## NATIONAL ENVIRONMENT AND PLANNING AGENCY Enforcement Branch Post Planning/Permit/License Monitoring

**Inspection Date:** 10 February, 2015 **Report in Series**: 2 of 2015

Time of Inspection: 10:30 am

**Permitted Activity:** Construction of New Highway

Location of Activity: Moneague to Mammee Bay, St. Ann

**Applicant:** Jamaica North South Highway Company Limited

**Reference No.:** 2012-06017-EP00109 **Amended:** 1 July 2013

Name of Contact: Environmental Engineer, CHEC Issue Date: 14 August 2013

Contact Telephone #: (redacted subject to Section 22 of the ATI Act)

**E-Mail:** (redacted subject to Section 22 of the ATI Act)

Investigator Officer: Environmental Officer, NEPA

**Present were:** Environmental Engineer (CHEC), Two (2) Environmental Officers (NEPA), (NEPA), Representatives (CHEC)

**Description of Permitted Activity:** This permit is for Section 3 of the North-South Leg of Highway 2000, which is to be a 4 lane controlled access, tolled motorway with a design speed of 80 kph and maximum gradient of 8%. The highway will be approximately 16 km and begin at the existing Moneague round-a-bout – which is likely to be converted to an interchange with the A1 road – and end with a round-a-bout at Mammee Bay, where the road meets the North Coast Highway. The toll plaza will be located between km 54 and km 55 in the vicinity of the abandoned Reynolds Bauxite Mines site and an interchange will be constructed at km 55+200 to provide access to the Claremont to St. Ann's Bay main road. The road will have 17 crossings (overpasses and underpasses) and is scheduled to be completed within 36 months of commencement. To facilitate the construction works, a site yard/office is constructed, at Golden Grove.

# Compliance Table:

No	General Condition	Level of	Comments/Action
		compliance	
9	A copy of this Permit shall at all times be placed in a prominent	Full	Permit is in office at
	place at the location of operation (or business as the case may		Golden Grove.
	be) and shall be in such characters and in such position as to be		
	conveniently read by the persons having functions and duties		
	which are or may be affected by the matters set forth in this		
	authorization.		

No	Specific Condition	Level of Compliance	Comments/Action
1.	The Permittee shall comply with all the representations made in the Permit Application and the Project Information Form both dated 4 June 2012 received and date stamped by the Natural Resources Conservation Authority 8 June 2012, documents titled, "NATIONAL ROAD OPERATING AND CONSTRUCTING COMPANY COMMENTS FROM THE NATIONAL ENVIRONMENT PLANNING AGENCY REGARDING THE MONEAGUE TO OCHO RIOS HIGHWAY DEVELOPMENT PROJECT" dated 15 February 2013 received and date stamped by the Authority 15 February 2013, "ENVIRONMENTAL IMPACT ASSESSMENT Proposed Highway 2000 North South Link - Moneague to Ocho Rios" dated 21 March 2013 prepared by CL ENVIRONMENTAL CO. LTD. received and date stamped by the Authority 8 April 2013 and "ARCHAEOLOGIC IMPACT ASSESSMENT Highway 2000 North - South Link Development Project Moneague - Mammee Bay, St. Ann" prepared by JAMAICA NATIONAL HERITAGE TRUST Archaeology Division Field Unit received and date stamped by the Authority 7 March 2013 and Map titled, "Highway 2000, Phase 2A Revised CHEC Section 3 Alignment" dated 8 May 2012 received and date stamped by the Authority 8 June 2012 and all accompanying addenda.	NC NC	The Permittee is not compliant with all the conditions in the permit
3.	The Permittee shall ensure that all correspondence, notifications, plans, reports or any other documents being submitted to the Agency and/or Authority pursuant to any General and/or Specific Condition of the Permit are addressed to "Manager, Enforcement Branch, National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5" or emailed to EnforcementManager@nepa.gov.jm.  The Permittee shall execute a Deed of Indemnity, indemnifying the Authority and the Government of	Full Full	Correspondence and reports are received.  This is signed when the permit is issued.
4.	Jamaica against all actions, proceedings, claims, losses, damages, injuries, demands, costs and expenses, which may become payable by the Authority or the Government of Jamaica as a result of any work carried out in pursuance of this Permit.  The Permittee shall implement the mitigation measures as proposed in Section 9 of the document titled "ENVIRONMENTAL IMPACT ASSESSMENT"	Full	The mitigation measures presented in the EIA are being

	Ocho Rios" dated 21 March 2013 prepared by CL ENVIRONMENTAL CO. LTD. received and date		
5.	stamped by the Authority 8 April 2013.  The Permittee and/or its agents shall, at least 4 weeks prior to the commencement of the Works, submit a schedule of the works to the Manager, Enforcement Branch, National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5 or by email to EnforcementManager@nepa.gov.jm.	Full	A schedule of works was submitted on September 24, 2013.
6.	The Permittee and/or its agents shall submit for the approval of the Agency/Authority, a detailed Environmental Monitoring and Mitigation Plan within sixty (60) days of the date of issue herein or at least thirty (30) days prior to the commencement of any Works, whichever is first. This Plan shall include, but shall not be limited to:  Person(s) responsible for environmental management and their qualifications  Details for the monitoring of water quality (to include but not be limited to TSS, TDS, oil and grease), air quality (fugitive dust/particulate matter) and noise  Measures to be employed to control runoff and water turbidity, sedimentation or debris flow into existing waterways; water pollution; noise pollution; fugitive dust and air pollution, preservation of archaeological features; including but not limited to operational and engineering control measures  Contingency measures to be employed for cleaning up any accidental spills – fuel, oil or hazardous material - that may occur Sample format for monitoring reports.	Full	This document was submitted on July 23, 2013
7.	The Permittee and/or its agents shall submit to the Agency/Authority for approval, Environmental Statements for any work, which falls outside of the current road reservation prior to carrying out any such activity.	Full	There is realignment into UDC lands. A notice was previously served for this. There are some artifacts in the area and JNHT has given the approval for a manual clearance. The Permittee is now back to the correct alignment as a result of the enforcement action taken.

8.	The Permittee and/or its agents shall submit, for approval, a Flora and Fauna Management Plan to the Authority/Agency within sixty (60) days of the date of issue herein or at least thirty (30) days prior to the commencement of any Works, whichever is first. The Plan shall include but not be limited to:  List of endemic, protected or threatened species  Measures to be employed to protect identified endemic, protected or threatened species  Mapping of bird feeding trees and trees with trunks greater than 18cm in diameter and the measures to be employed to compensate for the loss of any such tree to be impacted by the construction activities  Measures to be employed to allow for the detection and protection of bats	Full	This document was submitted on July 23, 2013.
9.	The Permittee shall conduct an assessment of the proposed highway route alignment to determine whether bats utilize the area. The methodology to be used to conduct the assessment shall be forwarded to the Agency for approval within sixty (60) days of the date of issue herein or at least thirty (30) days prior to the commencement of any Works, whichever is first.	Full	This document was submitted on July 23, 2013.
10.	The Permittee shall conduct an assessment along the highway alignment of all sinkholes/crevices/caves to confirm if any bats are present. The methodology to be used to conduct the assessment shall be forwarded to the Agency for approval within sixty (60) days of the date of issue herein or at least thirty (30) days prior to the commencement of any Works, whichever is first.	Full	This document was submitted on July 23, 2013.

11.	The Permittee and/or its agents shall submit, for approval, a Habitat Compensation and Re-vegetation Plan to the Agency within 3 months of the date of issue herein. The Plan shall include but not be limited to:  Details for the planting of trees to compensate for the loss caused by the Works Details for the re-vegetation of areas along the highway, including cut slopes, benches, bridge approaches, interchanges, camp sites, sites of batching plants, etc.  Measures to be employed to compensate for the loss of habitat for any sensitive or commercially viable species (eg. bats, bees, orchids, etc.) impacted by the Works	Full	This document was submitted on November 29, 2013
12.	The Permittee and/or its agents shall submit, for approval, a Site Rehabilitation Plan to the Authority/Agency within 3 months of the date of issue herein. The Plan shall outline the mechanisms to be implemented to restore the location of the construction work site to predevelopment conditions. In addition, the plan shall outline measures to be taken to restore areas that may have been contaminated by substances such as oil	NVA	This condition is not applicable as the workers are staying within the proposed footprint of the highway.
13.	The Permittee and/or its agents shall develop an Emergency Response Plan (ERP) for the construction and operation phases with the approval of the Office of Disaster Preparedness and Emergency Management (ODPEM) and Fire Department. The Emergency Response Plan shall be submitted to NEPA within 3 months of the date of issue of this Permit.	Full	This document was submitted July 23, 2013
14.	The Permittee and/or its agents shall develop a Waste Management Plan which must be submitted for the approval of the Agency/Authority within sixty (60) days of the date of issue herein or at least thirty (30) days prior to the commencement of any Works, whichever is first. The Plan shall include but not be limited to:  The designation of appropriate waste storage areas  Waste collection and removal schedules  System for the supervision and monitoring of the various types of waste	Full	This document was submitted July 23, 2013

15.	The Permittee and/or its agents shall prior to the commencement of any land clearance, submit to the Agency/Authority for approval, a detailed Flood Control and Drainage Management Plan for the entire alignment, with special emphasis placed on the impacts and proposed measures to mitigate the impacts on the communities of Moneague, Golden Groove and Steer Town.	Full	This document was submitted on February 6, 2014
16	The Devices and/on its assets shall substite for the		This do year was
16.	The Permittee and/or its agents shall submit for the approval of the Agency/Authority and the Mines and Geology Division a Geotechnical Report for the approved alignment, within 3 months of the date of issue herein and prior to the commencement of any land clearance at km63+500 to km65+000. This report shall include, but is not limited to the following:  - Geotechnical models and analysis - Geophysical (seismic) surveys - Peak ground acceleration and site spectral response to be used in slope stability analysis - Qualitative and quantitative assessments of rock/soils - Proposed solution to treat with any geotechnical issues identified		This document was submitted on December 10, 2012.

17.	The Permittee and/or its agents shall submit for the approval of the Agency/Authority within 3 months of the date of issue herein a detailed Water Resource Risk Management Plan for the entire road alignment to be approved by the Agency, WRA and NWC prior to any construction. This plan must include, but is not limited to the following:	Full	This document was submitted November 20, 2013
	<ul> <li>Water quality monitoring and storm water quality control, with special attention be given to areas with sinkholes, wells and the low points along the alignment</li> <li>Sediment control plan</li> <li>Location of engineering solutions (structural and non-structural) to treat highway runoff during construction and operation</li> <li>An assessment of the sinkholes and wells to</li> </ul>		
	be affected by the proposed alignment of the highway. This assessment shall include but not be limited to a capacity, flora and fauna assessment of the sinkholes  Plan for preserving the wells that fall within the corridor of the approved road alignment. The following must be considered in the developing of the Water Resources Management Plan:		
10	<ul> <li>Aquifer water quality must be protected from high turbidity rainfall runoff/inflows, spills of hazardous materials and discharges from the works</li> </ul>	NO	A
18.	The Permittee and/or its agents shall, within 3 months of the date of issue herein, submit for the approval of the Water Resources Authority and the Agency, a detailed Operation and Maintenance Manual for the protection, maintenance and cleaning of the engineering solutions for water quality control to sinkholes and wells. The Manual must include but not be limited to the following:  Specific pollutants being treated for Proposed standards for the pollutant discharge to the sinkholes and wells  Proposed frequency for monitoring of ambient water quality  Proposed method and frequency for	NC	A warning letter has been issued for this breach. A walk through was done with WRA to identify such sinkholes. No wells in the alignment will be affected. Some drawings by CHEC was submitted to NROCC for approval but were refused and a new set of drawings are to be submitted.
	monitoring of runoff to be discharged to the sinkholes and wells		To date the manual has not been submitted.

19.	The Permittee and/or its agents shall, within 3 months of the date of issue herein, submit a copy of the contract for the protection, maintenance and cleaning of the engineering solutions for water quality control.	NC	This is yet to be submitted as it is subject to the submission of the Operation and
20.	The Permittee is expressly forbidden from blocking or negatively impacting any wells within the alignment.	N/A	Maintenance Manual.  This condition is not applicable as it was indicated by Environmental Engineers, CHEC that there are no wells in the area.  Furthermore this was verified by an inspection done with the representative from Water Resource
21.	Noise level shall not exceed 75dBA at the boundary of the road reservation at any given time, save and except where otherwise specified by the Agency/Authority.	Full	Authority.  The construction activity at the time of visit did not create any significant noise. Furthermore the last Environmental Monitoring Report submitted shows that the noise level was within the specified noise level limit.
22.	Where the road passes through a residential area, noise level shall not exceed 55dBA or ambient conditions, whichever is higher, at the boundary of the road reservation at any given time.	Full	The construction activity at the time of visit did not create any significant noise Furthermore the last Environmental Monitoring Report submitted shows that the noise level was within the specified noise level limit.
23.	Noise level shall not exceed 45dBA or ambient conditions, whichever is higher, at the northern boundary to the Steer Town Primary and Junior High School at any given time.	Full	The construction activity at the time of visit did not create any significant noise Furthermore the last Environmental Monitoring Report submitted shows that the noise level was within the specified noise level limit.

24.	The Permittee shall ensure that any storm water generated during the construction and operation of the highway,	N/A	This condition is not applicable as there is
	complies with the NRCA Jamaica National Trade Effluent Standards, 1995.		no storm water generated.
25.	The Permittee shall comply with the Natural Resources Conservation Authority Ambient Air Quality Regulations, 2006.	Full	No air quality test has been conducted however the last Environmental Monitoring Report submitted by the Permittee shows that ambient air quality was within the standards.
26.	The Permittee shall comply with the Ambient Air Quality Standards Regulations for Jamaica - August 1996.	Full	No air quality test has been conducted however the last Environmental Monitoring Report submitted by the permittee shows that ambient air quality was within the standards
27.	The Permittee shall undertake and submit monthly monitoring reports to the Manager, Enforcement Branch of the National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5 or by email to EnforcementManager@nepa.gov.jm. with copies to the Water Resources Authority, The Mines and Geology Division, The National Works Agency, and the Environmental Health Unit of the Ministry of Health during the construction and operation phases of the development. This information shall include, but shall not be limited to:  The date, exact place (GPS coordinates) and time of sampling or measurement for water and air quality  The person(s) and/or organisation responsible for performing the sampling or measurement.  The date(s) analyses were performed Analytical techniques or methods used The results of water and air quality analysis Details of any environmental incidents, including spills or damage to sensitive flora or fauna and corrective actions taken Details of assessments of the implemented mitigation measures implemented as per the	Full	Monitoring reports submitted on January 20, 2015

29	approved Environmental Monitoring and Mitigation Plan  Details of any artifact, archeological, cultural, economic or ecological feature, unique specimen or significant deposits of fossils found during construction; actions taken and outcomes  Details of the emptying of chemical toilets, to include evidence to support the collection and disposal at an approved sewage treatment facility.	Eall	
28.	The Permittee shall commence monitoring of noise, ambient air quality and storm water runoff as follows:  Immediately  Monthly at all active areas of construction and areas impacted by the construction of the highway (during construction)  Monthly at all major drainage features (during operation)  Within 24 hours of any significant event	Full	Monitoring report shows noise and air quality test being done.
29.	The Permittee and/or its agents shall in the event of any breach of the Standards referenced in Specific Conditions 21 – 26 above; as verified by the monitoring results submitted to National Environment and Planning Agency, submit a Compliance Plan to ensure that the activity is brought into compliance with the standards.	N/A	This condition is not applicable based on the fact that the tests carried out and included in the monitoring report did not show any breach.
30.	The Permittee and/or its agents shall notify the Authority of the need for any work, which falls outside of the current road reservation and shall seek permission for same prior to carrying out any such activity.	Full	Previously, no notification was received. For the clearance at K62 however the permittee is now back within the correct road alignment.
31.	Works during the construction phase shall only be conducted between the hours of 7a.m. to 7p.m. on Mondays to Saturdays, save and except with written permission from the Authority/Agency.	N/A	This condition could not be assessed as it requires the officer to conduct visit before or after work hours.
32.	Works during the construction phase may be conducted 24 hours daily on Mondays to Saturdays at the following locations as per map titled, "Highway 2000, Phase 2A Revised CHEC Section 3 Alignment" dated 8 May 2012 received and date stamped by the Authority 8 June 2012:	N/A	This condition is not applicable as no 24 hour work has begun at this section.

	<ul> <li>km 48+500 to km 51+500</li> <li>km 55+000 to km 59+500</li> <li>km 61+800 to km 63+600</li> </ul>		
33.	The Permittee shall notify and obtain the written approval of the Agency/Authority prior to any Works during the construction phase on Sundays and public holidays.	N/A	This condition is not applicable as no work is done on Sundays and holidays
34.	The Permittee and/or its agents shall develop and implement a comprehensive plan to control the generation of fugitive dust to include periodic wetting of friable materials and the phased clearing of areas to ensure there is no fugitive dust emission to create a nuisance during the construction phase.	Full	According to the HSE wetting is being done.
35.	The Permittee and/or its agents shall ensure that trucks transporting particulate material during the construction phase are <b>adequately covered</b> to prevent the entrainment of particulates in the ambient air	N/A	This condition could not be assessed as no truck was seen transporting particulate material outside of construction site.
36.	The Permittee and/or its agents shall within 24 hours notify the Agency/Authority and the Jamaica National Heritage Trust of any artifact, archeological, cultural, economic or ecological feature, unique specimen or significant deposits of fossils found during construction of the highway, so that the necessary arrangements can be made to secure same and the Permittee or its agents shall stop the construction activities until authorized to recommence works by the Agency.	Full	Jamaica National Heritage is aware of the artifacts found in Old Forth Bay and a barb wire fence has been placed around the water wheel based on the recommendation of the JNHT. (see photo 4)
37.	The Permittee and/or its agents shall ensure that the Works do not impact on the Phoenix Park Great House and the sugar works ruins and aqueduct on the Mammee Bay property, save and except with the prior written approval of the Agency/Authority and the Jamaica National Heritage Trust.	Full	Phoenix great house was visited and no impacts was observed
38.	The Permittee and/or its agents shall not remove or caused to be removed/damaged any vegetation not located within the approved road alignment.	NC	Removal of vegetation out of alignment. A warning notice was issued on the previous visit on January 16 2015. It should be noted that

			this breach cannot be rectified.
39.	The Permittee and/or its agents shall ensure that there is no blockage of any sinkhole as a result of the Works.	Full	Based on the discussion with HSE, CHEC and observation all the sinkholes would be avoided.
40.	The Permittee and/or its agents shall ensure that the solid waste generated, inclusive of demolished material, during the construction phase of the development is disposed of at a municipal dumpsite with the approval of the National Solid Waste Management Authority. A copy of the approval from the National Solid Waste Management Authority shall be submitted to the Manager of the Enforcement Branch, National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5 or by email to EnforcementManager@nepa.gov.jm prior to the commencement of the development.	Full	NSWMA contracted to collect solid waste at dumpsite.
41.	The Permittee and/or its agents shall ensure that all stockpiles of earth materials used for construction are located within temporarily constructed enclosures to limit fugitive dust	N/A	This condition is not applicable as no stockpiles was seen
42.	The Permittee and/or its agents shall ensure that all stockpiles of earth material are contained within a berm to prevent this material being transported in terrestrial runoff during rainfall events.	N/A	This condition is not applicable as no stockpiles was seen
43.	There shall be no discharge of oil, oily waste, trade or sewage effluent, chemicals, solid waste, poisonous, noxious or polluting substances, on or into the ground without a Licence from the Natural Resources Conservation Authority.	N/A	This condition is not applicable as no such discharge was observed
44.	The Permittee shall ensure that adequate numbers of portable, mobile chemical toilets are provided and suitably located to satisfy the needs of workers during construction activities.	Full	The Permittee was non complaint based on the previous visit on January 16, 2015 and a warning notice was issued. The latest inspection shows that the breach is now rectified.

45.	The Permittee shall ensure that sewage from any potable chemical toilet is disposed of at an approved sewage treatment facility	Full	Elco is contracted to collect the portable toilets.
46.	The storm water drainage plan shall be implemented based on a design approved by the National Works Agency.	Full	Approved drainage plan submitted to NEPA
47.	The Permittee shall notify the Manager, Enforcement Branch, National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5, in writing of:  The date of commencement of construction of the highway  The date when the highway will be commissioned at least two (2) weeks prior to commissioning	NC	The first section of this condition is non-compliant as the Permittee did not submit the notification. The second component is not yet due.
48.	The Permittee shall develop and submit for the approval of the Agency/Authority appropriate measures for the prevention of the erosion of any cut faces and drainage features during construction and operation.	Full	This document was submitted
49.	The Permittee and/or its agents shall pursuant to Specific Condition 46 install appropriate permanent measures for the prevention of the erosion of any cut faces and drainage features during construction and operation.	N/A	This condition is not applicable has the road construction has not reach this phase
50.	The Permittee and/or its agents shall ensure that the storm water drainage plan to be implemented is approved by the National Works Agency prior to implementation and a copy of the relevant approval is submitted to the Agency.	Full	This document was submitted on February 6, 2014
51.	The Permittee and/or its agents shall comply with the conditions of the National Works Agency as outlined in their letter dated 4 April 2013 (see attached said letter from NWA)	Full	Permittee is in compliance with the conditions
52.	There shall be no construction between km 56.5 and km 60.0 without the prior written approval of the Jamaica Bauxite Institute and the Authority	Full	An extension was requested and was submitted.
53.	The Permittee and/or its agents shall ensure that all licensing requirements for quarrying works are obtained by the contractor prior to the commencement of those activities. In addition, copies of the Quarry Licences shall be submitted to the Manager, Enforcement Branch, the National Environment and Planning Agency, 10 Caledonia Avenue, Kingston 5 or by email to EnforcementManager@nepa.gov.jm	Full	Copies of Quarry license was submitted. The permittee was advised to submit outstanding ones.

54.	There shall be no blasting or use of explosives in the Permitted Area without the prior written approval of the Mines and Geology Division and prior to submission of the relevant Licences to the Agency.	Full	MGD is aware of the blasting operations.
55.	The granting of this Environmental Permit does not relieve the Permittee from complying with any other statutory obligation or from applying for and obtaining any permission, certification, permit or licence required by law. These include but are not limited to Building Permission under the Building Act, Planning Permission under the Town and Country Planning Act and Environmental Permits under the Natural Resources Conservation Authority Act	Full	All other required permits and licence are applied for including the Building Permit.
56.	The Permittee and/or its agents shall provide for the approval of the Authority a detailed layout and building plan for any construction site offices.	Full	Building plans submitted
57.	The Permittee shall apply to the Authority for Environmental Permits pursuant to Section 9 of the Natural Resources Conservation Authority Act for any batching plant and sewage treatment and disposal facility to be erected or constructed in connection with the Permitted Activity and Environmental Licenses pursuant to Section 12 of said Act for the discharge of any trade or sewage effluent.	Full	Permittee has all the required permits and licences
58.	The Permittee and/or its agents shall apply to the Authority for an Environmental Permit pursuant to Section 9 of the Natural Resources Conservation Authority Act for the construction of the toll facilities and the associated sewage treatment and disposal facilities in accordance with the Natural Resources Conservation (Permits and Licences) Regulations 1996.	N/A	This condition is not applicable as there is no construction of toll facilities and sewage treatment facility at the moment.

# Key:

**Full:** Means the operation was in compliance with the condition or Condition has already been met or Condition is no longer applicable.

Partial: The operation was only partially compliant with the condition

**NC:** The condition was not being met.

NA: Conditions was not applicable at the time or it could not be assessed because:

## Site Warning notice issued on site. No.

#### **General Observations**

- The ongoing construction activities include Earthworks, Retaining Wall, Drainage structures and Bridges. The project is on Schedule and its 78% Completed.
- A detour has been constructed at the Golden Grove roundabout to facilitate the improvement works to be carried out on the roundabout (see photo 1). Another detour have been constructed at Davis Town to facilitate the construction of a box culvert at that location. The two detours are adequately paved.

#### **CONCLUSION:**

An inspection of the highway was conducted and of the 59 conditions only 45 were applicable at the time. Of these 45 conditions 40 were full compliant, and 4 non-compliant. The remainder was not assessed at the time. Therefore the Permittee was found to be 89% compliant with the conditions of the permit.

#### **RECOMMENDATIONS:**

Continue monitoring to ensure Permittee remains compliant with conditions.

### APPENDIX



Photo 1: Construction works at the Golden Grove Roundabout. (Photo taken by Environmental Officer, NEPA on 10 February 2015)



Photo 3: Sandbags placed to prevent silts on the main road. (Photo taken by Environmental Officer, NEPA on 10 February 2015)



Photo 2: Sub-base works ongoing on a section of the alignment. (Photo taken by Environmental Officer, NEPA on 10 February 2015)



Photo 4: Water wheel and barb wire fence placed around it. (Photo taken by Environmental Officer, NEPA on 10 February 2015)



Photo 5: Drainage structure construction. (Photo taken by Environmental Officer, NEPA on 10 February 2015)