

### Site Inspection Report

**Proposal for Diversion of 119.92 Ha Forest land for Construction, Rehabilitation and Upgrading to 2 lane with paved shoulders configuration of section from Roleph to Menla (Length of Project km 37+600 to 93+950) Section of NH-717B in Sikkim State.**

**Proposal No – FP/SK/ROAD/49640/2020**

The Site inspection of the above diversion proposal was conducted by Dr. Biplov Chandra Sarkar, Technical Officer (Forestry), Integrated Regional Office, MoEF&CC, Kolkata from 19<sup>th</sup> to 20<sup>th</sup> June 2021. I was accompanied by Shri Jigme. T Sharngoe DFO (FCA), Shri Satish Vasistha, ACF Pakyong (T), Shri Nagender Rizal, Range Officer Pakyong (T), Shri Nashid Iqbal, DGM, NHIDCL, Shri Arjun Mehra, Environmental Manager, NHIDCL.

**1. Legal Status of the forest land proposed for diversion**

Reserve Forest- 105.4 Ha

Khasmal/ Gaucharan- 14.52 Ha

**Total Land – 119.92 ha**

**2. Item wise breakup details of the forest land proposed for diversion:**

Name of District	Name of Division	Purpose	Forest land in Ha.		Total Forest Land
East Sikkim	East (T) Division	Road	100.27	14.52	114.79
		Muck Dumping	5.128	0	5.128
				Total	119.92

**3. Whether proposal involves any construction of building (including residential) or not. If yes, details thereof:**

No, does not involve construction of building including residential area.

**4. Total Cost of the Project at present Rates**

Rs. 114500 Lacs

**5. Wildlife: Whether forest area proposed for diversion is important from wildlife point of view or not ?**

The forest area proposed in East (T) Division for about 42 Km in RF contains dense natural forests on both sides of the road. Though, the area does not fall in any National park or wildlife Sanctuary. However, it has been reported that wild animals such



as Black bear, Boso, wild Boar, pica, Musk deer, snow leopard, Himalayan Black Bear and Common Leopard are found.

## 6. Vegetation

The vegetation found in the proposed diversion area generally divided into two ecological zones on the basis of presence of dominant tree species and ecologically area fall under Sub-tropical broad leaved hill forests Himalayan Moist Temperate forest. The starting elevation of the proposed area is 1930 m, where the forest is dominant by oak (*Castanopsis* spp.) and ground flora with many valuable medicinal plants. In temperate region, proposed area is dominant by many valuable *Rhododendron* spp. and *Pinus* spp.

S. No	Name of Forest land for Diversion	Density & ECO Class
1.	Machang RF	0.2 (Eco Class V)
2.	Parkha RF	0.2 (Eco Class V)
3.	Barapathing RF	0.2 (Eco Class V)
4.	Lutai RF	0.2 (Eco Class V)
5.	Yali RF	0.2 (Eco Class V)

### (a) Total Number of tree to be felled

56,259 numbers of trees have been enumerated for felling for proposed diversion. The details are as follows:

S. no	Range	Area ( Ha)	Tree Nos.	Pole Nos	Bamboos	Shrubs and Herbs
1	Baraparthing (RF)	52.728	14591	17820	98621	124030
2	Baraparthing (Khasmal/ Gaucharan)	14.52	1116	5467	6835	12695
3	Ranipool	11.248	4056	3300	43000	50000
4	Kyongsala	41.424	36496	22780	100000	505000
	<b>Grand Total</b>	<b>119.92</b>	<b>56259</b>	<b>49367</b>	<b>248456</b>	<b>691725</b>

### (b) Important Species

The area proposed for diversion consists of felling and relocation of trees/ poles/ herbs/ and shrubs/medicinal plants like chimal, Arupatay, Kapasi, Phoskay, mehel, Patel, Ranichamp, ranikawalo, barjant, Gyra, Juuniper, Angiri, saur, Kapasi mail, Silver fir, Asarey, Timber etc.



## 7. Background of project

National Highways & Infrastructure Development Corporation Limited (Ministry of Road Transport and Highways, Government of India) represented by the Chairman is engaged in the development of National Highways and as part of this endeavor. The Authority has decided to take up the development of alternative Highway to Gangtok in Sikkim via "Bagrakot – Chuikhim – Nimbong – Kafer – Bakhim-Lava – Algarah – Pedong-Rehsi" in the State of West Bengal and from "Rhenock – Rorathang – Pakyong" (NH-717 A) along with spur from Rhenock-Rongli - Rolep – Menla (NH-717 B) in the State of Sikkim.

The National Highway & Infrastructure Development Corporation Limited (NHIDCL), works under MoRTH to develop the infrastructure like road in the Border States near LAC. The Project stretches falls under East Sikkim District of State Sikkim. The Proposed National Highways NH-717 B is the Alternative new route especially for Army and Defence which will take less time in travel to reach the army machinery or equipment to the LAC near China Border. To make the alternate route shorter the green field bypass is proposed from Chuchenpheri from Chainage 44.800 Km to 93+950 Km near Menla where it joins existing Jawharlal Nehru Marg. The Proposed alignment is having approx. 42 Km in the reserve forest and 14.35 Km in revenue land.

Hence National Highway & Infrastructure Development Corporation Limited (NHIDCL), is proposing Forest land diversion of 119.92 Ha under Forest Division East Sikkim is proposed for Construction, Rehabilitation and Upgrading to 2 lane with paved shoulders configuration of section from Roleph to Menla (Length of Project km 37+600 to 93+500) Section of NH-717B in Sikkim State.

## 8. Compensatory Afforestation

This proposal involves diversion of 119.92 ha of forest land. This project is being executed by NHIDCL which is Central Govt. Organization executing Strategic Projects of Govt. of India. The project lies within 100 Km from LAC of India China border, therefore equivalent extent of forest land proposed for diversion i.e. 119.92 of degraded forest is proposed for raising CA. An additional information vide letter no-449-450 Dated 10/05/2021 has been asked to raise CA over double the extent of forest land proposed for diversions. In this regard, State Govt. has submitted the reply stating that the User agency is agreed to bear the cost of raising CA over double the extent of forest land proposed for diversion. The state govt. submitted the details of revised CA land i.e. 239.84 Ha of degraded forest land details as follows:



S.No.	Forest Division	Proposed CA Forest Land	Range	Area (ha)	Financial Out Lay of Proposed CA Scheme (in Rs.)
1	East (T) Division	Baraparthing RF	Baraparthing (T) Range	134.42	2,84,44,972/-
2	East (T) Division	Assam RF	Ranipool (T) Range	22.42	
3	East (T) Division	Latui RF	Kyongsala (T) Range	83	
				239.84	

(a) Whether land for compensatory Afforestation is suitable from plantation and management point of view or not:

Yes

(b) Whether land for compensatory Afforestation is suitable from plantation and management point of view or not:

Yes

(c) Whether land for compensatory Afforestation is important from religious/Archaeological point view:

No

(d) Land identified for raising compensatory Afforestation is in how many patches, whether patches are compact or not:

Land identified for compensatory Afforestation is in 3 Patches.

(e) Map with Details:

Submitted

(f) Total Financial outlay

Rs. 2,84,44,972/-

9. Whether proposal involves violation of Forest (Conservation) Act, 1980 or not. If yes, a detailed report on violation including action taken against the concerned officials:

There is no violation of FC Act, 1980 in this project so far.

10. Whether proposal involves rehabilitation of displaced person. If yes, whether rehabilitation plan has been prepared by the state Government or not:

No

11. Reclamation Plan

Details and Financial allocation:

There is no reclamation involved in the proposal.



**12. Details on catchment and command area under the project:**

Proposed project is crossing many streams.

**Catchment area treatment plan.**

Viaduct are provided where embankment height is more than 10m, and approx. 39 viaduct structures has been proposed of varying length 50 m -400m with cumulative length of 8.17 Km out of 42 Km in forest area. These structures have potential to act as wildlife corridors for larger mammals. Culverts and causeway (1mx 2m) approx. 90 nos. are provided through out the proposed road alignment, to maintain natural water drainage

**13. Cost benefit ratio:**

1:2.36

**14. Recommendation of the Principal Chief Conservator of Forests/State Government:**

Yes, recommended.

**15. Recommendation of Addl. Principal Chief Conservator of Forests (Central) along with detailed reasons:**

Proposal will be placed in REC for approval.

**16. Conservator of Forests shall give detailed comments on whether there are any alternative routes/ alignment for locating the project on the non-forest land:**

There are three alternate alignment option submitted by user agency out of which the proposed alignment is most suitable and barest minimum forest land.

**17. Utility of the project:**

The proposed project connects to the Nathula pass (China border) which shorten the distance of LAC to Bagarakot. The proposed road will be mainly use for defense purpose.

**Number of Schedule caste/ Scheduled Tribes to be benefited by the project:**

As reported by the user agency, the project will generate employment to around 730000 mandays during construction period.

**18.**

**(a) Whether land being diverted has any socio-cultural/ religious value:**

Yes.

**(b) Whether any sacred grove or very old growth trees/forest exist in the area proposed for diversion:**

Yes, there is presence of sacred grove as observed in the form of two natural lakes namely Lampo Lake and Khedi Lake (Twin lake) near to the proposed diversion area. The proposed area will not directly impact the sacred grove.

**19. Situation with respect to any protected Area:**

Though the forest are proposed to be diverted does not from a part of any National park/ Wild life Sanctuary/ Tiger Reserve/ Eco sensitive Zone of Protected area, but the movement of wild animals are noticed in the area as per the site inspection of



reported of CF(T) and DFO (T) east division. Hence Biodiversity Management Plan of cost 11.45 Cr has been proposed by CF(T) to conserve the local flora and Fauna of the proposed area.

**20. Any other information relation to the project:**

The proposed area passing through the core of the forest, there is matured rhododendron. There are natural lakes known as Lampo Lake and Twin Lake. The details of endangered and endemic species of flora fauna found in area are follows:

**Threatened/ rare plant species found in Rolep-Menla area:**

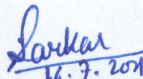
SN	Common name	Scientific name	Remarks
1.	Bearded rhododendron	<i>Rhododendron barbatum</i>	Threatened due to overuse
2.	Indian aconite	<i>Aconitum ferox</i>	High medicinal value
3.	Himalayan ginseng	<i>Panax pseudo ginseng</i>	High medicinal value
4.	Himalayan paris	<i>Paris polyphylla</i>	High medicinal value, over extraction
5.	Himalayan paper plant	<i>Daphne</i> sp	Livelihood value
6.	Niveum rhododendron	<i>Rhododendron niveum</i>	State tree of Sikkim
7.	Codonopsis	<i>Codonopsis affinis</i>	Rare
8.	Boat orchid	<i>Cymbidium eburneum</i>	Endemic to north -eastern India

**Threatened/ rare faunal species found in Rolep-Menla area:**

S.No.	Common name	Scientific name	Remarks
1.	Alpine musk deer	<i>Moschus chrysogaster</i>	IUCN status: Endangered
2.	Red Panda	<i>Ailurus fulgens</i>	IUCN status: Endangered
3.	Himalayan serow	<i>Capricornis sumatraensis</i> thar	IUCN status: Near Threatened
4.	Siberian weasel	<i>Mustela sibirica</i>	Rare in state



5.	Asiatic wild dog	<i>Cuon alpinus</i>	IUCN status: Endangered
6.	Common leopard	<i>Panthera pardus</i>	IUCN status: Vulnerable
7.	Asiatic black bear	<i>Ursus thibetanus</i>	IUCN status: Vulnerable
8.	Mishmi takin	<i>Budorcas taxicolor</i>	IUCN status: Endangered
9.	Leopard cat	<i>Prionailurus bengalensis</i>	Rare small wild feline
8.	Satyr tragopan	<i>Tragopan satyra</i>	IUCN status: Near Threatened
9.	Blood pheasant	<i>Ithaginis cruentus</i>	State bird
10.	Greater spotted eagle	<i>Clanga Clanga</i>	IUCN status: Vulnerable
11.	Alpine accentor	<i>Prunella collaris</i>	Rare, only found in high altitude ecosystems

  
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