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The Executive Engineer  
PWD (R&B) Division  
Nowshera

No - WLW/R/FCA/2022/ 1388  
Dated - 04-01-2023

Subject - Providing of Safe Passage Plan for wild animals for construction of various roads falling in PWD (R&B) Division Nowshera


Reference - your good office letter No - E E/R&B/Nsr/11989-91 dt :- 23-12-2022

Sir

On subject and reference cited above, find enclosed herewith the detailed passage plan of the flowing roads passing through the forest area of Nowshera Forests Division please.

1. Devaki to Bambliya connecting Sanki Deoli and Hathal to Sarooti link road.
2. Bhajwal Peli boarder road.
3. Kachian Mangla Mataji to Namb Karali road
4. Bhata Talla to Hathal via Rajgarh Saida road

Yours Faithfully

  
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**1. Introduction to the Project:**

1. Public Work Department (PWD) is a department under UT of Jammu and Kashmir. The said Road will be developed and maintained by the said Department.

2. The said Road is about 8.069 km and passes through forest area is about 6.051 Ha and comes under Nowshera Forest division.

3. Section- 6 of this project road starts from Km 1st RD (0) and ends at Km 14th RD(1000) with a total length of 14.00 Km.

4. The said Project will benefit about 25000 souls and will connect about 6 villages namely Devak, Bambliya, Sanki, Deoli, Hathal, Sarooti and its adjoining hamlets will be connected by the construction of this road. The main economic activity of public is agriculture and cattle rearing.

5. The forest area required for the Non-forest use i.e. Road development is **6.051 ha**. The total capital cost of the project is **Rs-22.00** /- (Rs- Twenty Two Crores only).

8. The details of the needs and benefits from the project area as follows:

(a)Improvement of this axis will enhance the mobility of troops, equipment's and vehicle to the far flung areas along the Western border (LoC).

(b) The construction of road will increase safety, improve road geometrics, reduce travel time, lower the cost of vehicle use, increase access to market area, education and health services and reduce transport costs for both freight and passengers. Thus helping development of investment is agro-product industries sector in the vicinity of the Project.

(c). The project is seen as a major generator of economic momentum and small benefit in a very significant way through better access and connectivity to the cities and industrial estates.

(d). The project in connection with other state policies and initiative or expected to assist to industrial development bottlenecks. Reduce transportation cost and thereby benefit all sections of the society.

(e). The foremost benefit for the local communities would be the increased levels of income. The project while giving opportunity for correct development for skilled & unskilled persons shall also provide indirect opportunity to thousands of people in

Animal Passage Plan for construction of Road from Devak to Bambliya connecting Sanki Deoli and Hathal to Sarooti link.

industrial as well as social sector. Hence it is requested that the proposal may please be recommended for sanction to concern authority as early possible.

## **2. Objective of Animal Passage Plan Study:**

The objectives of animal passage plan are:

- ❖ To incorporate the needs of wildlife into transportation projects.
- ❖ To maintain the habitat connectivity.
- ❖ To aid in the reduction of human wildlife conflict, improving awareness, safety and reducing collisions.

## **3. Project Location and Technical Details:**

Project:	Construction of road from Devak to Bambliya, connected Sanki, Deoli and Hathal, Sarooti
Proposal No.	FP/JK/ROAD/152391/2022 (Forest Territorial)
Project Proponent:	PWD (R&B) Division Nowshera
Project Cost:	<b>Rs-22.00/-</b> (Rs- Twenty Two Crores)
Details of Protected Area involved:	Devak, Bambliya, Sanki, Deoli, Hathal, Sarooti
Project Area Inside Protected Area:	6.051 Ha.

**4. Justification for Proposed route & alternative examined:** The present project road is an existing road alignment which is going to be constructed under CRF. There is no alternate alignment of the project road. Hence, the diversion of the Forest / Wildlife land is the only choice to construct the road.

## **5. Area Details :**

**Note :- No wildlife area involved under the construction of this Road.**

Part- 1

- (i) Total Length of the Road: 14000 m
- (ii) Width of the Road: 7.50 m
- (iii) Area: 6.051Ha.

**Total Area involved of Road within Forest Area: 6.051 Ha.**

**Total Forest Land involved in the Project including Protected Area: 6.051 Ha.**

Total Non-Forest Land involved under the Project: 0.48 Ha.

6. Major Activities involved in the execution of Project:

A	Earthwork in excavation in Hilly area
1	Earthwork in cutting
2	Earthwork in filling
B	CD Works
3	Construction of 1.0mDia Hume Pipe Culvert
C	Construction of Semi Pucca Walling
4	R/Wall L=900 m
5	B/Wall L=8000 m
6	Parapet
7	Pucca Drain
D	Providing & Fixing of Signage and Boards
8	Road Sign Boards

7. Likely impact of the Project on Protected Area:

No wildlife area falls in the proposed project.

Flora and Fauna:

The floral composition of this area is rich and diverse. The forests along the upper reaches ridge comprise of Chir pine, (*Pinusroxburghii*). The lower hills are covered with broad-leaved species like *Acacia catechu*, *Acacia modesta*, *Dalbergiasissoo*, *Bombacexiba*, *Toonacetrhella*, *Zizyphusjuguba*, *Ficusracemosa*, *Albizialebeck*, *Banhi*species constitute the middle canopy. The under story comprises of *Cassia fistula*, *Mallotusphilipensis*, *Emblica officinalis*, *Debregeasataticfolia*, *Zanthoxylumarmatum*, etc with various grasses and herbs as ground cover. Many of these species are fruit and seed bearers which serve as a good food source for wild animals.

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The sanctuary houses a variety of rare and endangered animals. The following species have been reported from the area:

### Mammal species:

Common name	Zoological name
Leopard	<i>Panthera spp</i>
Porcupine, Indian	<i>Hystrixindica</i>
Jackal	<i>Canis aureus</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Wild Boar	<i>Sus scrofa</i>
Wild Cuck	<i>Galus sonneratii</i>

### Bird species:

Common name	Scientific name
Babbler, Common	<i>Turdoidesdescudata</i>
Bee-eater, Large Green	<i>Meropsorientalis</i>
Bulbul, White-checked	<i>Pycnonotusleucogenys</i>
Bulbul, Red-vented	<i>Pycnonotuscifer</i>
Chat, Pied Bush	<i>Saxicolapruata</i>
Chat, Stone	<i>Saxicolalenuca</i>
Crow, House	<i>Corvussplendens</i>
Crow, Jungle	<i>Corvusmacrorhynchos</i>
Dove, Indian Ring	<i>Streptopeliadeacaeto</i>
Egret, Cattle	<i>Bubulcus ibis</i>
Egret, Little	<i>Egrettaargentina</i>



Great egret	<i>Ardea alba</i>
Lesser Parakeet	<i>Leucophaea parvula</i>
Lesser Red Jungle	<i>Calliope galus</i>
Lesser Cuckoo, Common	<i>Cuculoides coromandus</i>
Lesser, Pond	<i>Ardeola grayii</i>
Lesser	<i>Ardeola grayii</i>
Kingfisher, White-breasted	<i>Halcyon smyrnensis</i>
Kite, Pariah	<i>Milvus migrans</i>
Koel	<i>Eudynamis scolopacea</i>
Lapwing, Red Wattle	<i>Vanellus indicus</i>
Magpie, Green	<i>Cyanopicus</i>
Myna, Bank	<i>Acridotheres tristis</i>
Myna, Common	<i>Acridotheres tristis</i>
Myna, Pied	<i>Sturnus contra</i>
Owl, Spotted	<i>Athene brama</i>
Parakeet, Rose-ringed	<i>Psittacula krameri</i>
Parakeet Blossom-headed	<i>Psittacula cyanocapilla</i>
Partridge, Brown	<i>Francolinus francolinus</i>
Pie, Tree Indian	<i>Dendrocygna nigripinnata</i>
Pigeon, Blue Rock	<i>Columba livia</i>
Pipit, Indian Tree	<i>Anthus hodgsoni</i>
Rose, Finch Common	<i>Carpodacus erythrinus</i>



Shrike, Rufous-backed	<i>Laniusbach</i>
Sparrow, House	<i>Passer domesticus</i>
Swallow, Common	<i>Hirundinastica</i>
Thrush, Streaked Laughing	<i>Corvinalexlineatus</i>
Tit, Grey	<i>Parus major</i>
Warbler, Plain Leaf	<i>Phylloscopusneglectus</i>
Woodpecker, Grey-crowned Pygmy	<i>Picoidescanicapillus</i>
Woodpecker, Lesser Golden-backed	<i>Dinopiumbenghalense</i>

## **8. Safeguard for Animal/Wildlife Passage:**

**8.1. Passage Plan:** Animals moves between habitats in order to survive by finding food, mates and areas of refuge. As rural areas continue to expand and road network and traffic increase there is a threat to animals while crossing the roads. All proposals for roads, railway tracks, canals and power lines will now have to include a plan to provide for safe movement of wildlife and allocate budget for animal passages as per NBWL proceedings dated 25<sup>th</sup> January 2018.

### **Total Area involved of Road within Forest Area: 6.051 Ha.**

Total Forest Land involved in the Project including Protected Area: 6.051 Ha.

Total Non-Forest Land involved under the Project: 4.55 Ha.

The problem of human wildlife conflict, depriving free flow of habitats will be avoided by the provision of under passages in the form of RCC box. Passage to the wildlife habitats will be provided in the form of under passages by means of RCC boxes have been proposed after observation of Wildlife Warden. One (1) No. of RCC boxes are proposed in the project road.

The details are mentioned below:

**Table- 1: Showing location of 1.0 Mtrdia HPC Devak to Bambliya And Hathal to Sarooti link**

S. No.	Location of Culverts	Span	Latitude	Longitude
1.	Km 1st RD (425-450)	2.0 m span RCC culvert	33° 07' 17.49"	74° 34' 24.46"
2.	Km 1st RD (825-550)	3.0 m span RCC culvert	33° 07' 05.43"	74° 33' 34.64"
3.	Km2nd RD (50-75)	1.0 m span RCC culvert	33° 07' 11.53"	74° 33' 25.21"

**8.2. Conflict with road characteristics:** Traffic volume and speed play an important role in determining whether a road will impact wildlife movement. Because vehicle traffic behaves as a filter to movement rather than absolute barrier, the number of species both attempting and successfully crossing the road will be reduced at greater traffic volume and speeds. The majority of wildlife-vehicle collisions occur on the roads with immediate traffic volume while low traffic volume roads have essentially no incidents.

**8.3.Conflicts with Existing Infrastructure:** Many existing structures are not designed for wildlife and were installed with human function as the major goal. In order to avoid hindrance for wildlife, the followings are need to be kept in mind:

- Removal of physical barriers
- Structures that incorporate both pedestrian and wildlife into the same structures
- No perched culverts
- Structures with insufficient water depth for aquatic passage Structures with excessive water velocities
- During the construction phase, the excavated pits shall be properly barricaded and fenced, so as to prevent accidental falling of mammals in the vicinity of the construction sites.



- Noise levels during the construction phase shall be monitored properly to avoid disturbance, if any to the animals.
- No construction activity shall be undertaken after sunset and during the night.
- No harm to wildlife habitat including fauna and flora of the sanctuary shall be ensured.
- The wildlife protected area shall not be used for any other work other than the work permitted.
- No establishment of any temporary or permanent labour camp inside the wildlife forest area.
- Alternate Fuel (LPG) shall be provided to Laborer's for cooking purpose.
- No vehicular movement inside sanctuary area shall be allowed from sunset to sunrise except emergency vehicle.
- Awareness-raising will be done to mitigate this risk. The contractor and his workers shall be informed on the Forest and Nature Conservation Act, Rules and Regulations and copies of these shall be made available to them. Workers shall be made aware of the fines and penalties as well as the risk of job loss for poaching/hunting to avoid such illegal activities.
- In addition to above mitigation measures, any other measures as envisaged by the CWLW/State Board of Wildlife/National Board of Wildlife and as per provisions of wildlife (Protection) Act, 1972 shall be implemented by the company during execution of the project.

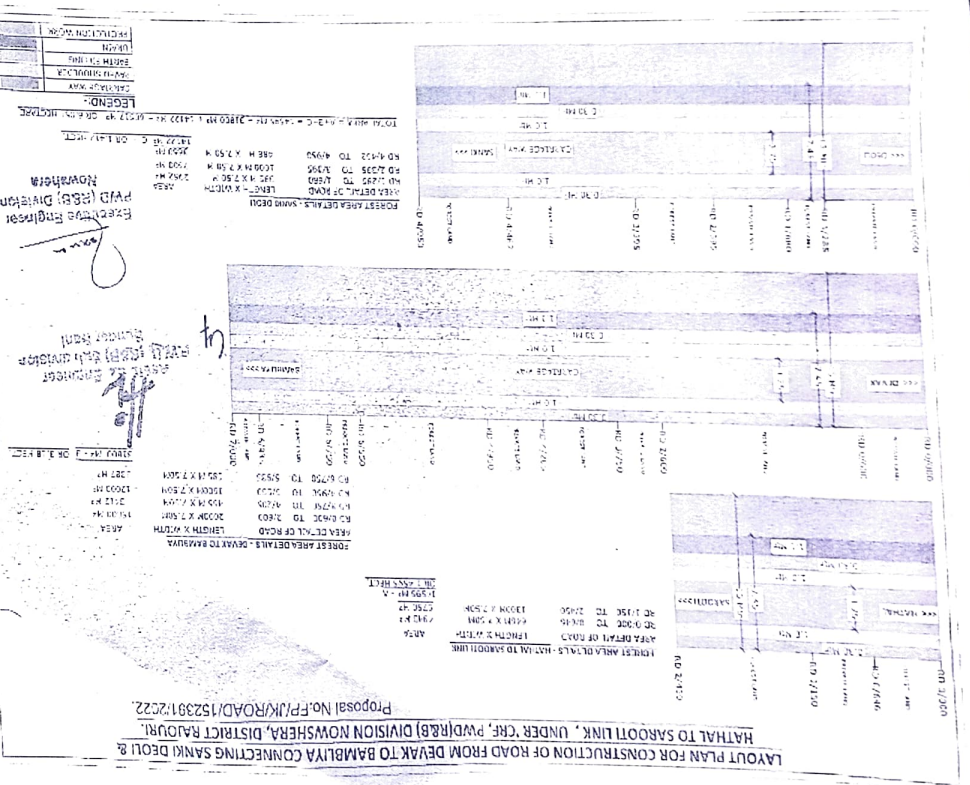
**8.4. Design Guidelines:** The design of the roadway can help to reduce the effects of transportation infrastructure on wildlife. Some simple principles that should be considered in the road design include:

- ❖ Consider the slope of the roadside
- ❖ Consider potential/known areas of higher wildlife activity
- ❖ Consider impact of drainage ditches
- ❖ Consider the implications of the roadway design for emergency response access and maintenance access.

**8.5.Identify Mitigation:** Mitigation for the purpose of this passage plan, is intended to be site specific and practical. The details of the crossings provided are as under:



Figure-2: Details of RCC Box



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- Length = 02 m
- Width = 06 m
- Height = 3.50 m

Specifications of 7 m Span RCC Box

