

Full Title of Project: - Construction of Small Hydel Project Kandha (0.40 MW).

File No :-FP/HP/HYD/148892/2021

BILL FOR NPV

Calculation of Net Present Value of Forest Land to be diverted under FCA, 1980 for construction of **Small Hydel Project Kandha (0.40 MW)** under Karsog Forest Division District Mandi, Himachal Pradesh.


Area to be diverted = 0.74 ha.

Rate of vegetation = Open forest.

Rate applicable class Vth of NPV = 10,05,210/- per hac.

NPV chargeable for the development
Small Hydel Project (upto 25 MW) @ 50% of the NPV applicable

NPV chargeable for 0.74 hac. = $10,05,210 \times 0.74/2 = 3,71,928/-$ only.


**Divisional Forest Officer,
Karsog Forest Division, H.P.**

CHECK LIST- 15

Full Title of Project: - Construction of Small Hydel Project Kandha (0.40 MW).

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SITE INSPECTION REPORT OF DFO KARSOG

(For the Forest land to be diverted under FCA)

A proposal has been received by this office from Shri Mohan Singh Negi Managing Director Bhagwati Hydro Power Project (OPC) Pvt. Ltd. Village Mumail, PO & Tehsil Karsog, Distt. Mandi, HP of forest land for non-forestry purpose under FCA, 1980. The project envisages the use of forest land for construction of Small Hydel Project Kandha (0.40 MW). The site inspection of the land involved in the proposal has been done by me on dated 18.02.2022.

1. On inspection of the site, it was found that the land required by the user agency is forest measuring 0.74 hac.
 2. The requirement of forest land as proposed by the user agency in Col. 2 of part-I is unavoidable and is barest minimum required for the project.
 3. Whether any rare/ endangered/ unique species of flora and fauna exist in the area:- No
 4. Whether any protected archaeological/ heritage site/ defence establishment or any other important movement is located in the area:- No
- 5(a) The user agency has not violated the provisions of Forest (Conservation) Act, 1980 :- Yes**
- (a) It has been found that the user agency has violated the Forest (conservation) Act, 1980 provisions. A detailed report as per para 1.9 of Chapter 1. Part C of Hand book of Forest (Conservation) Act, 1980 is attached:- No


SPECIFIC RECOMMENDATION FOR ACCEPTANCE OR OTHERWISE OF THE PROPOSAL

Since the land is required to form a green energy i.e. Construction of Small Hydel Project, so proposal is accepted and recommended for approval please.

The permission of diversion of forest land for construction of Small Hydel Project Kandha (0.40 MW) may be granted.

Dated:- 22.02.2022

Place: Karsog.


(Krishan Bhag) HPFS
Division Forest Officer
Karsog Forest Division
Karsog (H.P.) - 171304

CHECK LIST NO- 16

Full Title of Project: - Construction of Small Hydel Project Kandha (0.40 MW).

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LOCATION MAP

Location Map of Non Forest / Degraded Forest land identified for Compensatory Afforestation in 1.48 ha in lieu of proposal for diversion of 0.74 hac. of forest land for construction of Small Hydel Project Kandha (0.40 MW) under Pangna Forest Range, Karsog Forest Division as under:

Type of land : Degraded Forest Land Name of Muhal : Kot-Kapadyas

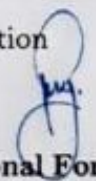
Tehsil : Karsog District : Mandi

Forest Range : Pangna Forest Division : Karsog

Block No./ Compartment/No./ Survey No. : H43F3

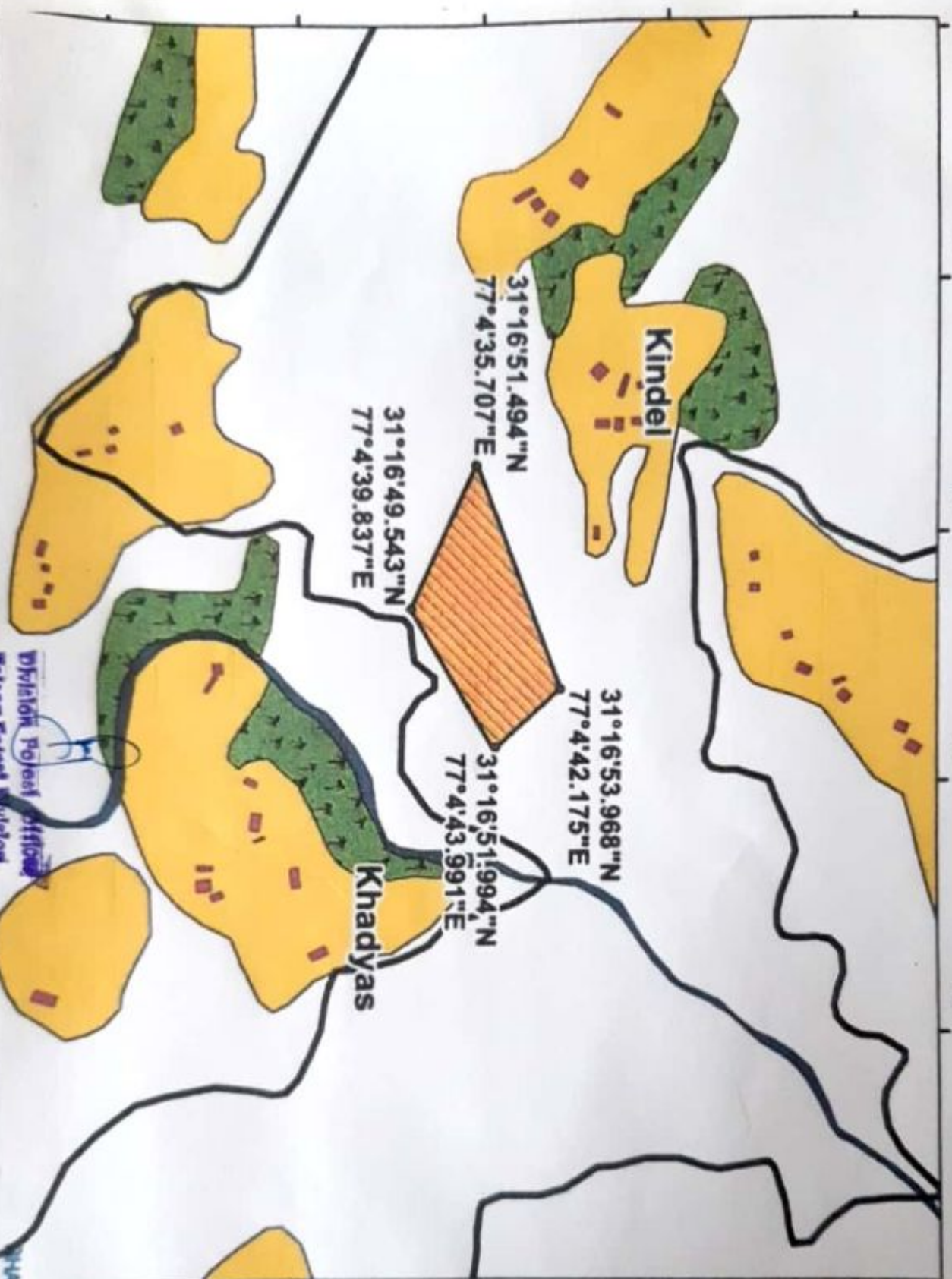
Area proposed for planting :: 1.48 ha. .

Map attached of the area to be taken for compensatory afforestation


**Divisional Forest Officer,
Karsog Forest Division,HP.**

ital Landuse Map for Proposed C A Site 1.48 ha. of Kandha SHP (0.40 MW) of Bhagwati Hydro Power Project (OPC) Pvt.Ltd. C/O Mohan Singh Negi Village Munnale P.O & Tehsil Karsog Distt.Mandi (H.P.)

77.073094 77.075123 77.077152 77.079181 77.081210 D-76 Kapadhyas

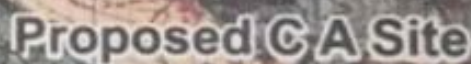


Legend

-  C A Site
-  Existing Road
-  Builtup
-  Forest Area
-  Open
-  Private Area
-  Water Body

MANAGING DIRECTOR
BHAGWATI HYDRO POWER PROJECT
(OPC) PRIVATE LIMITED
H.O. Village Munnale P.O. & Teh. Karsog
Distt. Mandi (H.P.) - 175011

D-76 Kapadyas



Proposed C A Site



Scale 1:50000
Topo Sheet:- 5

53E/\$

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"SCHEME FOR COMPENSATORY AFFORESTATION"

Detailed scheme for Compensatory Afforestation to be carried-out in lieu of 0.74 ha. forest area to be diverted for construction of Small Hydel Project Kandha (0.40MW), in Tehsil Karsog, Distt. Mandi, HP in jurisdiction of Karsog Forest Division in Distt. Mandi HP is given as under:-

1. Detail of degraded forest land/ non-forest land:-

Distt.:- Mandi

Village:-Kapadyas

Tehsil Karsog,

Distt. Mandi, HP

Name of Forest Division:-Karsog Forest Division

Name of Range: Pangna

Type of forest land proposed for CA:- Degraded forest land

Name of planting area:- D-76 Kapadyas (Patch No. 6)

Block/ Compartment/ Survey No.:- H43F3

Area proposed for CA:- 1.48 ha.

2. Description of area

I) Whether the site selected for compensatory Afforestation is a land bank or not: **No, (Degraded forest land).**

II) If CA site is other than the land bank, reasons be given: **Yes (Degraded forest land)**

III) In case of non-forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary: **NA**

IV) Soil type: **Sandy loam**

V) Topography:

(a) Hilly/undulation/Plain: **Hilly**

(b) Slope : **Steep/ Medium/ Gentle : Medium to Gentle**

VI) Whether the area is bearing any root stock of vegetation: No tree species exist in the area expect for some bushes stuff.

3. Plantation Model:-

Copy of the approved Compensatory Afforestation Scheme/ Model showing component-wise physical and financial break-up to be enclosed.

4. Schedule of Plantation Programme:-


GENERAL ABSTRACT OF COMPENSATORY AFFORESTATION AN AREA OF 1.48 HA. FOREST LAND IN FAVOUR OF SHRI MOHAN SINGH NEGI MANAGING DIRECTOR BHAGWATI HYDRO POWER PROJECT (OPC) PVT. LTD. VILLAGE MUMAIL PO & TEHSIL KARSOG DISTT. MANDI HP IN LIEU OF DIVERSION OF 0.74 HA. FOREST LAND FOR CONSTRUCTION OF SMALL HYDEL PROJECT AT KANDHA, WITHIN THE JURISDEICTION OF KARSOG FOREST DIVISION, DISTRICT MANDI, H.P.							
C A BILL							
Sr. No.	Particulars	Area in ha.	Year	Rate per hac.	Cost escalation	Rate after applying cost of escalation	Amount
1	New plantation over in area of 1.48 ha. in D-76 Kapadyas forest (Patch No. 6)	1.48	2023-24	109000	10%	119900	177452
2	1st year maintenance	1.48	2024-25	16700	20%	20040	29659
3	2nd year maintenance	1.48	2025-26	11200	30%	14560	21549
4	3rd year maintenance	1.48	2026-27	5700	40%	7980	11810
5	4th year maintenance	1.48	2027-28	5700	50%	8550	12654
6	5th year maintenance	1.48	2028-29	5700	60%	9120	13498
7	6th year maintenance	1.48	2029-30	5700	70%	9690	14341
8	7th year maintenance	1.48	2030-31	5700	80%	10260	15185
9	8th year maintenance	1.48	2031-32	5700	90%	10830	16028
10	9th year maintenance	1.48	2032-33	5700	100%	11400	16872
11	10th year maintenance	1.48	2033-34	5700	110%	11970	17716
Total initial planting and 10 year maintenance:-							346764
Added Departmental Charges @17.5%							60684
Contingency Charges @5%							17338
Grand Total							424786

5. Technical Details: -

- i) **General Details:-** Plantation will be done through Pit method as per plantation norms.
- ii) **Spa cement:-** Pits size 90x90x90 cm will be used for planting of 60% naked root stock and 40% of P/Bags stock.
- iii) **Species:-** Based on locality factor and demand of people.
- iv) **Plantation Method:-** Pit planting method.
- v) **Soil and Moisture Conservation Works:-** Contour trenching will be done over the entire area to conserve the available moisture during rainy season so that moisture regime in the area is improved. Minor Soil conservation works like gully plugging, check walls will be done wherever required.
- vi) **Protection (Fencing, Watch man, People's Participation etc.): -** B/wire fencing using concrete fence posts.
- vii) **Proposed Monitoring Mechanism:-** The plantation will be monitored as per existing monitoring mechanism in the forest department. The plantation will also be monitored by GOI representatives as per instructions. The plantation site will be approachable from NH – 21 Shimla- Karsog road from Mahota.
- viii) **Any other information:-** Nil

Date: 22.02.2022

Place: Karsog


(Krishan Bhag) HPFS
Division Forest Officer
Karsog Forest Division
Karsog (H.P.) - 171304

**SITE SPECIFIC COMPENSATORY AFFORESTATION SCHEME FOR THE DIVERSION OF
FOREST LAND 0.74 HAC. FOREST LAND FOR THE CONSTRUCTION OF SMALL HYDEL
PROJECT (0.40 MW) UNDER KARSOG FOREST DIVISION DISTRICT MANDI HIMACHAL
PRADESH COST ANALYSIS OF PLANTATION OVER AN AREA OF 1 HACTORS OF KARSOG
FOREST DIVISION (Per ha. cost norms, 1100 Nos. plants**

I	Name of Project	Construction of Small Hydel Project Kandha (0.40 MW)				
II	Name of User Agency	Bhagwati Hydro Power Project (OPC) Pvt. Ltd. village Mumail PO & Tehsil Karsog, Distt. Mandi, HP.				
III	Location for Compensatory Afforestation	List attached				
IV	Type of fencing	Barbad Wire with RCC Fence				
Sr No	Particulars of work	Total KM	Quantity	Unit	Rate in Rs.	Amount
FENCING						
1	Survey and demarcation of plantation area		1	Hac.	202	202.00
2	Preparation/ purchase of RCC Fence post (including GST @18%)		50	Nos.	358	17900
3	Carriage of RCC fence post up to 165cm long over distance 2 Km uphill/ downhill	2	50	Nos.	67	6700
4	Preparation of digging of holes 20x30x50 cm size		50	Nos.	18.12	906.0
5	Fixing of RCC fence posts including strutting		50	Nos.	14.32	716
6	Carriage of Barbed wire over distance 2 Km	2	0.75	Qtls.	147.25	220.9
7	Stretching and fixing Barbed Wire in 4 stands		600	Rmt.	9.6	5760
8	Interlacing of thorny bushes along the fence		150	Rmt.	8.18	1227.00
9	Cost of Barbed Wire (including GST)		0.75	Qtls.	6509	4882
Total-A/Survey, Demarcation & Fencing						38513.63
Or Say						38500

PLANTING

1	Bush cutting in strips (3mx3m)		1	Hac.	2385.6	2385.60
2	Digging of pits 45x45x45 cm		1100	Nos.	19.08	20988
3	Filling of pits 45x45xx45 cm		1100	Nos.	5.44	5984
4	Carriage of plants in P/bags over distance 2 Km uphill/ downhill	2	1100	Nos.	3.8	8360
5	Planting of entire plant raised in P/Bags		1100	Nos.	4.36	4796
6	Construction of inspection path 60 cm width.		100	Rmt.	22	2200.00
7	Cost of sign board, carriage & fixing etc.		L/S		450	450
8	Nursery cost of plants		1100	Nos.	23	25300
Total-B/Planting:-						70464

					Or Say	70500
					Grand Total(A+B)	109000
1st YEAR MAINTENANCE (30% BEATING UP)						
1	Re-digging of pits 45x45x45 cm		330	Nos.	9.54	3148.2
2	Filling of pits 45x45x45 cm		330	Nos.	5.44	1795.2
3	Planting of P. bag plants		330	Nos.	4.36	1438.8
4	Carriage P. Bag plants distance 2 Km uphill/ downhill	2	330	Nos.	3.8	2508
5	Repair of fencing		60	Rmt.	3.6	216
6	Nursery cost of plants		330	Nos.	23	7590
Total/1st Year Maintenance:						16696.2
					Or Say	16700
2nd YEAR MAINTENANCE (20% BEATING UP)						
1	Re-digging of pits 45x45x45 cm		220	Nos.	9.54	2098.8
2	Filling of pits 45x45x45 cm		220	Nos.	5.44	1196.8
3	Planting of P. bag plants		220	Nos.	4.36	959.2
4	Carriage P. Bag plants distance 2 Km uphill	2	220	Nos.	3.8	1672
5	Repair of fencing		60	Rmt.	3.6	216
6	Nursery cost of plants		220	Nos.	23	5060
Total/2nd Year Maintenance:						11203
					Or Say	11200
3rd YEAR to 10th YEAR MAINTENANCE (10% BEATING UP)						
1	Re-digging of pits 45x45x45 cm		110	Nos.	9.54	1049.4
2	Filling of pits 45x45x45 cm		110	Nos.	5.44	598.4
3	Planting of P. bag plants		110	Nos.	4.36	479.6
4	Carriage P. Bag plants distance 2 Km uphill	2	110	Nos.	3.8	836
5	Repair of fencing		60	Rmt.	3.6	216
6	Nursery cost of plants		110	Nos.	23	2530
Total						5709
					Or Say	5700

Divisional Forest Officer,
Karsog Forest Division, HP.

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Specific Recommendation of DFO

Since the land is required form of green energy i.e. Small Hydel Project and will be beneficial to Muhal Pichla Chera/327 and Kandha/328. So proposal for construction of Small Hydel Project Kandha 0.74 ha. forest land is recommended for approval please. The permission of diversion of forest land for construction of Small Hydel Project Kandha (0.40MW) may be granted.


Dated :22.02.2022


Place: Karsog.


**(Krishan Bhag, HPFS)
Divisional Forest Officer,
Karsog Forest Division.**

NO TREE CERTIFICATE

It is certified that there are no tree falls within the proposed alignment of project components for the construction of the SHP Bhagwati Hydro Power Project (OPC) Pvt. Ltd. 0.40MW project in forest Beat **Kamand (328) or Mahandi (327)** Forest Karsog within the jurisdiction of forest Division Karsog Distt. Mandi (H.P.)


Division Forest Officer
Karsog Forest Division
Karsog (H.P.) - 171304


Range Forest Officer
Karsog Forest Range
Distt. Mandi (H.P.)

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PART-II

(To be filled by the concerned deputy conservator of Forest)

7	Location of the project/scheme:	
	i. State/ Union Territory	<i>Himachal Pradesh.</i>
	ii. District	<i>Mandi</i>
	iii. Forest Division	<i>Karsog</i>
	iv. Area of forest land proposed for diversion (in hac)	<i>0.74ha.</i>
	v. Legal status of forest	<i>Protected Forest</i>
	vi. Density of vegetation	<i>0</i>
	vii. Species -wise (scientific names) and diameter class.	<i>List attached at page-65</i>
	viii. Brief on vulnerability of the forest area to erosion.	The user agency has been given an undertaking that the bioengineering measure will be taken and R/walls & B/walls will be const. for avoiding for landslides.
	ix. Approximate distance of proposed site for diversion from boundary of forest.	<i>0</i>
	x. Whether forms part of National Park, wildlife Sanctuary, biosphere reserve, tiger reserve, elephant corridor, etc. (if so, the details of the area, and comments of the Chief Wildlife Warden to be annexed)	<i>No</i>
	xi. Whether any rare/ endangered/ unique Species of flora and fauna found in the area- if so, the details thereof.	<i>No</i>
	xii. Whether any protected archaeological/ heritage site/ defense establishment or any other important monument is located in the area. If so. Details thereof with NOC from competent authority.	<i>No.</i>
8.	Whether the requirement of forest land as proposed by the user agency in col. 2 of part -I is unavoidable and barest minimum for the project, recommended area item- wise with details of alternative examined.	<i>The requirement of forest land as proposed by the user agency in col.2 of part -I is unavoidable and minimum for the construction proposed project.</i>
9.	Whether any work in violation of various Forest Acts has been carried out (Yes/No). If yes details of the same including period of work done, action taken against the erring officials. Whether work done in violation is still in progress.	<i>No</i>
10.	Detail of compensatory afforestation scheme:	
	i. Details of non-forest area/ degraded forest area identified for compensatory afforestation, its distance from adjoining forest, number of patches, size of each patch.	<i>Yes, degraded forest land has been proposed for CA and attached at Page No. 67</i>
	ii. Map showing non-forest/ degraded forest area identified for compensatory afforestation and	<i>Yes, attached at page No. 68-69</i>

	adjoining forest boundary.	
	iii. Detailed compensatory afforestation scheme including species to be planted, implementing agency, time schedule, cost structure, etc.	<i>Attached at page No. 70-74</i>
	iv. Total Financial outlay for compensatory afforestation and Penal Compensatory scheme.	<i>Rs. 4,24,786/-</i>
	v. Certificate from competent authority regarding suitability of area identified for compensatory afforestation and from management point of view.(to be signed by the concerned italics Deputy Conservator of Forests.	<i>Attached at page No. 75</i>
11.	Site inspection report of the DCF(to be enclosed) especially highlighting facts asked in col . 7(xi,xii), 8 and 9 above.	<i>Attached at page No. 66</i>
12.	Division /District profile:	
	i. Geographical area of the Division.	<i>66354 ha.</i>
	ii. Forest area of the Division	<i>48407 ha.</i>
	iii. Total forest area diverted since 1980 with number of cases.	<i>202.6006ha. No. of approved cases -32.</i>
	iv. Total compensatory afforestation stipulated in the District / Division since 1980 on :	
	a. Forest land including penal compensatory afforestation,	<i>481.547ha. up to 31-12-2021</i>
	b. Non Forest Land.	<i>Nil</i>
	v. Progress of the compensatory afforestation as on (date) on	
	a. Forest Land	<i>297.728ha. CA has been done in this Division up 31.12.2021.</i>
	b. Non Forest Land	<i>Nil</i>
13.	Specific recommendations of the DCF for acceptance or otherwise of the proposal with reason.	<i>Since the land is required to form a green energy i.e. Hydel Project, so proposal is recommended.</i>

Date: - 06.04.2022

Place: - Karsog.

(Krishan Bhag, HPFS.)
Divisional Forest Officer,
Karsog Forest Division, H.P.


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Full Title of Project: - Construction of Small Hydel Project Kandha (0.40 MW).

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LAND SUITABILITY CERTIFICATE BY DFO CONCERNED

This is to certify that the degraded forest land proposed in D-76 Kapadyas (Patch No. 6) survey No. H43F3 of Alsindi beat, Tattapani Block, Pangna Forest Range, Karsog Forest Division, Tehsil Karsog, District Mandi, H.P. for Compensatory Afforestation in lieu of diversion of 0.74 ha. for construction of Small Hydel Project Kandha (0.40 MW) is suitable for undertaking plantation from the management point of view and is free from all sorts of encumbrances and encroachments. It is also certified that the area selected for CA is contiguous to forest area and in compact block.


(Krishan Bhag HPFS)
Divisional Forest Officer,
Karsog Forest Division, HP. 02