

**OFFICE OF THE DIVISIONAL FOREST OFFICER, KULLU FOREST DIVISION
GOVERNMENT OF HIMACHAL PRADESH**

COMPENSATORY AFFORESTATION BILL

Reference: Observations of the 74th REC dated 31.01.2025

Project Name: Construction of Barod SHEP (1.0 MW)

Location of CA Site: Kharihar (MG- III)

Parameter	Details
Latitude & Longitude	32°5'11.5778"N 77°7'8.8244"E, 32°5'12.0632"N 77°7'10.4256"E, 32°5'10.715"N 77°7'7.6616"E, 32°5'10.8991"N 77°7'11.0044"E
Elevation	1791 meters above sea level
Aspect	North-East facing
Soil Depth	250 cm
Soil Type	Sandy/Loamy/Clayey, etc.
Area Dimensions	NA
Existing Vegetation	Bushes & Saplings (e.g. Chil, Kail etc.)
Land Status	Forest land

Soil & Moisture Conservation Measures

Measure	Details
Contour Trenches	To prevent soil erosion and enhance water retention
Check Dams	Small stone or brushwood structures to reduce runoff velocity
Mulching	Use of organic matter to retain soil moisture
Plantation Pits	Properly dug with a mix of soil and organic manure for better plant survival
Water Harvesting Structures	Small pond for rainwater conservation

Plantation Plan

Parameter	Details
Total Area for Afforestation	1.4 hectare
Number of Saplings to be Planted	1540
Plantation Density	1100/ plants per hectare
Species Selected	Cedrus Deodara, Pinus Wallichiana, Quercus Semicarpifolia, Alnus Nitida etc.
Justification for Species Selection	Species chosen based on ecological suitability, survival rate, and biodiversity benefits
Nursery Source	Departmental
Maintenance Plan	Regular watering, protection measures, and survival assessment

Photographic Evidence of Site Inspection

Type	Details
Pre-Afforestation Condition	(Photographs attached)
DFO Site Inspection Photographs	(Attached)
Existing Soil & Moisture Conservation Structures	Nil

Budget & Timeline

Component	Cost (₹)
Site Preparation	44906
Plantation	390353

Component	Cost (₹)
Maintenance	218680
Soil Conservation Measures	217000
Total Estimated Cost	870939
Timeline	Details
Start Date – End Date	2026-27 to 2036-37
Monitoring Plan	Periodic inspections and reporting at 6-month intervals

Approval & Recommendations

The revised CA Scheme has been prepared in accordance with the REC recommendations and is submitted for approval.



**Divisional Forest Officer
Kullu, Forest Division Kullu.**

Date: 27.11.2025

Attachments:

1. Site Inspection Photographs
2. Detailed Maps with Coordinates
3. Budget Breakup Sheet

This document ensures compliance with the REC observations and provides a comprehensive framework for successful compensatory afforestation implementation.

“SCHEME FOR COMPENSATORY AFFORESTATION”
(Norms-2024-25)

In lieu of diversion of 0.6995 hectare of forest land in favour of Dani Maha Mai Hydro Project for the construction of Barod SHEP (1.0 MW) within the jurisdiction of Kullu Forest Division.

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

Area: **Kharihar** District:- **Kullu** Tehsil:- **Kullu**
Division: **Kullu** Range:- **Patlikuhal** Block/Beat:- **Fozal/Mandalgarh**
Compartment/Survey No: **MG-III/ 52 H/4** Area to be afforested:- **1.4 ha.**

2. Description of area:-

- i. Whether the site selected for compensatory afforestation is a land bank or not:- **Yes**
- ii. If the CA site is other than the land bank, reasons be given:- **No**
- iii. In case of non forest area identified in from-A, then what is the distance of CA site from the adjoining forest boundary :- **forest area**
- iv. Soil type:- **Sandy-loamy/apparently deep**
- v. Topography :- a) **Hilly**
b) **Medium**
- vi. Whether the area is bearing any root stock of vegetation:- **Yes**

Plantation Model:- **Departmental**

Copy of the approved compensatory afforestation scheme/ model showing component wise physical and financial break up is enclosed.

Schedule of Plantation programme:-

3. Detail of year wise break up of requirement of funds is as under :-

Compensatory Afforestation Bill							
S. N.	Particulars	Area in ha.	Year	Rate per Hectare	Cost Escalation	Rate After applying cost escalation	Total Amount (Rs)
1.	New Plantation	1.4	2026-27	149600	10%	164560	230384
2.	1 st Year Maintenance	1.4	2027-28	22700	20%	27240	38136
3.	2 nd Year Maintenance	1.4	2028-29	15200	30%	19760	27664
4.	3 rd Year Maintenance	1.4	2029-30	7800	40%	10920	15288
5.	4 th Year Maintenance	1.4	2030-31	7800	50%	11700	16380
6.	5 th Year Maintenance	1.4	2031-32	7800	60%	12480	17472
7.	6 th Year Maintenance	1.4	2032-33	7800	70%	13260	18564

8.	7 th Year Maintenance	1.4	2033-34	7800	80%	14040	19656
9.	8 th Year Maintenance	1.4	2034-35	7800	90%	14820	20748
10.	9 th Year Maintenance	1.4	2035-36	7800	100%	15600	21840
11.	10 th Year Maintenance	1.4	2036-37	7800	110%	16380	22932
Cost of new plantation with (1100x1.4 plants) 10 Year Maintenance							449064
10% increase for CA rates							44906
Total Cost of New Plantation							493970
Cost of Soil Moisture Conservation Works to be carried out for CA area							
	Use of Fertilizers & organic matter for retaining moisture	300 Kg	40				12000
	Contour Trench Works	150 Nos.	100				15000
	Dry Stone Masonary Check Dams	2 Nos	30000				60000
	Crate Wire Check Dams	1 Nos.	30000				30000
	Rain Water Harvesting Structure for watering of plants	1	100000				100000
	Total						217000
Cost of Compensatory Afforestation with SMC Works							710970
Departmental charges @ 17.5%							124420
Contingency Charges @ 5%							35549
Total cost of CA							870939
Rupees Eight Lakh Seventy Thousand Nine Hundred and Thirty Nine Only							

4. Technical details:-

Technical details of compensatory afforestation scheme are as follows:-

- General Details :-** Indigenous Conifer/ B/L species will be planted.
- Spacing:** 3 mtr x 3 mtr.
- Species:** Cedrus Deodara, pinus wallichiana, salix Spp. etc.
- Plantation Method:** Artificial plantation with RCC Fencing.
- Soil Moisture Conservation Works:-** Trench Works, Dry Stone Check Dams, Crate Wire Check Dams & Rain Water Harvesting Structure will be constructed.
- Protection (Fencing , Watchman, People's Participation etc.)**
- Proposed Monitoring Mechanism :-** Department.
- Any other information :-** Nil

**Divisional Forest Officer,
Kullu Forest Division, Kullu.**

COMPENSATORY AFFORESTATION BILL

(Norms-2024-25)

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S.No.	Particulars of work	Unit	Qty	Mandays involved	Wage rate @ 400 for Non-Tribal areas
A	SURVEY, DEMARCATION & FENCING				
1.	Survey & demarcation of plantation area	Ha.	1	0.67	268
2.	Preparation/purchase of RCC fence post @ 490 per post (including GST)	No	50	0	24500
3.	Carriage of RCC fence post upto 165 cm long over a distance of 2 KM uphill/downhill	Km/ no	50	22.33	8932
4.	Preparation /digging of holes of 20x30x50 cm	No.	50	3.02	1208
5.	Fixing of RCC fence post i/c strutting	No.	50	2.39	956
6.	Carriage of B/wire over distance of 2 Kms uphill/downhill	Km/ qtl	0.75	0.74	296
7.	Stretching & fixing of B/wire in 4 strands	Rmt.	600	19.20	7680
8.	Interlacing of thorny bushes along the fence	Rmt.	150	4.09	1636
9.	Cost of B/wire	Qtl.	0.85	0	5534
					51010
	Total-A (Survey, Demarcation & Fencing)			Or say	51000
B	PLANTING:-				
1.	Bush cutting in strips (3m x 3m)	Ha.	1	7.95	3180
2.	Digging of pits 45x45x45 cm	No.	1100	69.96	27984
3.	Filing of Pits 45x45x45 cm	No.	1100	19.95	7980
4.	Carriage of plants in P. bags (uphill/downhill 2 Km)	Km/ no.	1100	27.87	11148
5.	Planting of plants raised in P/bags	No.	1100	15.99	6396
6.	Construction of inspection path	Rmt.	100	7.33	2932
7.	Cost of sign board, carriage & fixing	No.	2	0	6000
8.	Cost of Nursery Plants @ Rs.30	No.	1100	0	33000
					98620
	Total-B (Planting)			Or say	98600
	Total (A+B)				
	New Plantation				149600

1. **Schedule for Plantation Programme.**

Detail of year wise break up of requirement of funds is as under :-

S.N.	Particulars	Unit	Qty.	Mandays involved	Wage Rate @ Rs.400 for NT Areas
1ST YEAR MAINTENANCE (30% Beating up)					
1	Re-digging of pits 45x45x45cm	No.	330	10.49	4196
2	Filling of pits 45x45x45cm	No.	330	5.98	2392
3	Planting of plants raised in P/bags	No.	330	7.80	2574
4	Carriage of plants in P/bags	Km/No	330	8.36	3344
5	Repair of fencing	Rmt	60	0.72	288
6	Cost of Nr/plants	No.	330	0	9900
					22694
	Total			Or say	22700
2ND YEAR MAINTENANCE (20% Beating Up)					
1	Re-digging of pits 45x45x45cm	No.	220	7	2800
2	Filling of pits 45x45x45cm	No.	220	3.99	1596
3	Planting of plants raised in P/bags	No.	220	7.80	1716
4	Carriage of plants in P/bags	Km/No	220	5.57	2228
5	Repair of fencing	Rmt	60	0.72	288
6	Cost of Nr/plants	No.	220	0	6600
					15228
	Total			Or say	15200
3RD YEAR to 10th Year MAINTENANCE (10% Beating Up)					
1	Re-digging of pits 45x45x45cm	No.	110	3.50	1400
2	Filling of pits 45x45x45cm	No.	110	1.99	796
3	Planting of plants raised in P/bags	No.	110	7.80	858
4	Carriage of plants in P/bags	Km/No	110	2.79	1116
5	Repair of fencing	Rmt	60	0.72	288
6	Cost of Nr/plants	No.	110	0	3300
					7758
	Total			Or say	7800

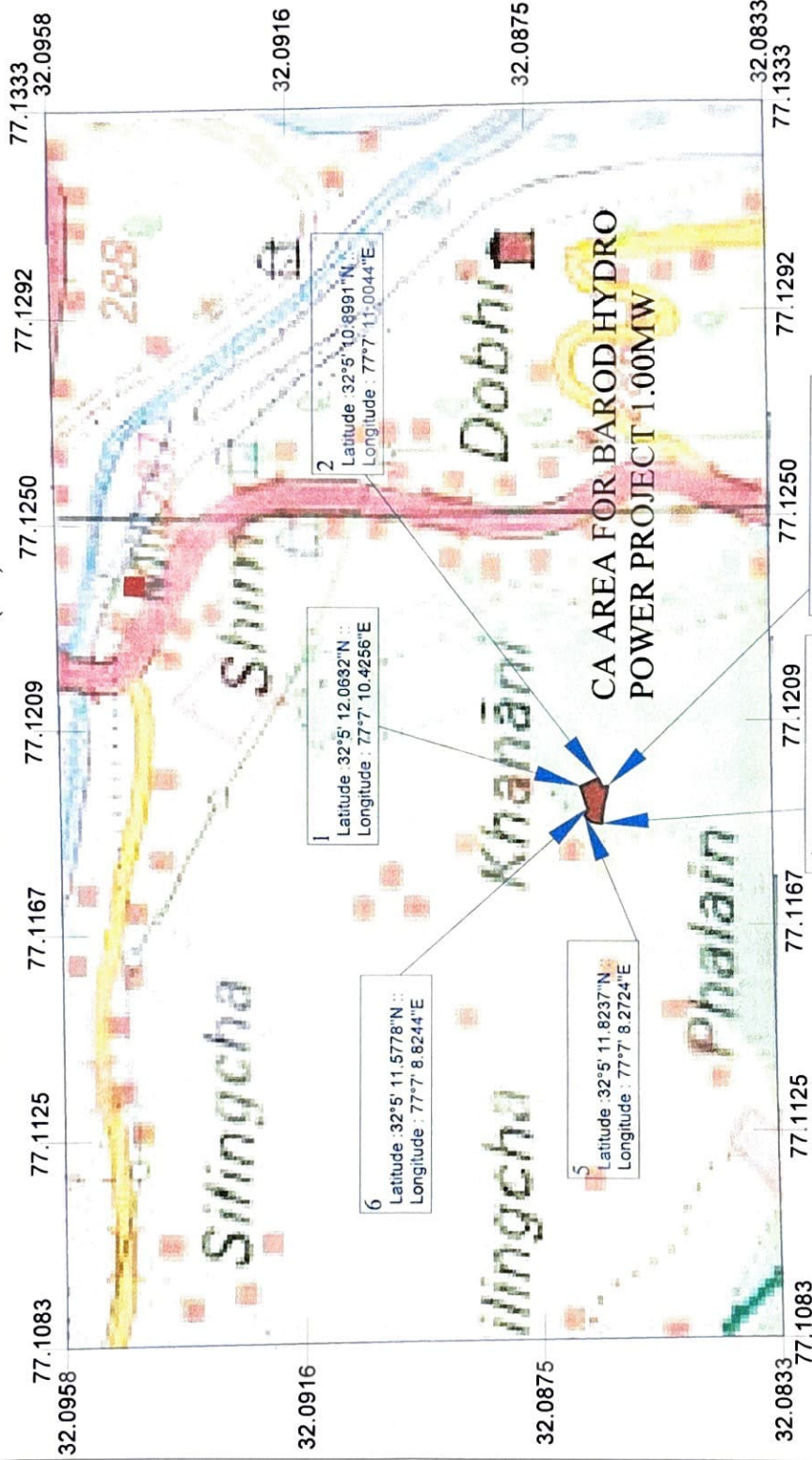


**Divisional Forest Officer,
Kullu Forest Division, Kullu**

DIGITAL / MAP OF CA AREA (1.40 HECTARE) FOREST BLOCK FOZAL, FOREST RENGE PATLIKULE, FOREST BEET-MANDALGARH FOR BAROD HYDRO POWER PROJECT 1.00MW.

M/S DANI MAHA MAI HYDRO PROJECT

SITE AT NEAR NH-3 KULLU-MANALI ROAD (H.P.)



Component Index of Colour Sign
CA AREA FOR BAROD HYDRO POWER PROJECT 1.00MW
KHARIHAR



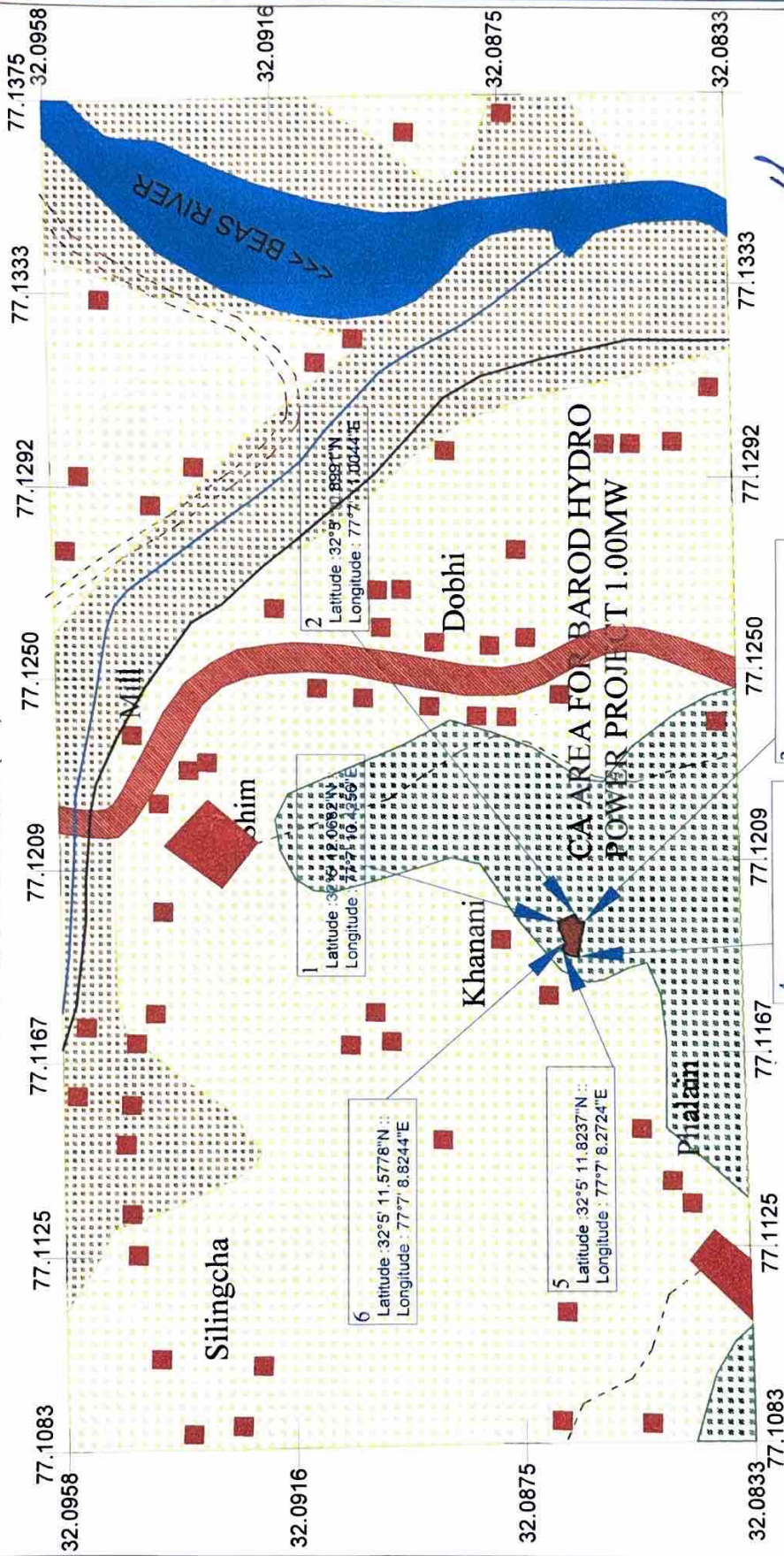
- Forest Land
- Grass, Scrub
- Waste Land
- Private Land
- Nallah/ River
- Footpath/Road

2cm to 1km
0 1km
SOI Toposheet Scale
1:50000 Sheet No.52
H/04(I43X4)

Divisional Forest Officer
Kullu Forest Division Kullu

Chha
Dani Maha Mai Hydro Project
ALOGROUND, MANALI
DISTT KULLU (H.P.)

**LAND USE MAP OF CA AREA (143 HECTARE) FOREST BLOCK FOZAL, FOREST RENGE
PATLIKULE, FOREST BEET-MANDALGARH FOR BAROD HYDRO POWER PROJECT 1.00MW.
M/S DANI MAHA MAI HYDRO PROJECT
SITE AT NEAR NH-3 KULLU-MANALI ROAD (H.P.).**



Component
CA AREA FOR BAROD HYDRO POWER PROJECT 1.00MW
KHARHAR

Index of Colour Sign

Forest Land

Grass, Scrub

Waste Land

Private Land

Nallah

Footpath/Road

2cm to 1km



SOI Toposheet Scale
1:50000 Sheet No.52
H/04(143X4)

**Divisional Forest Officer
Kullu Forest Division Kullu**

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