

## 1. Name of Project:

Design, Build, Finance, Operation and Maintenance of Bangna – Dhaneta Tunnel in Himachal Pradesh on DBFOT (Toll) basis under Public Private Partnership (PPP) Mode.

Government intends to award this project on revenue sharing basis.

## 2. Project Objective:

The Government of Himachal Pradesh intends to improve the all-weather connectivity and to reduce the distance by a minimum 10 KMs between Bangna and Dhaneta villages located in Una and Hamirpur districts respectively in Himachal Pradesh, through the construction of a commercially viable Tunnel including approach roads by utilising efficiencies of a Private partner under PPP mode. The Project shall include Design, Build, Finance, Operation, Maintenance and transfer back to Concessioneing Authority.

### The project will provide two primary benefits:

- Local level: The direct connection between the villages of Bangna and Dhaneta, benefitting the local population and other frequent users of the road over the Solasingi Dhar.
- Regional level: Creation of a new route for users travelling on routes between Una and Kangra (and beyond in both directions) as well as Una and Hamirpur.

## 3. Project Loaction

The Bangana – Dhaneta Tunnel project is located within the districts of Una (Bangna) and Hamirpur (Dhaneta).



#### 4. Existing and Planned Road Network

The road network and tunnel are not located in an area which prevents their availability all-year round. All roads shall be paved, so that their condition is not affected by heavy rainfall. The project roads connect to the paved road network.

An overview of the existing major roads demonstrating how the project complements the network is shown below. The colour coding is as follows:

- National Highways Green
- State Highways Orange
- Minor roads Light Red
- Existing road over Solasingi Dhar Yellow and purple
- New project roads with tunnel Purple and red



Both the Solasingi Dhar ridge and the Govind Sagar reservoir represent barriers to infrastructure development. The SH 32, which approaches Bangana from Una has to first circumnavigate the reservoir and its tributary, before turning back on itself to traverse the ridge at a lower elevation. It then continues to the village of Bhota where it meets the NH 70/88 which proceeds to Hamirpur in a westerly direction.

The area between Bangana and Nadaun is not connected to the major road network in the region. The existing approx. 14 km long single-lane Bangana – Dhaneta Road passes over the 950 m high Solasingi Dhar ridge. Whilst the quality of paving of this road is good, the

crossing of the ridge takes in steep gradients of up to 14 % and very tight curves. The road represents the only possibility to traverse the ridge in local area.

Analysis of the existing road network has shown that the road between Bangana and Dhaneta is neither the shortest nor most popular route for longer distance travel between Una and Hamirpur or Una and Kangra. At present, vehicles travelling between Una and Kangra take the route through Bharwain those travelling between Una and Hamirpur mostly take the route through Bhota.

The Feasibility Study showed that a new tunnel and upgrading of the existing roads between Bangana and Dhaneta would make the route significantly more attractive by forming a strategic connection between the SH 32 and NH 70/88. It can be expected that most road users travelling between Una and Hamirpur as well as some from Una and Kangra would divert to use the new tunnel if roads on both sides of the tunnel are suitably upgraded.

## 5. Coordinates

The Authority intends to construct a tunnel as per the details mentioned below:

| <i>Portal</i>  | <i>Tentative range of coordinates</i>  |
|----------------|--|
| Bangna Portal  | Between N 3501959.33 m to N 3503231.29 m and<br>Between E 43628053.68 m to E 43627126.38 m |
| Dhaneta Portal | Between N 3502595.76 m to N 3503590.61 m and<br>Between E 43629170.42 m to E 43628512.24 m |