



Ministry of Road Transport & Highway  
Government of India

Annexure - A4



Public Works Department  
Government of Karnataka

## Wild Life Mitigation Plan for Arboreal Animals

**Name of the Project:** Diversion of **25.763 Ha** (revised from 18.844 ha) for Construction of 2 Lane with Paved shoulder road from Km 55.60 – **Adugodi** to Km 90.70 – **Mavinakoppa** of **NH-766C** with 2 Major Bridges across Sharavathi Backwater in favour of Executive Engineer, NH Division, Public Works Department, Shimoga -Reg

**Proposal No:** FP/KA/ROAD/156224/2022

**Applicant/User Agency:**

Executive Engineer,  
NH Division,  
Public Works Department,  
Shimoga

# **WILDLIFE MITIGATION PLAN FOR ARBOREAL ANIMALS**

## **Introduction:**

The diversion of forest land proposed for the Diversion of 25.763 Ha of Forest land in Hosanagara Taluk, Shimoga District for Construction of 2L+PS road from km 55.60 to km 90.70 mavinakoppa of NH 766 C with major Bridges across Sharavathi back Water (FP/KA/ROAD/156224/2022) in favour of Executive Engineer, National Highways Division, Shivamogga. The Proposed project requires diversion of 25.763 ha forest land in about 8 villages of Hosanagara Taluk in Sagar division. This National Highway project starts at Mavinakoppa Village and ends at Adagodi Village (Bekkodi) with a length of 13+832 km. This Road covers in Shivamogga district.

Previously the Principle Chief Conservator of Forests, (Wildlife), & Chief Wildlife Warden approved wildlife mitigation plan vide Letter No. PCCF/WL/D/CR-51/2018-19 dated: 11-09-2023. In which 13 underpasses of various dimensions, 6.293 Km of chain link fencing, installation of signboards, providing speed breakers and providing a Mahindra Bolero vehicle for patrolling with necessary budgetary provisions of 420.83 lakhs has been proposed and approved.

The Deputy Inspector General of Forests (Central), Ministry of Environment, Forest & Climate Change vide letter no. 4-KRC 1400/2022-BAN Dt: 16-04-2025 raised an EDS to provide a wildlife mitigation plan for the unrestricted movement of arboreal animals in the forest.

## **Need of wildlife Management Plan for Arboreal Animals**

Wild animals move through the landscape for variety of reasons and often interact with roads, traffic and other linear infrastructure. There is always a risk of collision with a vehicle if the animal attempts to cross the road, resulting in injury or death (road kill) of the animal and sometimes commuters. The rate of wildlife-vehicle collisions (WVC) has been increasing globally. The location and timing of wildlife-vehicle collisions are influenced by the location of the road in the landscape, traffic volume, vehicle speed and infrastructure provided to the wildlife to cross over. Especially the arboreal animals usually move across the tree canopy from tree to tree without needing to descend to the ground. So in order to mitigate any wildlife-vehicle collisions of arboreal wild animals, necessary infrastructure must be created so arboreal wild animals can move across the proposed road without venturing on the road. The proposed road is situated Western Ghats containing tropical wet evergreen and semi evergreen forests which habitat

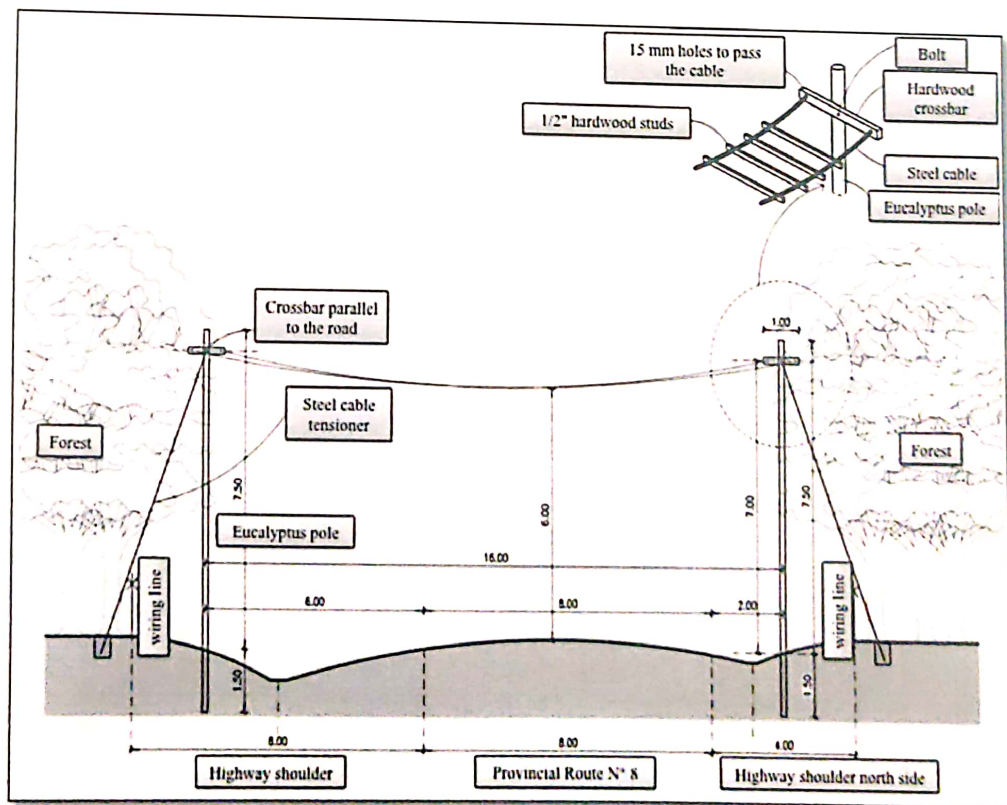
several arboreal wild animals. The proposed Diversion area inhabits following arboreal wild animals;

Sl. No.	Name of the Arboreal Wild Animal	Scientific Name
1	Common Langur	<i>Semnopithecus entellus</i>
2	Bonnet Macaque	<i>Macaca radiata</i>
3	Malabar Gaint Squirrel	<i>Ratufa indica</i>
4	Indian Gaint Flying Squirrel	<i>Petaurista philippensis</i>
5	Slender Loris	<i>Loris tardigradus</i>
6	Brown Palm Civet	<i>Paradoxurus jerdoni</i>

In order to facilitate the movement of above mentioned arboreal animals across the proposed road canopy bridges are proposed.

### Canopy Bridge

A canopy bridge is a structure which connects two opposite parts of a forest canopy fragmented by man-made barriers like roads, railway tracks and other similar infrastructure. These bridges allow animals to travel through the canopy without needing to descend to the ground, reducing the risk of road collisions and other man-wildlife conflicts.



Schematics of a Canopy Bridge

## Advantages of Canopy Bridges

- **Safe Passage for arboreal Wild Animals:** They provide a clear and safe path for arboreal animals to cross over roads, railway tracks, or other barriers.
- **Reduced Wildlife Accidents:** By preventing arboreal animals from crossing on the ground, they significantly reduce the risk of collisions with passing vehicles.
- **Connectivity in fragmented habitats:** Canopy bridges help reconnect fragmented forest habitats, allowing animals to move freely between different areas and maintain their natural behaviours.
- **Species-Specific Design:** Different bridge designs can be used to suit the needs of various species, such as single ropes for agile primates, horizontal ladders for those needing stability, and hybrid bridges for a wider range of animals.
- **Cost-Effective:** When compared to under passes/over passes canopy bridges have been shown to be a cost-effective solution for mitigating road mortality and improving wildlife conservation.
- **Site Specific Flexibility in Construction:**
  - If tall trees present on both sides of the proposed road horizontal ladders/single ropes can be tied directly to the tree branches.
  - If tall trees not available on both sides of the proposed road wooden/concrete/steel poles with a 7.5 meter height can be constructed. On top of the pole T-Shaped cross structures can be fitted, so simple or hybrid type canopy bridges can be built.



Simple Canopy Bridge



Hybrid Canopy Bridge

#### **Locations of Proposed Canopy Bridges**


With the consultation of local forest authorities 16 different locations have been identified on the proposed stretch of NH-766C Mavinakoppa to Adugodi road to build the canopy bridges. The GPS readings of proposed locations to build canopy bridges are given as below;

Sl. No.	Lattitude	Longitude
1	13.905939	75.043256
2	13.90625	75.033185
3	13.90599	75.030534
4	13.90594	75.025171
5	13.903411	75.010193
6	13.901996	75.006794
7	13.899908	75.002627
8	13.899212	75.00048
9	13.899004	74.998931
10	13.899759	74.99389
11	13.901838	74.987388

12	13.904637	74.980688
13	13.905344	74.979663
14	13.908166	74.958727
15	13.907918	74.957273
16	13.907543	74.955226

**Budgetary Provisions:**

Ministry of Road Transport & Highways has sanctioned Rs. 3607 lakhs for the forest clearance related expenditure vide Letter No. NH-12037/26/2022/KNT/South-I dated: 21-03-2023. From which Rs. 25 Lakhs will be utilized for the construction of canopy bridges in 16 identified locations across the proposed NH-766C Mavinakoppa to Adugodi road.

  
**Executive Engineer,**  
**National Highway Division**  
**Shivamogga.**