construction workers for personal protection (such as helmet, dust mask, safety boot, visibility vest, gloves, safety glasses etc.) during demolition. The contractor shall maintain records and shall at all times take all responsible precautions to prevent any accidents and loss of lives of contractor's personnel and damage to other property

Project Activity	Types of Impact/Risk	Impact Assessment	Measures to mitigate impact
			on and near the site. Signage boards, warning signs, reflector barriers shall be established with clearly visible around the demolition site to aware the public of all potential hazards from the demolition.
	Increase in traffic volume during transfer of debris	Hampering free flow of traffic around the site.	The Contractor shall take all responsible steps to maintain free flow of traffic within and out of the site. Movement of vehicles carrying demolition wastes shall not disturb existing traffic condition of the site.
	Impact and risks associated with haphazard disposal	Associated impacts such as water pollution, air pollution, land degradation due to haphazard disposal at unapproved site.	The Contractor shall take all responsible steps to collect and dispose of demolition wastes in appropriate disposal site in safe manner.
Transportation and stockpiling of construction materials	Unnecessary disturbance to road traffic and air/dust pollution	Movementof construction material carrying vehicles, equipments like concrete mixture and welding machine will add air pollution. Proper storage of construction materials such as sand, gravel,bolder and iron bars. These materials need to be procured from local market.	Construction materials procured shall not be stockpiled on the paved road surface for longer time disturbing traffic movement. Proper boundary shall be maintained for the storage. Water shall be sprinkledover the road near the site and over the stockpiling whenever required to avoid dust generated from the storage and movement of vehicles carrying construction materials.
Erection of foundation and building	Noise	Equipments like concrete mixture and welding machine and vehicles carrying construction material will add sound pollution to the area.	Contractor shall maintain the sound level of the site into permissible limit as far as applicable while operating welding and concrete mixtures. Unnecessary running of such equipment shall be avoided. Closed cover box with led shall be used to minimize sound level if contractor wishes to use electricity generator.
	Pressure on public utilities	With increase in labor force there will be additional pressure on the public utilities such as drinking water and toilets during construction period.	Drinking water facility to the contractor personnel and labors shall be managed by contractor. The employer shall be responsible to allocate a toilet to labor in order to avoid haphazard use of other toilet of nearby offices.

Project Activity	Types of Impact/Risk	Impact Assessment	Measures to mitigate impact
	Occupational health and safety, health hazard and risk of accidents during construction	Laborers might encounter occupational health and safety, health hazard and accidents during construction stage if proper safety gears are not provided.	The contractor shall maintain safety and protection against accidents during construction of the building. The Contractor shall provide whatever is required by the construction workers for personal protection (such as helmet, dust mask, safety boot, visibility vest, gloves, safety glasses etc.). The contractor shall maintain records and shall at all times take all responsible precautions to prevent any accidents and loss of lives of contractor's personnel and damage to other property on and near the site.

Chapter 5: Conclusion and Recommendations

Demolition and construction of RPPL building is unlikely to cause any adverse significant environmental impacts, except some common issues of noise and dust nuisance, waste management, worker safety, etc. The demolition and construction activity of RPPL building does not change any land use pattern of the existing site. A proposed project is classified as Category C and is likely to have only minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment action is required.

Contractor shall get permission from the employer before establishment of camp within the compound area of RPPL. Cleanliness shall be maintained if contractor wishes to establish labor camp inside the RPPL compound. Solid waste generated shall be managed properly and shall not be disposed off haphazardly around the camp site. Contractor shall provide LP Gas or kerosene oil for labor as a source of cooking energy. Further, contractor will be responsible to maintain potable drinking water and lighting system for the establishment of camp.Contractor shall be responsible to provide camp operational procedure and construction management plan prior to start the work. Contractor shall be responsible to clear all the sites after the construction of building.

Detail design of the building shall focus upon earthquake resistance design.A vulnerable building attached to the lab building shall be taken into consideration during demolition.

Annexes

Annex – 1

ENVIRONMENTAL SCREENING CHECKLIST

For

Demolition of existing RPPL building and construction of new one at the same location

Project Brief

Name of the project: Demolition and Re-Construction of RPPL building.

Location: Existing office compound at Hariharbhavan, Kathmandu.

Construction methodology: labor and machinery based. The construction works carried out by contractor.

Approximate Investment Required: Nrs. 86 million for both demolition and construction.

Environmental Setting and Problems/Issues

1. Are there any Protected Areas ecological fragile areas, national parks, wildlife sanctuaries, wilderness areas containing rare or endangered species of animals or plants and their habitat within and near the site? - **No.**

2. Does the RPPL lies within forested area? – **No.**

3. Do construction activities damage the forest, wildlife habitat and any other ecologically fragile areas? – **No.**

4. Are there any prone/existing Landslide areas and erosion? – **No.**

5. Are there any Flood prone/River Cutting/low lying areas? - **No.**

6. Are there any water sources/bodies within the project site? - **No.**

7. Do the demolition and construction activities damage any of any water bodies / drinking water sources? – **No.**

8. Are there any historical, cultural and religious sites around and near the proposed site? – **No.**

9. Are there any scientific or geological interest/wetlands? – **No**.

10. Do demolition and construction activities pose threat to any of aforementioned sites? – **No.**

11. Are there any public open spaces within and around the construction site? – **Yes.**
    (Public open spaces around other government offices are existed near the RPPL building.)

12. Are there any residential, school, and hospital areas, major sources of public water supply within and around the site? – (**One residential** on the back side of the building compound; and **other government office building**s existed in the surroundings; however; no School, hospital and water supply existed within and around the site).

13. Do construction activities pose threat to any of these open spaces? – **No.**

14. Do demolition and construction activity caused or likely cause dust/noise/vibration problems? – **Yes.**
    (Demolition of building likely to cause dust, noise and vibration problems near and around the RPPL premises. Especially, during drilling and wall destruction dust pollution is likely in the vicinity.)

15. Does the site pose threat to aesthetically important place? **– No.**

16. Does the site have or likely to have induced impacts like; change in land use, encroach into agricultural land, settlements, encroachment into forest/marginal lands/common property, quarrying, health, girl trafficking etc? **– No.**

17. Land requirement for the project is large in comparison to the scale of the surrounding environment? **– No.**

18. Do the demolition and construction activity affect people and require resettlement? **– No.**

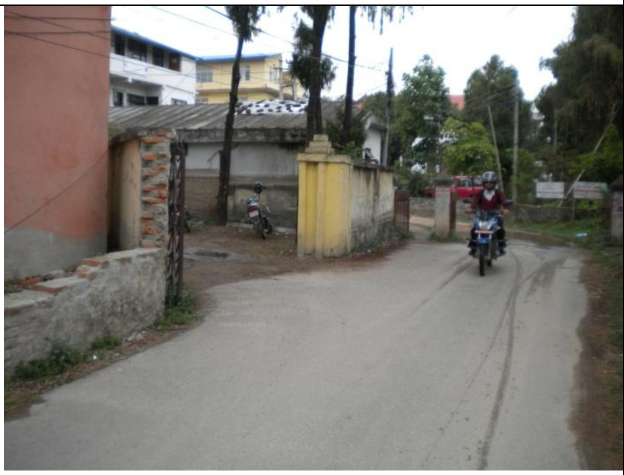
19. **Do the demolition and construction activity disturb existing traffic condition of the site? – Yes.**
    (The free flow of traffic within and out of the site is likely to be affected with frequent movement of construction vehicle carrying demolition wastes and construction materials.)

20. Does the project required to undergo IEE/EIA as per Schedule 1 and Schedule 2 of EPR, 1997? - **No.**

Annex – 2

Photographs

	
Front gate and existing vegetation	Front view of RPPL building required for demolition

	
existing open space and front view of the building	Other office building existed nearby
	
Outside 4m width road and entrance gate	Outside 4m width road and boundary wall
	
Vulnerable building attached to the lab building	Vulnerable building attached to the lab building