

कार्यालय प्रभागीय वनाधिकारी, बागेश्वर वन प्रभाग बागेश्वर

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पत्रांक 3400 / 12-1-2
सेवा में,

बागेश्वर

दिनांक : 03 / 1 / 2026

वन संरक्षक,
उत्तरी कुमाऊ वृत्त,
उत्तराखण्ड अल्मोड़ा।

विषय:- जनपद बागेश्वर के अन्तर्गत बालीघाट-धरमघर-खन्तोली पुल से गुरगुच्चा प्रा0पा0 स्कूल तक मोटर मार्ग के निर्माण हेतु 0.63 है0 वन भूमि के प्रत्यावर्तन के सम्बन्ध में। (Online Proposal No. FP/UK/ROAD/12710/2015).

संदर्भ:- भारत सरकार क्षेत्रीय कार्यालय देहरादून के पत्रांक सं0 8बी/यू0सी0पी0/06/242/2015/एफ0सी0 दिनांक 16.07.2025।

महोदय,

उपरोक्त विषयक संदर्भित पत्र के क्रम में अवगत कराना है कि भारत सरकार पर्यावरण एवं जलवायु परिवर्तन क्षेत्रीय कार्यालय देहरादून द्वारा उक्त प्रस्ताव में जो आपत्तियां लगायी गयी थी। प्रस्तावक विभाग द्वारा आपत्तियों का बिन्दुवार निराकरण कर अग्रिम आवश्यक कार्यवाही हेतु प्रेषित किया जा रहा है।

क्र0 सं0	ई.डी.एस. आपत्ति	उत्तरालेख
1	State Government is requested to submit a detailed reply of this office letter dated 01.11.2021 with comparative statement and KML file of alternative alignment.	प्रस्तावक विभाग द्वारा अवगत कराया गया है, कि वैकल्पिक समरेखण-3 से गुरगुच्चा प्राथमिक पाठशाला को जोड़ा जाता है, तो Elevation अधिक व Linear distance कम होने के कारण 5-6 HairPin Bend आएंगे जिससे स्वभाविक है कि पहाड़ कटान की दृष्टि से उक्त भाग Stable नहीं रहेगा। प्रस्तावित समरेखण पर किसी भी प्रकार के जमीन धसने की कोई भी समस्या नहीं है। (भू-वैज्ञानिक आख्या संलग्न)

संलग्नक -उपरोक्तानुसार।

भवदीय,

(आदित्य रत्न)
प्रभागीय वनाधिकारी
बागेश्वर वन प्रभाग बागेश्वर

पत्रांक / दिनांकित।


प्रतिलिपि :- अधिशासी अभियन्ता, निर्माण खण्ड, लो0नि0वि0, कपकोट को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

(आदित्य रत्न)
प्रभागीय वनाधिकारी
बागेश्वर वन प्रभाग बागेश्वर

वन एवं पर्यावरण मंत्रालय भारत सरकार की आपत्ति के बिन्दु संख्या 1 के क्रम में
आख्या

जनपद बागेश्वर के अन्तर्गत बालीघाट-धरमघर-खन्तोली पुल से गुरगुच्चा प्रा०पा० स्कूल तक मोटर मार्ग निर्माण का प्रस्ताव निर्माण खण्ड लो०नि०वि० कपकोट द्वारा तैयार किया गया है। क्षेत्रीय कार्यालय भारत सरकार द्वारा लगायी गयी आपत्ति State Government is requested to submit a detailed reply of this office letter dated 01.11.2021 with comparative statement and KML file of alternative alignment. के क्रम अधिशासी अभियन्ता एवं सहायक अभियन्ता के साथ स्थलीय निरीक्षण कर चर्चा की गयी तथा प्रस्तावित समरेखण की के०एम०एल० फाइल का भी अवलोकन किया गया। जिसमें अधिशासी अभियन्ता द्वारा अवगत कराया गया कि वैकल्पिक समरेखण से गुरगुच्चा प्राथमिक पाठशाला को जोड़ा जाता है तो Elevation अधिक व Linear distance कम होने के कारण 5-6 Hair Pin bend आएंगे जिससे स्वाभाविक है कि पहाड़ कटान की दृष्टि से उक्त भाग Stable नहीं रहेगा। (संलग्न) तथा (भू-वैज्ञानिक आख्या संलग्न)

अतः आवश्यक कार्यवाही हेतु रिपोर्ट सेवा में सादर प्रेषित है।


(आदित्य रत्न),
प्रभागीय वनाधिकारी,
बागेश्वर वन प्रभाग बागेश्वर।



कार्यालय अधिशासी अभियन्ता निर्माण खण्ड, लो०नि०वि०, कपकोट

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दिनांक 23/12/2025

पत्रांक 2648/2ई०

सेवा में,

प्रभागीय वनाधिकारी
वन प्रभाग बागेश्वर।

विषय:-

जनपद बागेश्वर के अन्तर्गत बालीघाट-धरमघर-खन्तोली पुल से गुरगुच्चा प्रा०पा० स्कूल तक मोटर मार्ग के निर्माण हेतु 0.63 है० वनभूमि के प्रत्यावर्तन के सम्बन्ध में। (FP/UK/ROAD/12710/2015)

सन्दर्भ:-

भारत सरकार क्षेत्रीय कार्यालय देहरादून के पत्रांक सं० 8बी०/यू०सी०पी०/०६/२४२/२०१५/एफ०सी० दिनांक 16.07.2025 (received online on 29-07-2025) एवं आपके कार्यालय पत्रांक सं० 1364/12-1-2 दिनांक 30.09.2025

महोदय,

उपरोक्त विषयक सन्दर्भित पत्र के कम में अवगत कराना है कि भारत सरकार, पर्यावरण एवं मंत्रालय क्षेत्रीय कार्यालय एफ०आर०ए० उत्तराखण्ड देहरादून द्वारा उक्त प्रस्ताव में आपत्तियाँ लगायी गयी हैं एवं दिनांक 30.07.2025 को VC के माध्यम से हुयी बैठक में निम्न बिन्दु पर आख्या मांगी गयी है जिसके कम में निम्नानुसार आपत्ति का निराकरण कर अग्रिम आवश्यक कार्यवाही हेतु प्रेषित किया जा रहा है।

बिन्दु सं०	लगायी गयी आपत्तियाँ	आख्या
1	State Government is requested to submit a detailed reply of this office letter dated 01-11-2021 with comparative statement and KML file of alternative alignment	भारत सरकार द्वारा लगायी गयी आपत्ति के कम में अवगत कराना है कि वैकल्पिक समरेखण-3 से गुरगुच्चा प्राथमिक पाठशाला को जोड़ा जाता है तो Elevation अधिक व Linear distance कम होने के कारण 5-6 Hair Pin bend आएंगे। जिससे स्वाभाविक है कि पहाड कटान की दृष्टि से उक्त भाग Stable नहीं रहेगा। प्रस्तावित समरेखण पर किसी भी प्रकार के जमीन धसने की कोई भी समस्या नहीं है। (भू-वैज्ञानिक आख्या संलग्न)

संलग्न-भू-वैज्ञानिक आख्या।

उपरोक्त के अतिरिक्त यह भी अवगत कराना है कि उक्त बैठक में भारत सरकार क्षेत्रीय कार्यालय देहरादून द्वारा निर्देश दिये गये हैं कि प्रभागीय वनाधिकारी स्थलीय निरीक्षण कर आख्या भी संलग्न करें। अतः उक्त आख्या के साथ स्थलीय निरीक्षण रिपोर्ट संलग्न कर प्रस्ताव सैद्धान्तिक स्वीकृति हेतु उच्चाधिकारियों को प्रेषित करने की कृपा करें।

भवदीय,

(अमित कुमार पटेल)

अधिशासी अभियन्ता

नि०ख०लो०नि०वि०, कपकोट

पत्रांक /2ई०

दिनांक /09/2025

प्रतिलिपि प्रमुख वन संरक्षक एवं नोडल अधिकारी, वन संरक्षण, इन्दिरानगर फारेस्ट कालौनी उत्तराखण्ड, देहरादून को सादर सूचनार्थ प्रेषित।

अधिशासी अभियन्ता
नि०ख०लो०नि०वि०, कपकोट

जायन सख्या 2523

दिनांक 29/12/2025

शाखा 12-1-2

फाइल नं०

आवश्यक कार्यवाही करें।

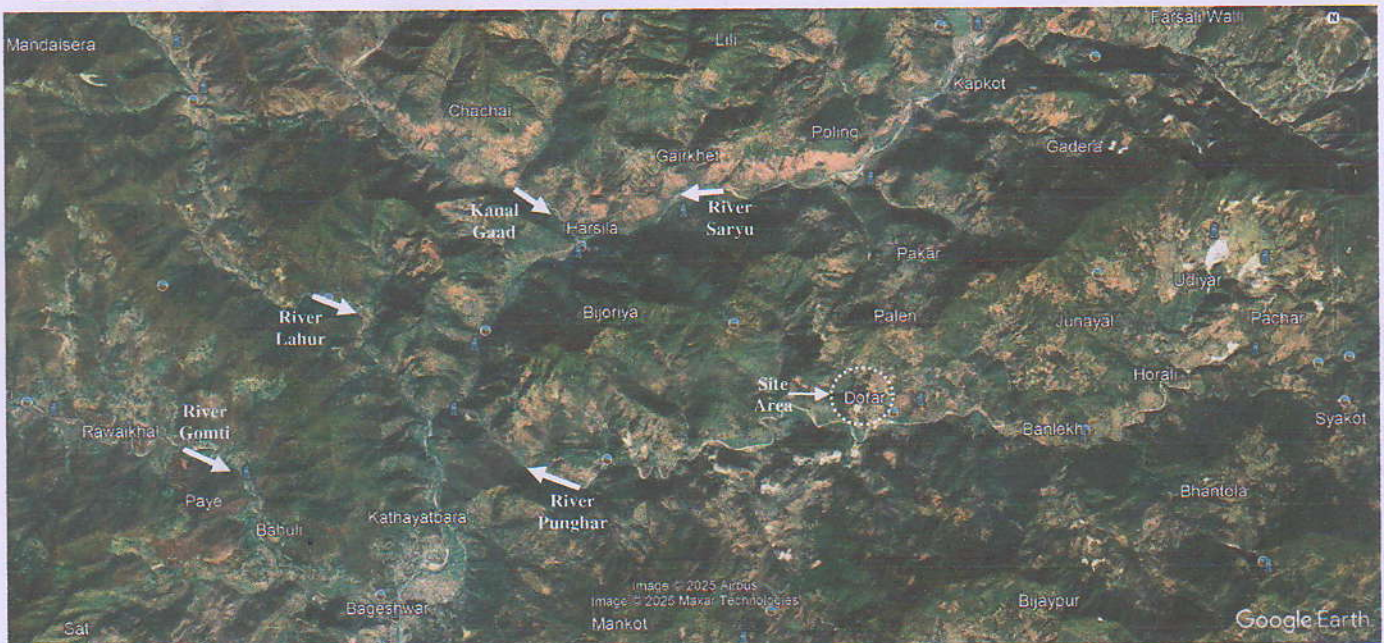
प्र० व० अ०



**Geological Site Assessment of 3.0 Km long Khitoli Bridge to Gurkucha
Motor Road Alignment Corridor between CH 0.0-3.0 Km,
Kapkot Block, District Bageshwar (Kumaon)**

- 1- **Introduction:** The Construction Division, PWD Kapkot, had been entrusted for construction of Khitoli Bridge to Gurkucha motor road for which three different alignment surveys were done. Alignment-1 (shown in white) is 3.0 Km, Alignment-2 (shown in blue) is also 3.0 Km and Alignment-3 (shown in yellow) which is 2.0 Km long. Alignment-3 was found geologically suitable by Mr. Vijay Dangwal (Ex. Senior Geologist) of PWD for which a report was submitted to the division (Letter No.: SG-112/Road Alignment/Kumaon; Dated: 07/02/2013). In order to assess the geological conditions of all the three alignment options for selecting the best site, Er. Amit Kumar Patel (Executive Engineer) Construction Division, PWD, Kapkot asked for a geologist to make a site visit. Consequent to his request a visit to the proposed road alignment site was made on 30/10/2025; Er. Deepak Upreti (Junior Engineer) CD PWD, Kapkot was present during the site visit.
- 2- **Topographical Information/Location:** The above mentioned motor road alignments divert from Km 59 near Khitoli motor bridge (Alignment-1&2) & Km 57 (Alignment-3) of Dangoli-Balighat-Dofaad-Dharamgarh-Kotmanya motor road (SH-60) and terminates near GPS Gurkucha in Kapkot block, district Bageshwar. The co-ordinates and elevation, masl of all 3 sites at their CH 0.0 Km are as follows:-

Location	Alignemnt-1 (White)	Alignemnt-2 (Blue)	Alignemnt-3 (Yellow)
Latitude	29° 52' 32.90"	29° 52' 33.00"	29° 52' 33.90"
Longitude	79° 52' 34.20"	79° 52' 34.75"	79° 51' 53.00"
Elevation	1160 m	1160 m	1140 m



Broader Satellite view of the Site



Closer Satellite view of the site

- 3- **Geological Assessment:** Geologically, the site area falls under Inner Lesser Himalayan region of Kumaon region in the vicinity of thrust contact between Deoban (West) & Berinag (East) formations of Tejam & Jaunsar groups respectively. Lithologically, the area consists of folded, jointed and fractured dolomitic lime stone, calcareous slate, quartzite and slaty quartzite belonging to Deoban & Berinag formations of Tejam & Jaunsar groups respectively. However, the motor road alignment intersects the hill slope which is mostly draped with thick to thin cover of overburden (OB) which consists of slope wash material (SWM) over which there is cultivation fields (Naap khet & Civil land) and vegetation which predominantly consists of Pine trees (Forest land) with patches of folded & jointed bed rock.



View of alignment-1 site at CH 0.0 Km



View of old muck dumping zone at CH 0.050 Km

Alignment-1 diverts from CH 59 Km of SH-60 near right abutment site of Khitoli motor bridge and is 3.0 Km in length, it does not have any hairpin bends and the gradient of this alignment is level to 1:20, 1:24 & 1:60 of rising gradient and 1:40 of falling gradient. This alignment has already been found geologically suitable by Mr. Vijay Dangwal (Ex. Senior Geologist) of PWD. Accept that the alignment intersects an old muck dumping zone (initial ~50 m) for which suitably designed protection measures are to be taken.

Alignment-2 diverts from CH 59 Km of SH-60 near left abutment site of Khitoli motor bridge and runs parallel to the alignment-1. It is also 3.0 Km in length and it has 01 hairpin bend with level to 1:15 and 1:20 of rising & 1:20 of falling gradient and 1:40 gradient at the hairpin bend but the the initial slope that this alignment intersects is steep and the alignment at its CH 0.040 Km intersects a temple. Therefore, alignment-2 also does not seem to be suitable for the construction of the motor road.

Alignment-3 diverts from CH 57 Km of SH-60 ~1.8 Km before Khitoli motor bridge. It is 2.0 Km in length and it has as many as 06 hairpin bends which repeat on the same slope one over the other. Also the gradient of this alignment is very steep. In order to improve the gradient and to decrease the no. of hairpin bends the arms of the alignment are to be stretched after which the alignment will have to cross the naap land of village Chaura for which the residents of the village did not agree. Therefore, alignment-3 does not seem to be suitable for the construction of the motor road.



View of the bridge site at Km 02



View of the hill slope at Km 3 of the alignment-1

The hill slope of the alignment-1 site area is gentle to moderate to steep which declines at ~10-40° initially towards west direction followed by South-East & south-West direction. The approximate strength of exposed rock mass is around ~80-100 MPa and has undergone W_0 to W_3 weathering grade. The alignment-1 intersects 02 small perennial streams/naalas at Km 01 (~ CH 0.500 Km) & Km 02 which in the absence of scuppers/culverts/bridge may damage the motor road especially during monsoon season.

- 4- **Seismicity of the area:** According to Indian Standard code the site falls in seismic zone V of seismic zoning Map of India (IS 1893, part 1, 2002) which corresponds to intensity IX and above on MM scale.

On the basis of the geological inspection of the site studies carried and the facts given above, the following recommendations are being made for the construction of the proposed motor road failing to these recommendations this report will be automatically treated as cancelled.

5- **Recommendations:**

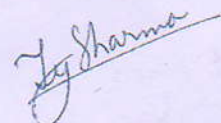
1. Blasting by explosives for the road construction is to be avoided as far as it is possible as use of explosives will render the slope unstable. Instead excavation & cutting must be carried out by skilled manual workers or mechanized methods with utmost care.

2. At places where the hill slope is steep and is covered with thick OB & SWM construction of suitably designed retaining wall/breast wall with proper weep holes is to be made sure on either sides of the motor road especially at initial ~50 m where the alignment intersects an old muck dumping zone.
 3. Construct two small bridges at Km 01 & 02 where the motor road alignment intersects two small perennial streams/naalas.
 4. Construct large U-shaped longitudinal concrete lined drain all along the hill side of the road with adequate provision of cross drains.
 5. Construct the road by cutting/excavating to its full width which is very important for long term stability of the motor road. At places where the hill slope is steep, half cut and half fill techniques should be applied by proper dynamic compaction of the fill material.
 6. At places the motor road alignment passes quite near to rural residential buildings therefore utmost care is to be taken while carrying construction/excavating work in that area along with provisions of retaining and breast walls for maintain the stability of the hill slope around the area.
 7. Disposal of muck and excavated waste on the lower slopes of this road is to be strictly avoided; failing to which will increase the weight of the lower slope resulting in the increase in driving forces. It is advised to dispose the muck on the identified site for muck disposal.
 8. All the construction activities ought to be carried out as per the standard codes of practice laid by the BIS and MORTH.
- 6- **Conclusion:** On the basis of the geological observations/studies carried at the site and with the above recommendations, the alignment-1 site proposed for 3.0 Km long Khitoli Bridge to Gurkucha motor road was found geologically suitable construction between CH 0.0 to 3.0 Km.

Note: On the basis of the geological observations/studies carried at the site keeping in view the hill slope, weather & seismological conditions, this is a generalized report based on site conditions during the day of visit. The conditions of the site are likely to change during or after the construction work as the area receives heavy rainfall during monsoon season, in case if opinion is required during or post construction then the geologist should be separately communicated.

Letter No.: G(AZ)-55/2025

Date: 20/11/2025



Dr. Tushar Sharma
(Geologist)
Office of the Chief Engineer
PWD Almora (Kumaon) Zone