

Social Monitoring Report

Annual Report
September 2016

BHU: SASEC Road Connectivity Project

Prepared by Ministry of Works and Human Settlements, Department of Roads for the Royal Government of Bhutan and the Asian Development Bank.



Royal Government of Bhutan
Ministry of works and Human Settlement
Department of Roads



**Construction Supervision and Capacity Development
Consultancy Services**

**Asian Development Bank Grant No. 0400-BHU (SF) South Asian Sub-
regional Economic Cooperation (SASEC) Road Connectivity Project**

Pasakha Access Road Social Monitoring Report September 2015-
August 2016



CURRENCY EQUIVALENTS

(as of 07 April 2016)

| | | |
|---------------|---|--------------------|
| Currency unit | – | Bhutanese Ngultrum |
| Nu 1.00 | = | \$ 0.01504 |
| \$1.00 | = | Nu 66.4928 |

ABBREVIATIONS

| | | |
|--------|---|--|
| ADB | - | Asian Development Bank |
| AP | - | Affected Person |
| AH | - | Affected Household |
| BSR | - | Bhutan Scheduled Rates |
| CDCL | - | Construction Development Corporation Limited |
| CSC | - | Construction Supervision Consultants |
| DoR | - | Department of Roads |
| GRC | - | Grievances Redress Committee |
| GRM | - | Grievances Redress Mechanism |
| HH/hh | - | House hold |
| HISC | - | Health Information Service Center |
| HIV | - | Human Immunodeficiency Virus |
| MoH | - | Ministry of Health |
| MoLHR- | - | Ministry of Labour and Human Resources |
| Nu | - | Ngultrum (Bhutanese Currency) |
| PC | - | Project Coordinator |
| PIU | - | Project Implementation Unit |
| RGoB | - | Royal Government of Bhutan |
| RP | - | Resettlement Plans |
| SASEC | - | South Asia Sub-regional Economic Cooperation |
| SPS | - | Safeguard Policy Statement |
| STD | - | Sexually Transmitted Diseases |

Contents

| | |
|---|----|
| 1. Background | 6 |
| 2. Asphalt Plant | 8 |
| 2.1 Conclusion | 10 |
| 3. Affected Person (Loss of Land/structure) | 11 |
| 3.1 Relocation and resettlement | 12 |
| 3.1.1 Description and specifications of the affected structure | 12 |
| 3.1.2 Grievances Redress Mechanism (GRM) | 12 |
| 3.1.3 Resettlement Policy | 13 |
| 3.1.4 Relocation of Housing and Settlements..... | 14 |
| 3.1.5 Conclusion..... | 16 |
| 4. Organisations and agencies involved in the recruitment process..... | 16 |
| 4.1 Labour Agencies..... | 17 |
| 4.2 Diagnostic Centers | 17 |
| 4.3 Recruitment procedures..... | 17 |
| 5 Awareness Program | 18 |
| | |
| Annex 1: Calculations for the valuation of the affected structure | 20 |

NOTE

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

This social monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of this website.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

1. Background

The Royal Government of Bhutan (RGoB) and the Asian Development Bank (ADB) approved the SASEC Road Connectivity Project in July 2014. The Project includes the following activities: the construction of (i) 68km of National Highway between Nganglam and Dewathang; (ii) 1.2km access road from an Indian border constructed at Pasakha area, (iii) a mini-dry port in Phuentsholing and Allay land customs station; and (iv) the construction of about 2.7km of bypass road in Phuentsholing city.

This document is the Social Monitoring Report covering the period from September 2015 to August 2016 for the construction of the two activities being implemented by the Department of Roads (DOR): (1) 68km of National Highway between Nganglam and Dewathang, and (ii) 1.2km access road from an Indian border constructed at Pasakha. Given that the first activity (Nganglam to Dewathang Road section) is currently on hold due to the pending security situation, this report only covers the social activities related to the construction of the Pasakha Access Road.

More specifically this Social Monitoring Report focuses on the following activities:

- the establishment and operation of an Asphalt Plant within the vicinity of the construction project office and camp;
- the compensation/relocation case of the affected person, Mr. Nala Tshering and his family; and
- HIV/STD awareness campaign at the labour camps.

Construction works started in September 2015 and are expected to end by August 2017. Works include improvement of the 1.2 km section of the Rinchending-Pasakha highway at Allay and the concrete bridges at Bhawanijhora and Bhalujhora. Once works have been completed, the flow of traffic from Phuentsholing to Pasakha is expected to improve.

The number of workers at the construction site office has fluctuated from ten to fifty three in December, 2015. The number of workers are expected to increase to over 200 workers as work progresses. These labourers will be required to live (cook, eat, and sleep) at the workers camps that was constructed in November 2015. As per the TOR, awareness programs have to be conducted at the project construction sites on a periodic basis. The programs include awareness on HIV/AIDS, anti-trafficking and child labor and gender sensitization activities. However, as per Bhutan's Labour Act, recruitment of female laborers and children (below the age of 18 years) is not permissible and male workers are also not allowed to bring their family/spouse with them.

The camps which have been constructed by the contractor are within close proximity to the Asphalt Plant (less than twenty feet). Towards the northern side of the Asphalt plant, within a distance of twenty feet, are the field laboratory for the construction works and site office of the Resident Engineer.

2. Asphalt Plant

The Construction Development Corporation Limited (CDCL) has set up an asphalt plant between the Consultancy project site office and the construction camp site. The plant which is located just at the entrance of the site makes it inconvenient for proper mobility of vehicles, especially bigger trucks and also workers and project personnel. However, the bigger issue here is the risks to the health and wellbeing of people and animals living and working in close proximity to the Asphalt plant. Such plants are not suited to be set up in areas close to a human settlement as they emit chemicals to the air during production and also during the loading of the asphalts into trucks. Some of the negative impacts on human and animal health and on the vegetation have already been highlighted.

Although the Phuentsholing Thromde had been contacted and informed about these issues, the response is that the air quality is being controlled by the CDCL and also that public clearance has been obtained from the villages around Pasakha. However, the project office and contractor camp site have not been taken into consideration prior to installation and operation of the Asphalt plant.

Ever since the plant became operational, complaints from the Construction Supervision Consultants (CSC) and contractor's staff have been coming in with reports of smoke and dust emissions from the plant which has been causing irritation and discomfort to the workers at site. Even engineers and supervisors who work indoors need to keep the doors and windows of the laboratory and office closed and still use a face mask.

The contract for resurfacing of the roads in Phuentsholing town was awarded to CDCL by Phuentsholing Thromde in 2015. Since the work includes double layering of the entire urban core road (approximately 19 kms), an Asphalt Plant was initiated at Pasakha. According to officials from the CDCL, the road works are expected to complete by December 2016. The plant will stop production after December if no other works/contracts are forthcoming according to CDCL. Currently, due to frequent rainfall, the asphalt plant has minimized its operations.



Figure 2.1: Asphalt Plant

Table 2.1 below summarises the events and correspondences between the CSC, Project Coordinator (ADB SASEC Road Connectivity Project, Department of Roads), Phuentsholing Thromde and the Dzongkhag Environment Committee from the start of this project which is from as early as August 2015:

Table 2.1 Dates and summary of the correspondences

| No | Date | Summary of correspondences/mail |
|----|-------------------|---|
| 1. | 24/08/2015 | The Project Implementing Unit (PIU) puts up a request to Dasho Thrompon (Mayor), Phuentsholing Thromde for approval of land to set up the site office, laboratory and the workers camp. |
| 2. | 01/10/2015 | Lease agreement between the contractor and the Phuentsholing Thromde is signed for a period of one year. |
| 3. | 08/10/2015 | PIU requests the Phuentsholing Thromde for the issuance of location clearance for the installation of the Concrete Batching Plant. |
| 4. | 29/10/2015 | Approval for the Concrete Batching Plant from the Thromde. Environment Clearance for the same from the Dzongkhag Administration, Chukha was also accorded |
| 5. | End November 2015 | CDCL receives approval of land allocated for their Asphalt plant. By this time, the labour camps were already completed and the project office and the laboratory were nearing completion |

| No | Date | Summary of correspondences/mail |
|--|------------|--|
| 6. | 07/12/2015 | DOR and CSC writes to Phuentsholing Thromde informing the installation of the Asphalt Plant in the same location and the inconvenience on the construction works and impact on human life |
| Even after verbally informing the Phuentsholing Thromde, no action has been taken by the Thromde or the CDCL and the installation works on the plant continues. DOR and CSC officials are neither consulted nor informed about this plant or the location of this plant which is between the workers camp and the project office and laboratory. | | |
| 7. | 05/02/2016 | The Project Coordinator writes to Phuentsholing Thromde with a request to ensure that all the necessary clearances have been obtained for installing and operating the Asphalt plant and that all pollution abatement devices are in place. |
| 8. | 15/02/2016 | The Chairman of the Dzongkhag Environment Committee (Dasho Dzongda) is informed about the full operation of the Asphalt plant and the impact on the health and well-being of the workers on the site (especially the resident engineers and labourers who work and reside at the site) |
| 9. | 19/02/2016 | The Phuentsholing Thromde writes to the CSC requesting to bear with the operation of the Asphalt plant until black topping works in Phuentsholing are completed (expected to finish before the monsoon starts). The letter further states that huge investments on the plant have already been made by CDCL mainly for the purpose of road improvement works in Phuentsholing which was seen as an urgent matter. The other option offered by the Phuentsholing Thromde is for the CSC office and construction camp to move to another location where there is no pollution and that the letter is to be treated as a one month notice as per the lease agreement. |
| 10. | 04/03/2016 | In response, the Project Coordinator, submits in writing the costs associated with moving to another location which amounts to Nu.8,155,334.00 (USD 122,649.88). The letter also calls for an immediate need for the Thromde to identify and allocate a suitable area for the construction of site office and workers camps. The letter highlights the series of events/ correspondences/meetings held between the CSC team, the Phuentsholing Thromde officials and the CDCL. And also the effects of the plant on the health and wellbeing of the workers and on the progress of the works. |

2.1 Conclusion

The option to relocate the project site office and camps has been held off for now since Phuentsholing Thromde has not responded with a suitable location and cost approval. Besides, suitable areas are not available in Phuentsholing for relocation of the site office and camps and any effort to relocate now will affect the project implementation. Therefore, it

has been decided to co-exist in the present location with mitigation measures to be put in place by CDCL.

Following the meeting held on 1 August 2016, higher capacity pumps have now been installed for sprinkling the dust which has helped to control dust. According to the Project Engineer, CDCL, green fencing had been installed during the initial phase (2015), but, it has been blown away by the wind and therefore did not prove effective. CDCL has also agreed to better manage the scum, bitumen spillage, etc. at site. However, for the operation of the plant, a suitable timing could not be agreed on since the plant operation time and the site office hours overlapped.

CDCL informed that the plant has stopped operations due to the heavy rains. However, once the monsoons are over, works at the plant will resume to continue the resurfacing works under the Phuentsholing Thromde. The works are expected to complete by December 2016. According to CDCL, as of now no potential projects seem likely in the near future and the plant will most likely be relocated after December 2016 or when the resurfacing works are complete.

3. Affected Person (Loss of Land/structure)

This project has affected one semi-permanent structure located at end of the existing Bhalujhora bridge. This structure serves both as a residential house and a small shop for Mr. Nala Tshering (38 years) and his family. Mr. Nala Tshering, together with his wife, runs a small grocery and bar business and since it is ideally located, the small business is doing well with daily net earnings anywhere between Nu. 2,000 and Nu. 3,000. The family does not own any land, assets or business in Phuentsholing or any other places in Bhutan and this is their only source of income. The land does not belong to Mr. Nala, and although he claims so, he has not been able to produce any documentation to prove his claim. The Phuentsholing Thromde has agreed to relocate him to a small plot just adjacent to the existing structure. The plot is small, measuring about 2,100 sqft. but Mr. Nala Tshering feels its sufficient to construct a similar structure and that it would not affect his business.

According to the Road Act of Bhutan, the Department of Roads, under the Ministry of Works and Human Settlement has the authority to demolish 'unauthorised structures within the road right of way and road control area and recover the cost of such demolition from the concerned owners of the unauthorised structures (p. 4)'. However, since the relocation is a result of an ADB financed project, the Royal Government of Bhutan, who is the client, will

have to compensate for the involuntary displacement of the affected household as per the ADB's Safeguard Policy Statement 2009. The compensation should include for loss of assets other than land, such as dwellings and also for other improvements to the land, at full replacement costs as well as for loss of income.

3.1 Relocation and resettlement

The compensation for the structure and relocation has been calculated by DOR engineers with costs based on the current construction costs (cost of constructing a similar structure at current prices). Below is an overall abstraction of costs for the structure, fence belonging to the affected person and an electric pole that will need to be removed and relocated (the detailed costing has been attached as Annex 1):

3.1 Overall Abstraction of Costs

| No. | Description | Amount (Nu.) | Amount (USD) |
|--------------------|-----------------------------|---------------------|------------------|
| 1. | Structure | 670,186.00 | 10,079.08 |
| 2. | Fencing | 14,264.03 | 214.52 |
| 3. | Relocation of Electric Pole | 366,650.49 | 5,514.14 |
| TOTAL (Nu.) | | 1,051,100.52 | 15,807.74 |

3.1.1 Description and specifications of the affected structure

This is a single storied semi-permanent residential house with RRM wall foundation, main wall and partition, cement flooring, timber doors, window frames and shutters, CGI sheet roofing on timber truss and basic electrical and finishing. The house was constructed in 2011 and has six rooms with a total plinth area of 92.46 sq. meters or 995.23 sq.ft. There is also a barbed fencing on the side of the house which will also need to be removed. Calculations based on the Bhutan Scheduled of Rates 2015 work out to Nu. 14,264.03.

3.1.2 Grievances Redress Mechanism (GRM)

The AP, Mr. Nala Tshering does not have any legal documents or papers to support his claim to the land or the house he resides in. According to Phuentsholing Thromde, the land has been leased to Mr. Zeko, uncle to Mr. Nala's wife. This can complicate the compensation

and relocation which can result in the affected household having a number of grievances. So, a Grievances Redress Committee needs to be established comprising of members from the Phuentsholing Thromde, the Department of Roads and the Dzongkhag to hear complaints from the AP and facilitate solutions, especially in cases where an issue is not easily resolved. The purpose of the GRM is not intended to bypass the Government's own redress process, rather it is intended to address the concerns and complaints of the project affected person(s).

The first step for the AP if he faces any grievances related to the environment, land acquisition or resettlement, is to approach the contractor, CSC, or the DOR staff directly at the site. If the issues are not resolved at the site level, the AP can then forward his grievances to the Grievances Redress Committee. If issues remain unresolved, the AP has the right to approach the Government as per the country's practices or His Majesty the King.

3.1.3 Resettlement Policy

The following compensation and entitlement packages can be applied for the project:

- a) The AP (titled and non-titled) should be informed and provided information on the compensation, entitlements and resettlement assistance. The information should be also provided in local language for the benefit of the AP. The AP, regardless of his ownership status on the affected land/property shall be consulted and informed on the schedule of construction of any physical infrastructure, including the timeframe for delivery of compensation and benefits.
- b) There will be no physical or economic displacement in connection to the project construction works until compensation and other entitlements have been provided to the AP. He is entitled to receive assistance to restore his income and livelihood at pre-project standards and any additional assistance on top of his compensation.
- c) The resettlement planning and management will ensure that all gender concerns are incorporated, including gender specific consultation and information disclosure. This includes special attention to guarantee women's assets, property and to ensure the restoration of their income and living standards. Institutional arrangements will be in place to timely and effectively design, plan, consult and implement land acquisition, compensation, resettlement and rehabilitation program. Appropriate reporting, monitoring and evaluation mechanisms will be set in place as a part of the resettlement management system.

3.1.4 Relocation of Housing and Settlements

There are two options for the relocation plan of the affected household:

Option 1

The initial proposal was to dismantle the house and relocate the family to another place/house until a similar structure is ready for occupancy (see Option 2 below). However, according to the Phuentsholing Thromde, giving a plot replacement and constructing a new house could create precedence in the locality. Since these are facilities that cannot be provided under the current circumstances, the proposal was to create an extension of the existing house instead of building a new house. Option 1 will entail dismantling affected portions of the existing house and extending the house by an equal extent on the empty plot located on the south side. This means that the entire process of acquiring a replacement plot and constructing a new house would be averted.

Moreover, the AP is to be provided with the Replacement Cost of the structure, and compensated for the temporary loss of for a period of three months as per the Entitlement Matrix of the Nganglam-Dewathang and Pasakha Resettlement Plan¹. The average daily income (but not less than the Minimum wage of Bhutan) will also be taken into account for calculating the compensation. According to Mr. Nala, the average daily income of the family/shop is Nu. 2,500. In addition, the AP will be provided with rental assistance given that the household will have to relocate during construction activities.

Under this option, the compensations and relocation assistance for this affected household (see details below in Table 3.2 below) will be provided as per the Entitlement Matrix of the Nganglam-Dewathang and Pasakha Resettlement Plan²:

Table 3.2 : Summary of Compensation for rental and loss of livelihood

| Action details | Unit | AH | Rate/day (Nu.) | Amount (Nu.) |
|-------------------------------|----------|----|----------------|-------------------|
| Replacement Cost of Structure | 1 | | | 670,186.00 |
| Replacement Cost of Fencing | 1 | | | 14,264.03 |
| Loss of Livelihood | 90 days | 1 | 2,500.00 | 225,000.00 |
| Relocation cost | Lumpsum | 1 | Lumpsum | 10,000.00 |
| Rent of space | 2 months | 1 | 15,000.00 | 30,000.00 |
| TOTAL (Nu.) | | | | 949,450.03 |
| TOTAL (USD) | | | | 14,279.59 |

¹ <http://www.adb.org/projects/documents/sasec-road-connectivity-project-nganglam-dewathang-highway-pasakha-access-road-rp>

² Ibid

Neither Mr. Nala Tshering or his wife are educated and they have four school going children who cannot support either of the parents during the construction and resettlement period. So it would be advisable for the client to build/extend the house in addition to compensating them with cash. The Department of Roads (DoR) needs to take the responsibility of handing the compensation money directly to Ms. Chengya (the wife) who is the licensed owner of the shop. The DOR and the CSC will also assist the family in finding a house during the extension of the affected structure. This is due to the difficulty in finding a rental spaces around Bhalujhora for a period of just two months.

To summarize, the total costs for the first option, which involve replacement cost of the structure, compensation for loss of income and rental assistance, would amount to approximately Nu. 949,450 (USD 14,279.59) assuming that everything goes as planned.

Option 2

The other option would be to construct a house in the empty Government plot adjacent to existing house (highlighted in yellow circle in the picture below). The plot has ample land space to construct a similar sized structure for the AH. This option should be the preferred option as this would save the client and the AH the time spent otherwise in looking for a rental space for two months around this area. Secondly, there will always be indirect costs and time associated with dismantling and salvaging the old structure. Thirdly, the client can avoid minor disputes with the AH over the unsold and/or damaged goods, daily payment of income lost and transporting of household items from one place to another. Lastly compensation for income lost can be minimised (during the relocation phase of the shop and household items). In addition, if the calculated amount for the structure is not sufficient to build a similar structure, the client has the option of utilizing the amount that would have otherwise been used for the daily income lost and rental amount which is totalling to approximately Nu. 265,000.00 (see table 3.2).



Figure 3.1: Small empty plot marked in yellow circle and the affected house marked with a yellow arrow

3.1.5 Conclusion

On careful review of the above two options and due to the complexity of this case in terms of allocating replacement land and permitting new construction by Phuentsholing Thromde, it was decided to go with Option 1. The compensation shall include replacement cost for the structure, cost for income loss and relocation (if any) and house rental for the duration of construction. Although this is only an extension of the existing structure towards the south side, the family would still need to be relocated as living in such close proximity to construction works is dangerous and would cause inconvenience to the family and also to the construction workers.

4. Organisations and agencies involved in the recruitment process

The Ministry of Labour and Human Resources (MoLHR) is the lead organisation to monitor the recruitment and mobilization of labourers in construction sites. If Indian labourers are recruited, then the Department of Immigration and the Ministry of Health (MoH) are also stakeholders to the recruitment process.

The Regional Labour Office in Phuentsholing has three labour officers and two employment officers who monitor and assess all business and service activities in Chukha and Samtse. Since they are short-staffed, the officers make visits to sites with a specific purpose. For instance, a particular visit to a site may involve only occupational health and safety of the workers and the next visit may involve only checking on the wages. Most of these visits are ad hoc. The MoLHR together with the MoH have also trained some of the management staff

from industries and construction companies on first aid and basic treatment of occupational injuries.

4.1 Labour Agencies

In 2007, private labour recruitment agencies were given licences to operate the recruitment and mobilisation of labourers. Responsibilities of the agencies include registering the labourers and carrying out all the necessary medical and immigration documentation works. The entire process takes a minimum of two days. During these two days, the labourers are provided with accommodation and food by the contractors. The agencies are also expected to monitor the labourers at site and to ensure that the labourers are not being harassed at work, unpaid/not paid in time, and that proper accommodation and the necessary basic facilities are provided.

4.2 Diagnostic Centers

In 2012, The Government allowed private diagnostic centers to open in Thimphu. The center was initially opened to cater to both locals and foreigners to carry out tests that would otherwise need time or travel to India. However, by 2013, the Government approved for more private diagnostic clinics to open in bordering towns like Phuentsholing, Gelephu and Samdrup Jongkhar. These clinics were given the added responsibility to carry out medical tests for the large numbers of expatriate workers who enter Bhutan, especially construction or factory workers.

4.3 Recruitment procedures

The labourer is first checked for tuberculosis, gonorrhoea, syphilis and malaria through a series of blood tests, urine tests and X-rays. The entire process for one person takes about two-three hours and these are all carried out at Bhutanese private diagnostic clinics. The results of the tests are compiled and sent to the Government Hospital for review from the medical doctor. A minimum fee of Nu.580.00 (USD 8.72) is chargeable to the construction company. At the Government hospital, the doctor will further conduct some basic medical checks on the labourers which includes blood pressure, eye, chest and nerves. There is again a minimum fee of Nu. 150.00 (USD 2.26) charged to the construction company.

5 Awareness Program

The awareness program was conducted in April 2016 by Ms. Karma, who works with the Health Information Service Center (HISC) in Phuentsholing. HIS Centers were first opened in 2005 in Thimphu and Phuentsholing to encourage and facilitate the general population to avail HIV/STI Counselling, Testing and Treatment services. HIS Centers are also involved with awareness programs in schools, institutes, industries and hotels.

Majority of the workers on the construction site are from the neighbouring states of West Bengal and Assam, India. As per Bhutan's Labour Act, their family/spouse are not allowed to accompany them to Bhutan. This could lead to the labourers having one or more sexual partners inside Bhutan and/or in neighbouring Indian town Jaigaon, unprotected sex and men having sex with other men. Young girls/women from the locality who are poor and uneducated can also be at risk as they can move to construction sites to sell sex or be lured into sex by these male workers. In addition the lack of economic power means that most women are unable to negotiate safer sex. So there is a need to educate the labourers at construction sites with regards to their sexual activities, the risks associated with multiple sex partners, preventing STD/HIV and social marketing of condoms.



Figure 1: Ms. Karma creating an awareness on HIV/STD

There were about fifty labourers, both national and non-national who sat through the entire awareness program. Since there was no proper setting to accommodate everyone into one room or quarter, the program was conducted outside the construction company's site office. The ground was wet so a tarpaulin was spread out for the labourers to sit on. It was a gloomy day but no rain and no sun either which made it easier for Ms. Karma and the labourers to sit through the entire session without any difficulty.

The program lasted ninety minutes and included demonstrations on the usage of condoms and distribution of condoms. She also offered them the option of being tested for HIV/STD for which many agreed to be tested. Ms. Karma has agreed to visit the site on another day to conduct tests on the labourers after discussing with the Resident Engineer from the Construction Supervision Consultants (CSC). Tests will be provided free and if any of the labourers have contracted sexual diseases, the HISC together with the MoH will provide medical care and medicines free of costs. The treatment will be carried out in a private hospital in Siliguri, India (about four hours' drive from Phuentsholing) and all expenses will be covered by the Royal Government of Bhutan, even for Indian labourers.



Figure 2: Distribution of condoms

Since majority of the construction workers are from India, Ms. Karma requested a labourer to help with her with language translation. She also distributed leaflets on the different sexual diseases which had been translated from English to Bengali and Hindi.

This is the first awareness program conducted at this construction site. There will be another awareness conducted during the October-November 2016 period. This will again depend on the availability of the health person who will conduct the awareness and the number of labourers mobilised at site.

Annex 1: Calculations for the valuation of the affected structure

| | Specification | Remarks |
|--------------------------------------|---------------|---|
| Total number of rooms in the house | 6 | Actual measurement |
| Average room height | 2.6 mtrs | Floor to ceiling height as per the actual measurements |
| Base town rates (per sq. m/mtr. ht.) | Nu. 1,780.80 | Ref. the rates conforming to the above specifications (BSR 2005) |
| Average room size | 3.42 mtrs | Average room size = {(Plinth area x Room height) / number of rooms} ^ (1/3) |
| Room size factor | 1.010 | Ref. the rates adjustment factors for the above average room size |
| Adjusted rate | Nu.2,764.24 | Adding 5% per annum to bring base town rate to current price level |
| Year of construction | 2011 | |
| Age of house | 6 years | |
| Economic life span | 25 years | |

Calculation of the plinth area (actual measurements)

| Floor details | Dimension (m) | | Area(sq.m) |
|--------------------------|---------------|---------|------------------|
| | Length | Breadth | Length x Breadth |
| Ground floor | 13.40 | 6.90 | 92.46 |
| Total Plinth Area | | | 92.46 |

Cost estimation/valuation

| Description | Plinth Area | Unit | Adjusted rate (Nu.) | Room size factor | Room ht (m) | Amount (Nu.) |
|--|--------------|---------------|---------------------|------------------|-------------|-------------------|
| Residential structure | 92.46 | Sq. mt | 2760.24 | 1.01 | 2.60 | 670,186.16 |
| Total cost estimate of the house at present price level at 2016 (P) | | | | | | 670,186.16 |

Details of measurement and abstract of costs

Name of work: Barbed wire fencing

Location : Bhalujhora, Pasakha

| Sl. | Ref. Code | Description of works | No. | Length | Breadth | Height | Qty. | Unit | Rate (Nu.) | Amount (Nu.) |
|-----|-----------|---|-----|--------|---------|--------|------|-------|------------|--------------|
| 1. | EW0106 | Excavation in foundation trenches or drains not exceeding 1.5m in width or area 10sq.m on plan, including dressing & ramming, disposal of surplus soil within 50m lead & 1.5m lift-hard soil | 9 | 0.20 | 0.20 | 0.25 | 0.09 | Cu. m | 122.62 | 11.04 |
| 2. | CW0005 | Providing & laying in position plain cement concrete 1: 3: 6 (1 cement :3 sand :6 graded crushed rock 20mm nominal size) excluding the cost of centering & shuttering - All work up to plinth level. | 9 | 0.20 | 0.20 | 0.25 | 0.09 | Cu. m | 3610.64 | 324.96 |
| 3. | RW0220 | 1.8m height fencing with 1.8m angle posts (50mmx50mmx6mm) placed every 3m apart embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with nine horizontal lines and two diagonals of barbed wire between two posts fitted and fixed with G.I. staples, turn buckles complete (cost of posts, struts, | 1 | 27.0 | | | 27.0 | m | 258.30 | 6974.10 |

SOCIAL MONITORING AND HIV/STD AWARENESS

| Sl. | Ref. Code | Description of works | No. | Length | Breadth | Height | Qty. | Unit | Rate (Nu.) | Amount (Nu.) |
|--------------------|-----------|---|-----|--------|---------|--------|-------|------|------------|------------------|
| | | earthwork and concrete to be paid separately) | | | | | | | | |
| 4. | SW0003 | Steel work in single section including cutting, hoisting, fixing and applying priming coat of red lead paint-angles (4.50 kg/m) | 9 | 1.80 | | | 72.90 | kg | 95.39 | 6953.93 |
| TOTAL (Nu.) | | | | | | | | | | 14,264.03 |
| TOTAL (USD) | | | | | | | | | | 214.52 |