

### भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

#### National Highways Authority of India

(Ministry of Road Transport & Highways, Govt. of India) परियोजना कार्यान्वयन इकाई (प॰ का॰ ई॰)/PROJECT IMPLEMENTATION UNIT (PIU) ई-09, ड्रीम सिटी/ E-09, DREAM CITY, अमृतसर-143015 (पंजाब) / AMRITSAR-143015 (PUNJAB)

Phone: 0183-2911309

Date: 14.12.2021

E-mail: piuamritsar@nhai.org/ nhaipiuamritsar@gmail.com



NHAI/PIU-ASR/Blackspots/2022 2816

To,

Divisional Forest Officer.

Forest Division,

Amritsar

Divisional Forest Officer,

Forest Division, Jalandhar

Diversion of 39.7656 ha. (30.51 ha in Amritsar Division & 9.2556 ha in Jalandhar Division) Project is construction of 6 - lane structures on NH-1 Section (KM 407+000 to KM 444+794) under Rectification of Blackspots on Brownfield Amritsar Spur of Delhi- Amritsar- Katra Expressway under forest division Jalandhar and Amritsar, Punjab. (Online proposal No. FP/PB/Road/143098/2021)-regarding.

Ref:

Sub:

File No. 9-PBC443/2022-CHA dated 06.12 .2021

Sir.

Please refer to Regional office, MOEFCC letter cited at reference above vide which certain observations on subject mention Forest diversion proposal has been raised.

The points - wise reply of the observations pertaining to this office are as under:-

S.No	Observations	Reply
1.	NOC from irrigation department.	The Irrigation department issues only provisional NOC and the same is uploaded already in the forest proposal. Final NOC is issued on the approval of detailed design submitted by the contractor after commencement of works.
2.	Area calculation with existing road width & proposed road width, which is not shown in layout plan and calculation sheet. Linear plan for the instant project clearly showing the component wise forest area requirement in distinct colour duly approved by the competent authority and countersigned by the DFO	All the forest land in the exsisting ROW is proposed for Diversion. The width of road may vary in subjected project. Area Calculation sheet is attached with Form-A, Part-I. Linear plan for the instant project clearly showing the component wise forest area requirement in distinct colour is attached for clarification.
3.	Cost-benefit analysis in part-I-G, based on calculation as per new NPV rates	



4.	Project approval is provided for chainage 414.000, 425.800, 432.300 & 438.850, whereas as per justification proposed project starts from 407.00 to 444.794. This needs to be Clarified.	The rectification of blackspots is being undertaken in two stages. The approval of Authority on the following blackspot locations (414+000, 425+800, 432+300, 438.850) is already conveyed at a cost of Rs. 166.70 Cr. Further, the approval of the blackspots locations (408+400, 409+000, 411+900-412+500, 422.650, 440+800, 433+550) is in process with MoRTH and shall be received shortly. The in-principal approval of the same and the submission of the cost estimates are attached herewith.
5.	Cost of the project in online part-I A-1(viii) is uploaded as 334.34 crore, whereas in project approval it is given as 166.70 crore. This needs to be clarified.	The cost of Rs. 334.34 Cr. is for all the blackspot locations. Whereas the cost of Rs. 166.70 Cr. is only for the following blackspot locations (414+000, 425+800, 432+300, 438.850). The rectification of blackspots is being undertaken in two stages. The approval of Authority on the following blackspot locations (414+000, 425+800, 432+300, 438.850) is already conveyed at a cost of Rs. 166.70 Cr. Further, the approval of the blackspots locations (408+400, 409+000, 411+900-412+500, 422.650, 440+800, 433+550) is in process with MoRTH and shall be received shortly. The in-principal approval of the same and the submission of the cost estimates are attached herewith.
6.	In online part-II 4(ii) at Sr. no. 08, total 498 trees uploaded as misc. species, and needs to be uploaded with their scientific name & local name.	Pertains to DFO.
7.	Vegetation Density of the project is uploaded as 0.3 in part-II, whereas the NPV calculation is done based on very dense class instead of open forest. The NPV calculation sheet needs to be revised using rate for Open forest.	
8.	KML file of CA/ACA site in Amritsar division was analysed on DSS and found that total area of CA site is approx. 73.14 ha, out of which approx. 71.2 area is available for plantation. Additional area of 1.94 ha for ACA is required for target plantation.	
9.	Under column B-1 of online part-I one proposal has been uploaded.	

Juil

However, as per record five project proposals for this road have already been approved by the competent authority under FCA 1980, vide OnlineProposalNo.
FP/HR/ROAD/51984/2020,FP/PB/RO AD/154267/2022,
FP/PB/ROAD/130183/2021,FP/PB/R OAD/141585/2021, and FP/PB/ROAD/124978/2021. All previous proposal details need to be uploaded correctly.

Expressway" of Bharatmala Pariyojna which is being dealt through various offices of NHAI. The detail of the previous proposal of Delhi-Katra-Expressway is as under:

Online	Dyanasal	Under DIII
Online		Under PIU
Proposal NO.	offices	
FP/HR/ROAD/	PIU, Bhiwan	i
51984/2020		-
FP/PB/ROAD/	PIU,	Ludhiana
154267/2022	Expressway	
FP/PB/ROAD/	PIU,	Ludhiana
124978/2021	Expressway	
FP/PB/ROAD/	PIU, Amritsa	ır
141585/2021		
FP/PB/ROAD/	PIU, Amritsa	ır
130183/2021		

10. In the approval of the project and MoM of of appraisal of the project by IAC, the chainage have been mentioned Kms 414/000 to 438/850 of NH-3. Approval from the competent authority for the instant project from KM 407+000 to KM 444+794 is required.

The rectification of blackspots is being undertaken in two stages. The approval of Authority on the following blackspot locations (414+000, 425+800, 432+300, 438.850) is already conveyed at a cost of Rs. 166.70 Cr. Further, the approval of the blackspots locations (408+400, 409+000, 411+900-412+500, 422.650, 440+800, 433+550) is in process with MoRTH and shall be received shortly. The in-principal approval of the same and the submission of the cost estimates are attached herewith..

3. In view of above, it is kindly requested to process the subject mentioned Forest diversion proposal so that the same may be approved in next REC meeting.

(Sunil Yadav)
Project Director
PIU – Amritsar

Encl: -As Above



#### भारत सरकार GOVERNMENT OF INDIA

#### पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE



एकीकृत क्षेत्रीय कार्यालय,चंडीगढ़ /Integrated Regional Office, Chandigarh

फाइल नम्बर: 9-PBC443/2022-CHA

दिनांक: -12-2022

सेवा में.

अ०प्रधान मुख्य वन संरक्षक& नोडल ऑफिसर)एफ०सी०ए०), पंजाब सरकार,फोरेस्ट कॉम्पलैक्स, सै०-68, (एस०ए०एस०नगर (मोहाली, पंजाब | (fcaforest@gmail.com)

Sub: Diversion of 39.7656 ha. (30.51 ha in Amritsar Division & 9.2556 ha in Jalandhar Division) Project is construction of 6-lane structures on NH-1 Section (KM 407+000 to KM 444+794) under Rectification of Blackspots on Brownfield Amritsar Spur of Delhi-Amritsar-Katra Expressway under forest division Jalandhar and Amritsar, Punjab. (Online proposal No. FP/PB/Road/143098/2021)-regarding.

Ref: State Government online proposal received on dated 24.11.2022

महोदय,

मुझे आपका ध्यान उपर्युक्त प्रस्ताव की ओर दिलाने का निर्देश हुआ है,जिसमें वन (संरक्षण) अधिनियम, 1980 की घारा-2 के अनुसार गैर वानिकी उद्देश्य के लिए **39.7656** हेक्टेयर वन भूमि की मांग की गई है।

- 2. प्रस्ताव से सम्बंधित निम्नलिखित जानकारी भेजने का कष्ट करे:-
- i) NOC from irrigation department.
- ii) Area calculation with existing road width & proposed road width, which is not shown in layout plan and calculation sheet. Linear plan for the instant project clearly showing the component wise forest area requirement in distinct colour duly approved by the competent authority and countersigned by the DFO
- iii) Cost- benefit analysis in part-I-G, based on calculation as per new NPV rates.
- iv) Project approval is provided for chainage 414.000, 425.800, 432.300 & 438.850, whereas as per justification proposed project starts from 407.00 to 444.794. This needs to be clarified.
- v) Cost of the project in online part-I A-1(viii) is uploaded as 334.34 crore, whereas in project approval it is given as 166.70 crore. This needs to be clarified.
- vi) In online part-II 4(ii) at Sr. no. 08, total 498 trees uploaded as misc. species, and needs to be uploaded with their scientific name & local name.
- vii) Vegetation Density of the project is uploaded as 0.3 in part-II, whereas the NPV calculation is done based on very dense class instead of open forest. The NPV calculation sheet needs to be revised using rate for Open forest.
- viii) KML file of CA/ACA site in Amritsar division was analysed on DSS and found that total area of CA site is approx. 73.14 ha, out of which approx. 71.2 area is available for plantation. Additional area of 1.94 ha for ACA is required for target plantation.

Page 1 of 2

#### THE NO.9-PBC443/2022-CHA

- ix) Under column B-1 of online part-I one proposal has been uploaded. However, as per record five project proposals for this road have already been approved by the competent authority under FCA 1980. vide Online Proposal FP/HR/ROAD/51984/2020.FP/PB/ROAD/154267/2022, FP/PB/ROAD/141585/2021. FP/PB/ROAD/130183/2021, FP/PB/ROAD/124978/2021. All previous proposal details needs to be uploaded correctly.
- In the approval of the project and MoM of of appraisal of the project by IAC, the chainage have been mentioned Kms 414/000 to 438/850 of NH-3. Approval from the competent authority for the instant project from **KM 407+000 to KM 444+794** is required.
- 3. उपरोक्त जानकारी इस पत्र के जारी होने के पश्चात 30 दिनों के भीतर प्रस्तुत करे, जिसके प्रस्तुत न करने की स्थिति में इस प्रस्ताव को रद्दकिया जा सकता है |

हस्ता/-(राजा राम सिंह) उप-वन महानिरीक्षक (केन्द्रीय) (IRO-CHD, MOEF&CC)

Digitally Signed by Raja Ram Singh Date: 06-12-2022 16:12:57

Reason: Approved

प्रतिलिपि:

1. वन मण्डल अधिकारी, वन मण्डल और जिला Jalandhar and Amritsar पंजाब (dfojalandhar@gmail.com) (dfoamritsar@rediffmail.com)

2. NATIONAL HIGHWAY AUTHORITY OF INDIA, PIU- Amritsar, E9 Dream City, Amritsar. (nhaipiuamritsar@gmail.com)



### भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड्व परित्रहन और गुक्रमार्ग मंत्रालय, भारत सरकार)

#### National Highways Authority of India

(Ministry of Road Transport & Highways, Govl. of India) परियोजना कार्यान्ययन इकाई (फ का- ई-), PROJECT IMPLEMENTATION UNIT (PIU) ई-०७, ड्रांस स्टिशे E-09, DREAM CITY, अनुनत्-1-3015 (पंजाय) . AMRITSAR-143015 (PUNJAB)

Prong : 0183-28 m800 S-mail : plusmitsan@mai.org nhalplusmitlsan@gmail.com



Date: 15.06.2021

NHAI/PIU-ASR/Blackspot/Priority-III/2021/ 1346

To, Regional Officer National Highways Authority of India, Chandigarh Bays No. 35-38, 1st Floor, Sector-4, Panchkula-134112

Sub: Rectification of Blackspots on NH-3 section from Amritsar to Jalandhar under Development of Brownfield spur of Delhi-Amritsar-Katra Expressway - <u>Rectification of Blackspots under Priority III</u> - reg.

Ref: This office letter no. NHAI/PIU-ASR/Blackspot/Priority-III/2021/834 dated 3.04.2021 Sir,

In reference to this office letter dated 03.04.2021 cited in reference above vide which the Cost estimate and bid documents of 04 nos. of structures under Blackspot Priority-III was submitted to your good office, it was directed that the section from Jalandhar to Amritsar of NH-03 has to be taken up for six-laning and this office was asked to review the proposal on the same lines.

- 2. In this regard, it is humbly apprised that as per the directions of the Competent Authority, this office had directed the Feasibility Consultant to work on the six-lane proposal however as per further directions of the Competent Authority, it was informed that the Internal Appraisal Committee had while approving the Blackspot Priority-II Proposal conveyed vide NHAI HQ letter dated 04/06/2021 recommended to include the same under residual NHDP. It was also informed that the Priority-III Blackspot proposals shall also be taken up similarly in residual NHDP.
- 3. The Consultant was accordingly asked to resubmit the Priority-III Blackspot estimates. M/s Feedback infra. has now vide their e-mail dated 15.06.2021 submitted the revised cost estimate and bidding documents for the following blackspots location falling under Priority III:

S. No.	Chainage	Proposed structure	Total Civil Cost (in Cr)
Priority-II	I Blackspots		
1	408.400	ROB widening (43+50) on RHS	70.83
•	409.000	VUP 1x15 Dhilwan	
2	411.900-412.500	Major Bridge, Beas River	•
3	422.650	VUP 20+30+20 Naranjanpur fattubal	41.67
4	440.800	VUP 1x30 Tarantaran Road	36.95
5	443.550	VUP 1x30 IIM Amritsar	34.25

Head Office : G-5/6, SECTOR-10, DWARKA, NEW DELHI-110075 प्रधान कार्यालय : जी-5 एवं 6, सेक्टर- 10, द्वारका, नई दिल्ली-110075 4. In this regard, it is submitted that the bid documents submitted by the Consultant have been examined in this office and are majorly found in order. The Bid Documents comprising of GADs, Plan & Profile, technical Schedules and Cost Estimate are enclosed with a recommendation for the approval of Competent Authority and invitation of bids at the earliest.

(Sunil Yadav)
Project Director
PIU-Amritsar

Encl: As above

Copy to: CGM (Punjab), NHAI HQ

No. 5579-21 /1-W

date 20/12/2021

To

The Project Director, NHAI, PIU, Amritsar.

Sub:

Rectification of Blackspots on Jalandhar-Amritsar Section of NH-01( New NH -03) in the state of Punjab on EPC mode under Development of Brownfield spur of Delhi — Amritsar —Katra Expressway: Issuance of NOC for construction of six lane structures from Ch.407.100( Dhilwan) to Ch.456.100 (Verka) of NH-03 in the state of Punjab —reg.

Ref:

Your office letter No. NHAI/PD/ PIU-ASR/NH-3/2021 /2793 date 15-12-2021

In regard to above cited subject and referred letter, NOC related to structures pertaining to this office is hereby provisionally granted for forest clearance purpose only. This office has right to revoke this NOC upon any objections, raised by field staff or divisional office. No construction or dismantling of the structures pertaining to this office is allowed before the vetting of the drawings for the same from this office.

Superintending Engineer, Amritsar Drainage Circle, Amritsar.

CC: -

Copy of above is forwarded to Executive Engineer, Amritsar drainage Division, Amritsar & Drainage construction Division, Amritsar for information and necessary action.

परियोजना निद्याक/Project Director भारतीय गण्येय गजमार्ग प्रथिकरण National Highways Authority of India परियोजना कालस्यात स्थाप सम्बद्धार No\_\_\_\_1090-91 /183/M/Generl

Dt. 17/12/2021

To

Project Director,

National Highway Authority of India,

PIU-Amritsar.

Sub:-

Rectification of Black spots on Jalandhar-Amritsar section of NH-01 (New NH-03) in the state of Punjab on EPC mode under development of Brownfield spur of Delhi-Amritsar-Katra expressway: Issuance of NOC for construction of six lane structure from Ch. 407.100 (Dhilwan) to Ch. 456.100 (Verka) of

NH-03 in the state of Punjab-reg.

Remarks:-

No. NHAI/PD/PIU-ASR-NH-3/2021/2792, Dt. 15-12-2021.

As reported by Executive Engineer, Majitha Division UBDC, Amritsar vide their office letter no. 1040, dated 17/12/2021, in principle NOC is hereby issued for the above cited project for obtaining forest clearance. However, final NOC for the project shall be issued on submission of the detailed drawings by NHAI.

This is for information and further necessary action.

Superintending Engineer,
Upper Bari Doab Canal Circle,
Amritsar

Amritsar.

Copy:-

Executive Engineer, Majitha Division UBDC, Amritsar for information.

परियोजना निवेशक/Project Director भारतीय गाणीय पजमला प्रियकरण National Highways Authority of India परियोजना कार्याक्य कार्य अमृतस्य PIU-America

Name of Project: Construction of 6-lane structures on NH-1 Section (KM 407+000 to KM 444+794) on Brownfield Amritsar Spur of Delhi-Amritsar-Katra Expressway

Nature of Proposal: Diversion of 39.7656 ha of Forest land under FCA, 1980 for structure improvement

**Purpose:** The Cost Benefit analysis has been undertaken for proposed Diversion of Forest Land being affected due to rectification of Blackspots on existing NH-1 from KM 407+000 to KM 444+794 in the State of Punjab.

Total Length of the Project: 15.586 km

Number of districts involve: 02

Number of forest divisions involve: 02

Sl. No. Forest Division		Proposed Forest Area for Diversion (ha)
1	Jalandhar	9.2556
2 Amritsar		30.510
	Total	39.7656

Table A: Cases under which a Cost-benefit analysis for forest diversion is required

Sl. No.	Nature of Proposal	Applicable/Not Applicable	Remarks
1	All Categories of proposal involving forest land up to 20 hectares in plains and up to 5 hectares in hills	Not Applicable	These proposals may be considered a case-to-case basis and value judgments.
2	Proposed for defense installation purpose and oil prospecting only	Not Applicable	In view of national priority accorded to these sectors, the proposal would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use
3	Habitation, establishment of industrial units, tourist lodge complex and other building construction	Not Applicable	These activities being detrimental in protection and conservation of proposals would be rarely entertained.
4	All other proposal involving forest land more than 20 hectares in plain and more than 5 hectares in hills including roads, transmission line, minor, medium and major irrigation projects, hydro projects, mining	Applicable	These are cases where a cost benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

Sl. No.	Nature of Proposal	Applicable/Not Applicable	Remarks
	activity, railway line, location specific installations like microwave stations, auto repeater centers, TV tower etc.		

Since, the proposal is for diversion of forest land measuring more than 20 hectare in plain area for the road project, cost benefit analysis report is applicable.

Table B: Estimation of Cost of forest diversion

Sl. No.	Parameters	Given Guideline	Evaluation
1	Ecosystem services losses due to proposed forest diversion	Economic value of loss of ecosystem services due to diversion of forest shall be the net present Value (NPV) of the forest land being diverted as prescribed by central Government (MoEF&CC)  Note: In case of National parks the NPV shall be ten (10) times the normal NPV and in case wildlife Sanctuary the NPV shall be five (5) times the normal NPV or otherwise prescribed by the ministry or any other competent authority	INR 9,57,780/- (~9.58) lakhs per hectare (Tropical
2	Loss of animal husbandry productivity, including loss of fodder	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum	The forest land proposed for diversion is roadside plantation notified by Govt. of Punjab as Protected Forest. No grazing activity is being / has been carried out on these patches. Therefore, no loss of animal husbandry productivity including loss of fodder will take place.  10% of NPV =10% of NPV (380.954448 lakhs) = 38.0954448 lakhs.  So considered amount is INR 380.954448 Lakhs.

National Highways Authority of परियोजना कार्यान्वयम उकार्ड, अमृतसर PIU-Amritsar

Sl. No.	Parameters	Given Guideline	Evaluation
3	Cost of human resettlement	To be quantified and expressed in monetary terms as per approved R & R plan.	NIL  No resettlement in the forest land proposed for diversion.
4	Loss of public facilities and administrative infrastructure (Roads, buildings School, dispensaries, electric lines, railways etc) on forest land, or which would require forest land if these facilities were diverted due to the project.	To be quantified and expressed in monetary terms on actual basis at the time of diversion.	No loss of public facilities and administrative infrastructure on forest land.
5	Possession value of forest land diverted	30% of environment costs (NPV) due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum	Possession value of Forest Land= 30 % of NPV = 30% of 380.954448 lakhs = 114.2863344 Lakhs
6	Cost of Suffering to oustees	The social cost of rehabilitation of Oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R & R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not been shifted	Nil as no Resettlement and Rehabilitation is required in forest land proposed to be diverted.
7	Habitat fragmentation Cost	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.	Habitat fragmentation Cost= 50% of NPV = 50% of 380.954448 Lakhs = 190.477224 Lakhs
8	Compensatory	The actual cost of compensatory	Total 79.53 Hectare of

भारतीय राष्ट्रीय श्रजमार्ग प्री करण National Highways Authority of India परियोजना कार्यान्ययन उकार्ड, अमृतसर Plu-Amritsar

Sl. No.	Parameters	Given Guideline	Evaluation
	afforestation and	afforestation and soil & moisture	degraded forest land which
	soil & moisture	conservation and its	is about two times of the
	conservation cost	maintenance in future at present	forest area proposed for
		discounted value	diversion has been
			proposed for CA in lieu of
			<b>39.7656</b> ha forest land.
			Cost of CA is <b>INR 453.321</b>
			Lakhs (@ 5.70 lakhs per
			ha)

Table C: Existing Guidelines for estimating benefits of forest land diversion in CBA

Sl. No.	Parameters	Given Guideline	Evaluation
1	Increase in productivity attributable to the specific project	To be quantified and expressed in monetary terms avoiding double counting	The proposal for which diversion of forest land is sought is for rectification of Blackspots on existing NH-1 from KM 407+000 to KM 444+794 in the state of Punjab.  The proposed expansion shall reduce traffic congestion and result in time savings. Moreover, the proposed expansion will improve road safety, save fuel and cost, generate employment, boost tourism and commercial activities in nearby areas etc. The proposed project shall improve trade efficiency and bring economic growth in the region.  Again, directly the project will have the potential for employment generation for local people during the construction period. The proposed project does not involve any manufacturing or production. Hence, this section is not applicable. Monetary benefits due to increase in productivity is NIL.
2	Benefits of economy due to the specific project	The incremental economic benefit in monetary terms due to the activities attributed to the specific project.	Economic benefit in terms of increase in trade, saving in vehicular operation and maintenance cost, better connectivity, safer journey to commuter and saving of travel time. Improved road connectivity helps in better implementation and management of government schemes. It will provide last and economical

र्शायोजना निद्यांकर भारतिय संज्ञान वानवार्ग प्रवित्रकरण भारतिय संज्ञान वानवार्ग प्रवित्रकरण भारतियाजना निर्याच्यान इकार्ड, अपनसर परियोजना निर्याच्यान इकार्ड, अपनसर PTU-American

Sl. No.	Parameters	Given Guideline	Evaluation
			transport of goods, after completion of
			project, the local people and industries
-			situated in the area will be greatly
			benefited. The project road will provide
			safe and fast, economical and
	1		environment friendly transportation to
			the State, which in term will accelerate
			the rate of growth in this area.
			The expansion of existing highway shall
			decongest the highway and results in
			time and fuel savings.
			Average Annual Daily Traffic = 10909
			Passenger Car Unit (PCU).
			Fuel saving = avg. 1.5 Litre per PCU
			Average fuel cost = INR 90 per Litre
			Fuel saving on 10909 PCU = 1.5 x
			10909 = 16363.5 Litres per day
			Savings (in monetary terms) = 16363.5
			x 90 = 1472715  INR = INR 14.72715
			Lakhs
	1		Total benefits in 40 years
			$= 14.72715 \times 40 \times 365 = INR$
			215016.39 Lakhs
3	No. of population	As per the detailed	Population of Jalandhar district
	benefited due to	-	(2193590), Kapurthala district (815168)
	specific project		and Amritsar district (2490656) will be
			benefitted due to proposed development.
4	Economic	As per the detailed	A total of 430174 man-days
·	benefits due to of	project report	employment will be generated during
	direct and	respective	construction phase for skilled/unskilled
	indirect		labour.
	employment due		Base wage rate for the year $2019 - 20$ is
	to the project.		INR360 per day.
	1 0		Total financial implication will come
			out to be = $430174 \times 360 = INF$
			1548.6264 Lakhs
5	Economic	Benefits from such	
	benefits due to	compensatory	the proposed Row in forest land along
	Compensatory	forestation accruing	
	Afforestation	over next 50 years	undertake at least twice of affected area
1	roject Director	monetized and	as Compensatory afforestation as pe
		discounted to the	Forest Conservation Act, 1980 to
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-Amritsar			

SL No.	Parameters	Given Guideline	Evaluation
1		present value should	increase the net productivity.
		be included as	The Compensatory Afforestation will be
		benefits of	done in 79.53 ha of degraded forest land
		compensatory	which is down the line would be having
		afforestation.	a density of minimum 0.7. The
		*For benefits of CA	ecological value for a 50 years period
		the guideline of the	for the density of 1.0 is INR 126.74
		-	Lakhs per hectare. By considering
		estimation may be	minimum 0.4 density the ecological
		considered.	gain for the project would be INR
			$126.74 \times 0.4 \times 79.53 = INR 4031.85288$
			Lakhs

Summary of Cost -Benefit Analysis for the Project

Sl. No.	Cost (in Lakh)	Benefit (Lakh)
1	Ecosystem services losses =INR 352.720872 Lakhs	Benefits of economy due to the specific project = INR 215016.39 Lakhs
2	Loss of Animal Husbandry Productivity including loss of Fodder=INR 38.0954448 Lakhs.	
3	Possession Value of Forest Land diverted = Rs 114.2863344 Lakhs	Ecology gains due to Compensatory Afforestation = INR 4031.85288 lakhs
4	Habitat Fragmentation Cost = INR 190.477224 Lakhs	
5	Compensatory Afforestation and Soil and Moisture Conservation = INR 453.321 Lakhs	
	Total Cost = INR 1177.134451 Lakhs	Total Benefit = INR 220596.86928 Lakhs

Cost Benefit Ratio: -2205596.86928/1177.134451 = >1 Therefore, project will have multifold benefit on the economy.

Date: 12.12.2022 Place: Amritsar

(Sunil Yadav)
Project Director
NHAI, PIU-Amritsar







































