

Dated Mandi, the/ 06 DEC 2022

From: CCF(T) Mandi.

To: Nodal Officer-cum-APCCF (FCA),
O/o Pr.CCF(HoFF) H.P Shimla.

Subject: Diversion of 4.9069 ha. of forest land in favour of M/s Cliff Finvest Private Limited 1-41 DFL Industrial area Phase-I Faridabad, Haryana for the construction of Thaltukhod stage-1 SHEP (5.00 MW), within the jurisdiction of Jogindernagar Forest Division, Distt. Mandi, HP. (Online No. FP/HP/Others/42734/2019)

Memorandum:

Kindly refer to observations raised by GoI Integrated Regional Office MoEF & CC Shimla vide letter No. 8B/HP/01/15/2021/FC/372 dated 11.07.2022 on the subject cited above.

The pointwise reply of observations as raised by Govt. of India Ministry of Environment Forest and Climate Change Regional Office Shimla vide his letter under reference is given as under:-

1. The detailed Muck Management Plan showing muck dumping site-wise area, dimension, capacity, muck to be dumped have been prepared and uploaded online Part-I in additional information by user agency The same has been enclosed herewith in duplicate as **Annexure-"A-I"**.
2. The reclamation Plan has been uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-II"**.
3. The component wise break-up has been marked/ mentioned in KML file, Layout Plan, Geo-referenced map, Toposheet and uploaded online Part-I in additional information. The same have been enclosed herewith in duplicate as **Annexure-"A-III"**.
4. The component wise-area dimension, Khasra numbers for proposed in forest and non-forest land has been uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-IV"**.
5. The compensatory afforestation has been carried out in DPF Bhumchayan Khasra No. 976, 977, 963 and 2/1. The copies of the Nakal Jamavandi of the above Khasra numbers are enclosed herewith in duplicate as **Annexure "A-V"**.
6. The user agency has intimated that the matter is still under consideration in the office of DFO (Wild Life) Kullu and also intimated that will be submitted as and when the report is received from the higher office.
7. The component of proposed project has been marked in toposheet and uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-VI"**.
8. The Geo-referenced map with all proposed components in distinct colours has been uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-VII"**.
9. The Geo-referenced map and KML file showing boundaries of nearest PA and ESZ, location and distance of HEP,s within 10 Km of nearest PA,s and its notified ESZ has been uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-VIII"**.
10. The KML file and list of approved/ existing/ proposed project in the landscape showing evacuation/ transmission plan, distance from nearest PAs and ESZ alongwith their impacts has been uploaded online Part-I in additional information by user agency and enclosed herewith in duplicate as **Annexure-"A-IX"**.

पावती सं 22708
13/12/22

APCCF (FCA)
13/12/22

Retravel
back in
review of
dated
14/10/22

11. In this connection, it is submitted that the trees coming in diversion area having VDF category will not be damaged because that whole area is tunnel and the proposed water conductor system will pass through it. Therefore,, there will not be any damage to the forest area above.

12. The DPF Bhumchayan has been proposed for CA area. The KML file, Geo-referenced map, Toposheet, Land suitability certificate and CA scheme have been uploaded online Part-II and enclosed herewith in duplicate as **Annexure-A-X**".

13. The proposed diversion area has been corrected in the KML file and uploaded online Part-I in additional information by user agency.

It is, therefore, requested that necessary Stage-I approval of the proposal under FCA-1980 may kindly be obtained and conveyed to this office please.

Encl: As above.



Chief Conservator of Forests,
Mandi Forests Circle, H.P.

DETAIL OF MUCK MANAGEMENT PLAN

SR NO	Name of the component where muck /debris is to be produced	Total quantity of muck/debris to be produced (In Cum)	Factor of increase in volume @40% for dumping. (In Cum)	Total quantity of muck /debris produced i/c factor of increase. (In Cum)	Qty of muck/debris to be utilised (55 %). (In Cum)	Qty of muck debris to be dumped (In Cum)	Name of dumping place.	slope of dumping place.	location of dumping place/village /police station and nearby road.	Distance of dumping place from nearby river/nala with name of river (In km)	Area of dumping place with length & width(in mtr)			Area of dumping place as per plan & section (in hectare)	expected / volume capacity of muck dumping sites (in cum)
											L	B	H		
1	Trench weir	1950	780	2730	1502	1229	Muck Dumping at Weir site.	5- degree to 17 - degree	Gramang/ vill Gramang/ P.S Drang & Thaltukhod to Gramang link road.	2 mtr from Thaltukhod nala.	80	19.48	max- 6, min- 2	0.1600	1589
	Intake pipe & shingle excluder pipe	1270	508	1778	978	800									
	Feeder pipe	540	216	756	416	340									
	Desilting basin & collection pool	4390	1756	6146	3380	2766									
	Connecting pipe	1197	479	1676	922	754									
2	Head race tunnel	22605	9042	31647	17406	14241	Muck Dumping at Adit.	15 -degree to 46 - degree	Gramang/ P. S Drang & Thaltukhod link road.	120 mtr from thaltukhod nala.	37	46	max - 20, min - 12	0.1500	8902
	Adit	1160	464	1624	893	731									
3	Forebay. (A + B)	2970	1188	4158	2287	1871	Muck Dumping at Forebay.	Site B- 16 - degree to 26 - degree, site A- 20 to 39 degree.	Kharyan/ vill kharyan/ P.S Drang & Thaltukhod to Gramang link road.	222 mtr from thaltukhod nala	(A= 37.46, B= 35.44)	(A= 19.39, B= 16.57)	(A= max 30, min 20), (B= max- 10, min - 4)	0.1380	14066

For Cliff Finvest Pvt. Ltd.

 Authorised Signatory

9/5

 Divisional Forest Officer
 Joginder Nagar Forest Division
 Joginder Nagar (H.P.)

4	Penstock.	11939	4776	16715	9193	7522	Muck Dumping at Power house.	4 to 10 degree	Kharyan/ vill Kharyan/ P.S Drang & Thaltukhod to Gramang link road.	2 mtr from Thaltukhod nala.	51.58	44.8	max - 12, min - 4.50	0.1637	7878
	Powerhouse	2618	1047	3665	2016	1649									
	Tail race channel	62	25	87	48	39									
	Switch yard	360	144	504	277	227									
	Energy dissipator	212	85	297	163	134									
Total		51273	20509	71782	39480	32302	_____	_____	_____	_____	_____			0.6117	32435


NOTE

1 Total dumping capacity = 32435 Cum

2 Muck to be dumped = 32302 Cum

of Unit Finvest Pvt. Ltd.


 Authorised Signatory


 Divisional Forest Officer
 Joginder Nagar Forest Division
 Joginder Nagar (H.P.)

NOTE	
1	Filling behind retaning wall, Rock pieces which are dressable will be used for costruction of wire crates, retaning walls & breast wall = 25%
2	Collected pieces of rock from underground as well as open excavation will be carried to crusher site & crushed to different grades for use in lining of the HRT tunnel and other RCC structures where ever suitable = 20 %
3	Rest of the muck will be used in soling work in roads i.e approach road to power house, other components of the project & link roads near project area = 10 %

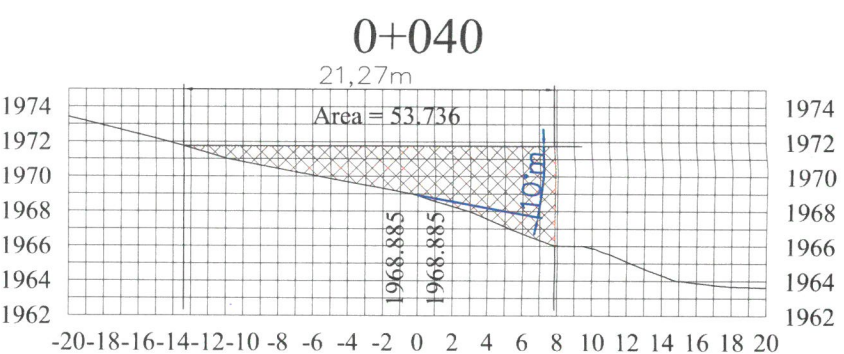
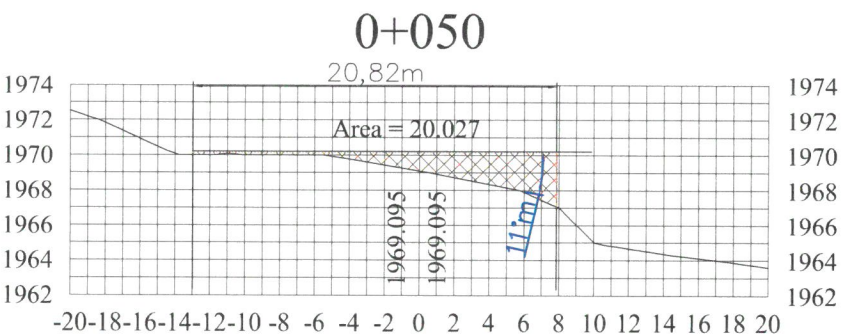
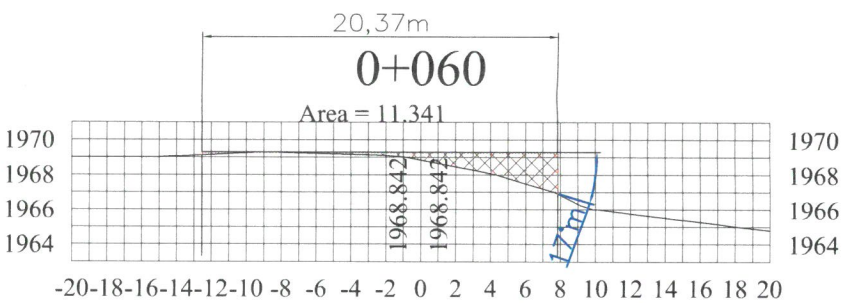
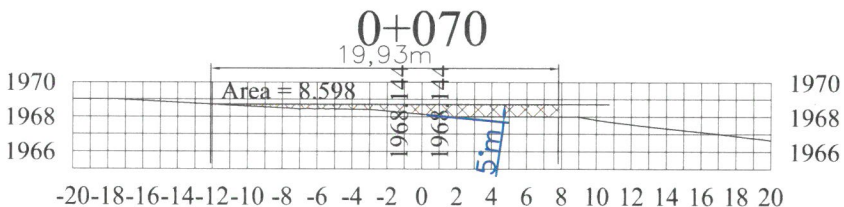
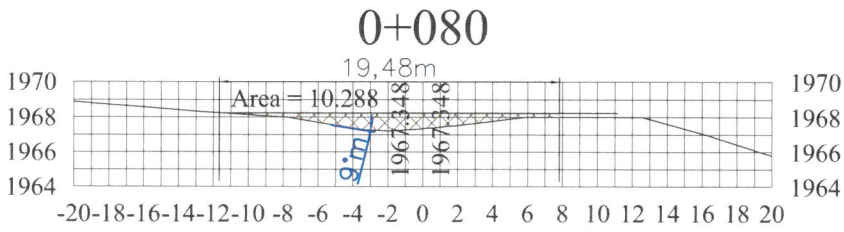
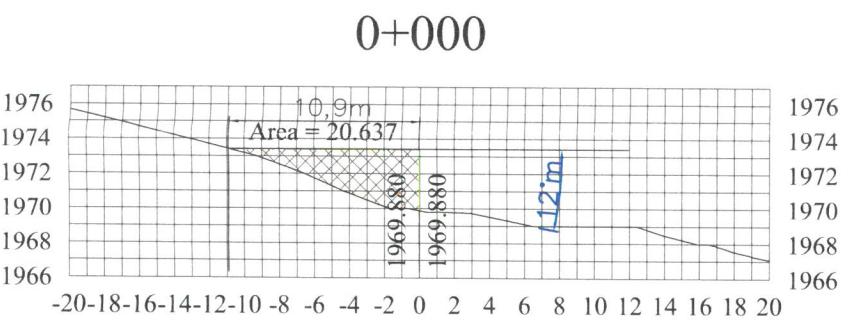
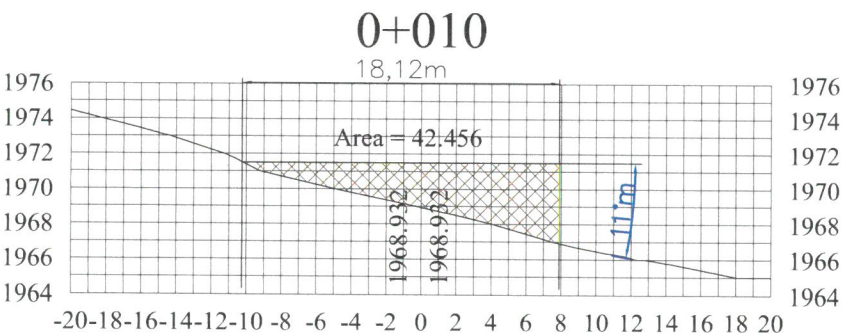
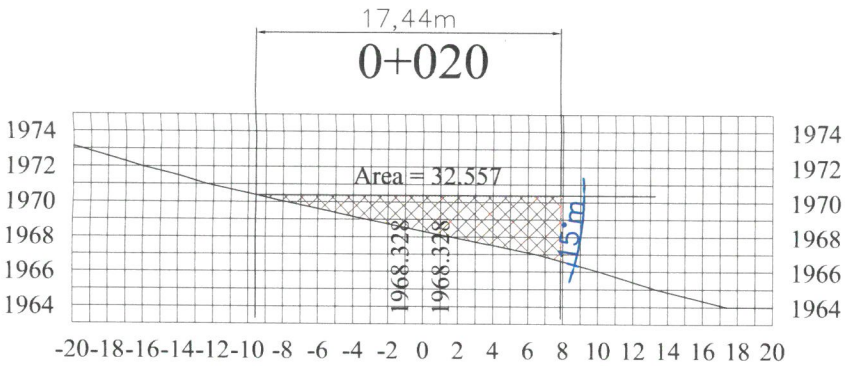
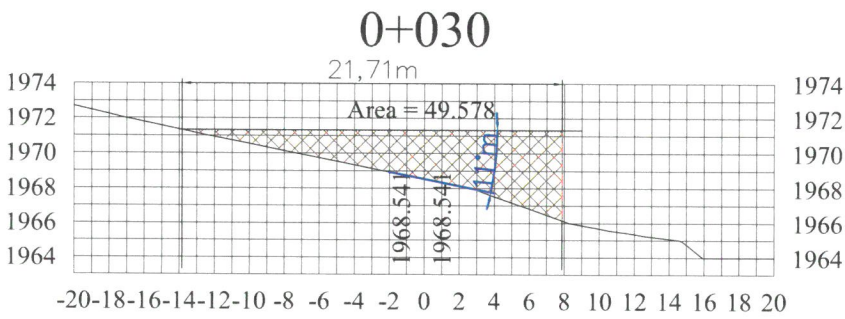
For Cliff Finvest Pvt. Ltd.

 Authorised Signatory


 Divisional Forest Officer
 Joginder Nagar Forest Division
 Joginder Nagar (H.P.)

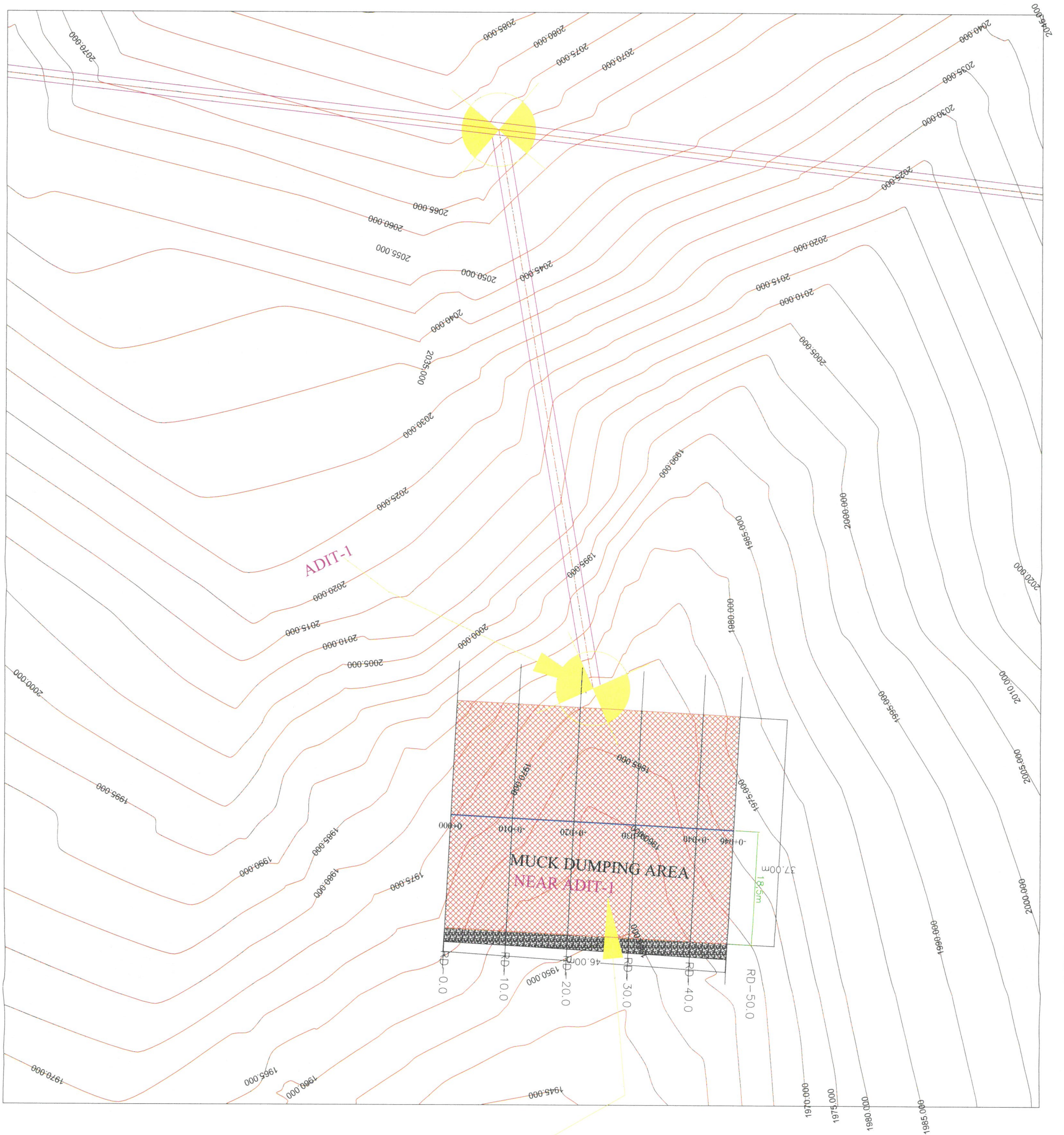
X-Section of MUCK DUMPING WEIR SITE

Muck Dumping Area Weir Site Thaltukhod Stage-I				
RD	Area in Sqm	AV/Area	Distance	Quantity in cum
0.000	20.637	0	0	0.000
10.000	42.456	31.54	10	315.400
20.000	32.557	37.5	10	375.000
30.000	49.578	41.06	10	410.600
40.000	53.736	51.65	10	516.500
50.000	20.027	36.88	10	368.800
60.000	11.341	15.68	10	156.800
70.000	8.598	9.96	10	99.600
80.000	10.288	9.44	10	94.400
			Total Area=	2337.100
Considering Swell Factor			0.68	
Total Dumping Capacity				1589.228



For Cliff Finvest Pvt. Ltd.
Thara
Authorised Signatory

Divisional Forest Officer
Joginder Nagar
Joginder Nagar



PLAN OF MUCK DUMPING AREA NEAR ADIT

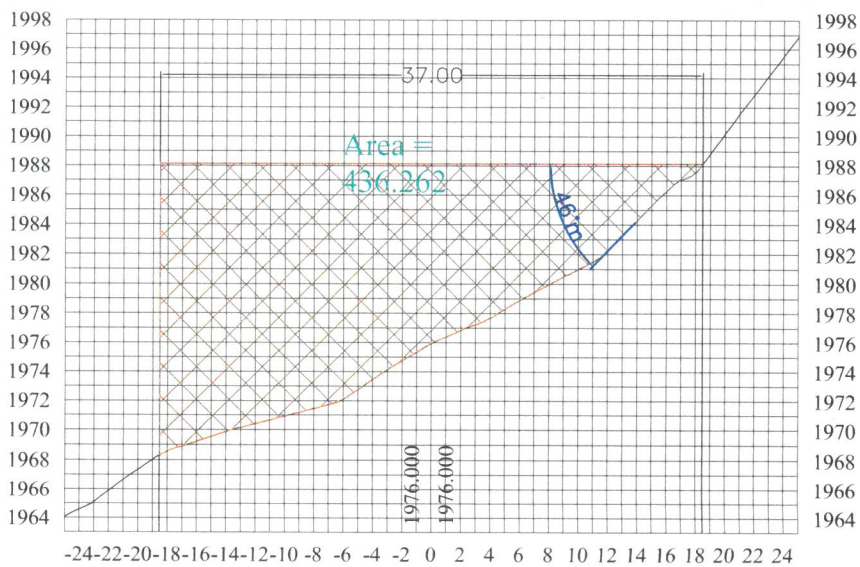
For Cliff Finvest Pvt. Ltd.
[Signature]
 Authorised Signatory

[Signature]
 Divisional Forest Officer
 Joginder Nagar Forest Division
 Joginder Nagar (H.P.)

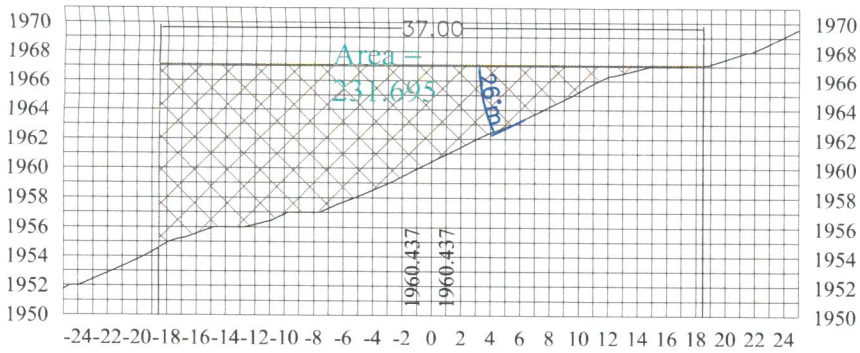
X-SECTION OF MUCK DUMPING AREA NEAR ADIT

Muck Dumping Area Adit Portal Site Thaltukhod Stage-I				
RD	Area in Sqm	AV/Area	Distance	Quantity in cum
0.000	436.262	0.000	0	0.000
10.000	349.379	392.82	10	3928.200
20.000	301.532	325.455	10	3254.550
30.000	231.695	266.613	10	2666.130
40.000	178.056	204.875	10	2048.750
46.000	220.094	199.075	6	1194.450
			Total Area=	13092.080
	Considering Swell Factor	0.68		
	Total Dumping Capacity			8902.621

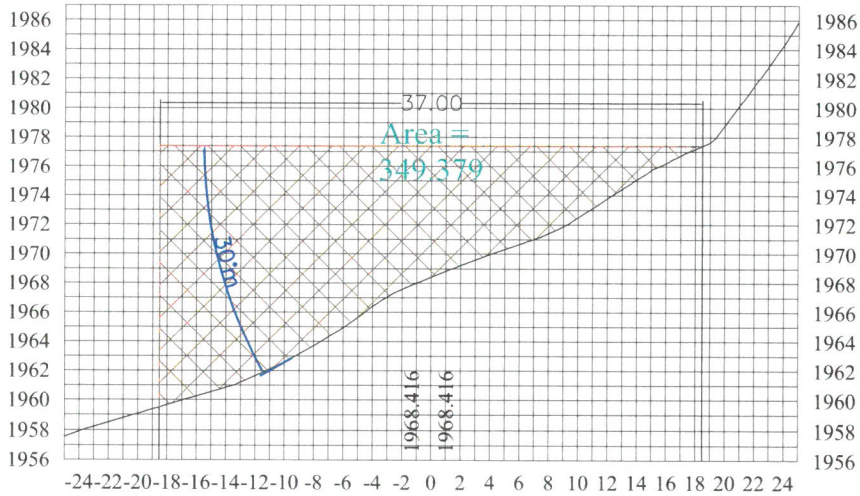
0+000



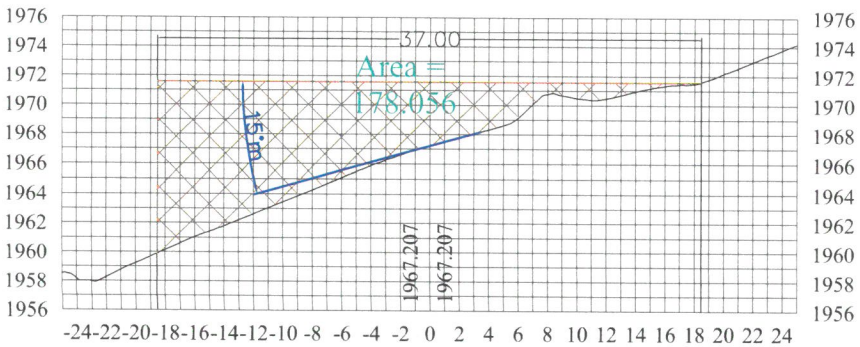
-0+030



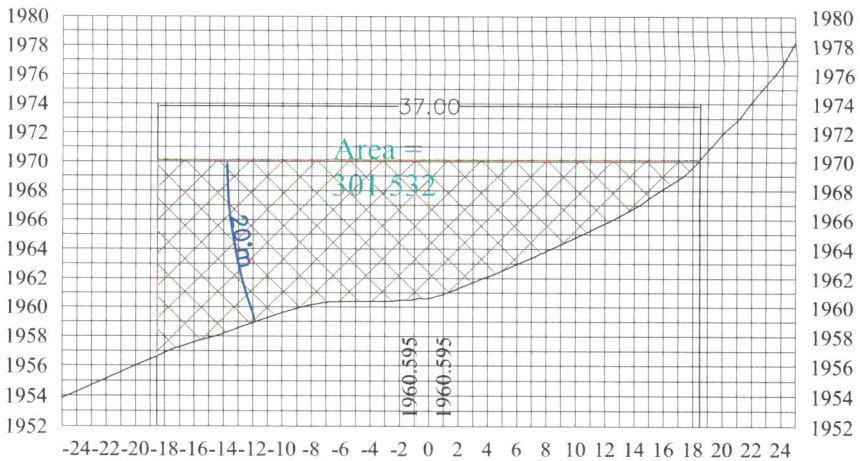
-0+010



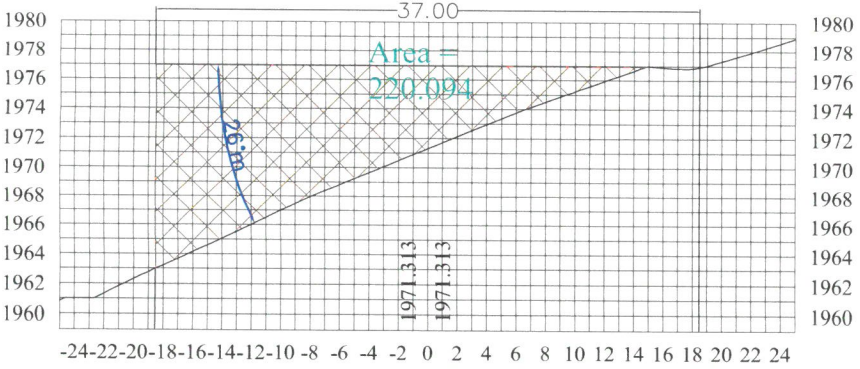
-0+040



-0+020



-0+046

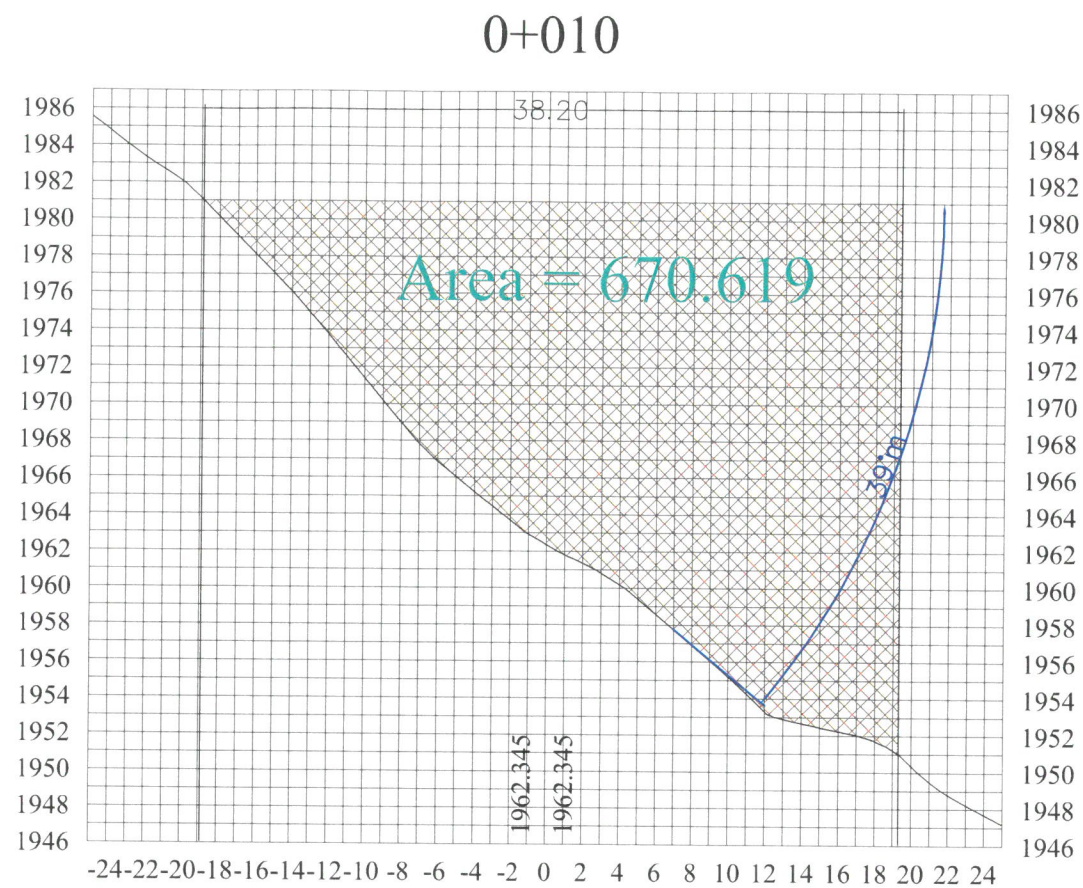


For Cliff Invest Pvt. Ltd.
[Signature]
Authorised Signatory

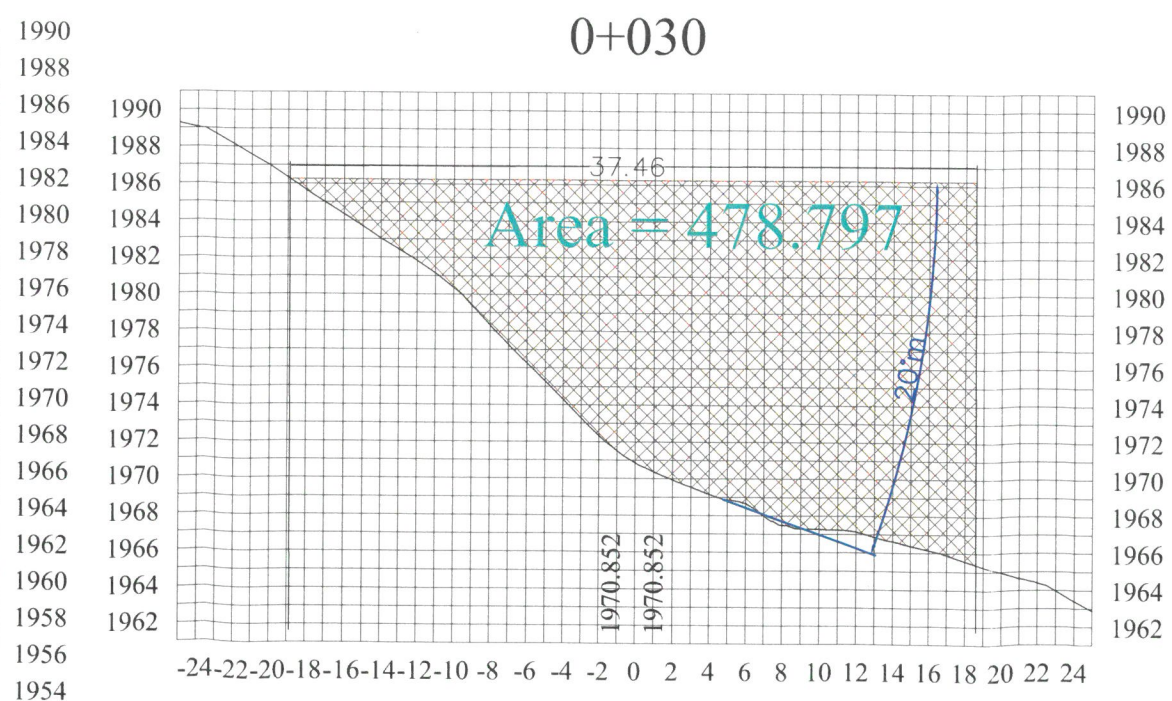
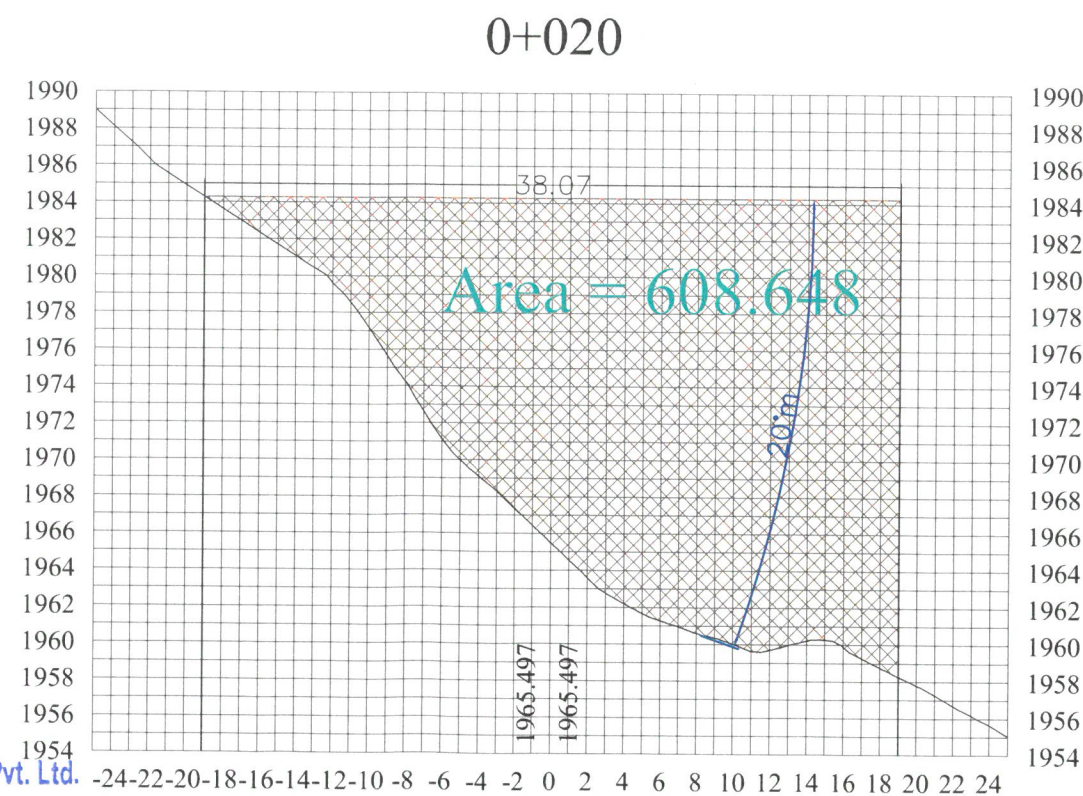
[Signature]
Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (H.P.)

X-SECTION OF MUCK DUMPING AREA NEAR FOREBAY SITE

Area = A



Muck Dumping Area Near Forbay Site Thaltukhod Stage-I				
RD	Area in Sqm	AV/Area	Distance	Quantity in cum
AREA- A				
5.000	114.875	114.875	5.000	574.375
10.000	103.014	108.944	5.000	544.720
15.000	126.552	114.783	5.000	573.915
20.000	54.600	90.576	5.000	452.880
AREA- B				
10.000	670.619	670.619	10.000	6706.190
20.000	608.648	639.633	10.000	6396.330
30.000	478.797	543.722	10.000	5437.220
Total Area=				20,685.630
Considering Swell Factor			0.68	
Total Dumping Capacity				14,066.228

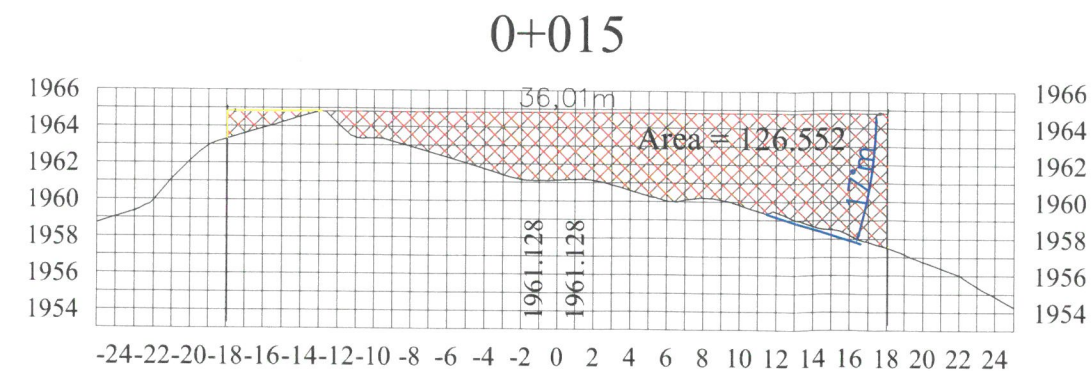
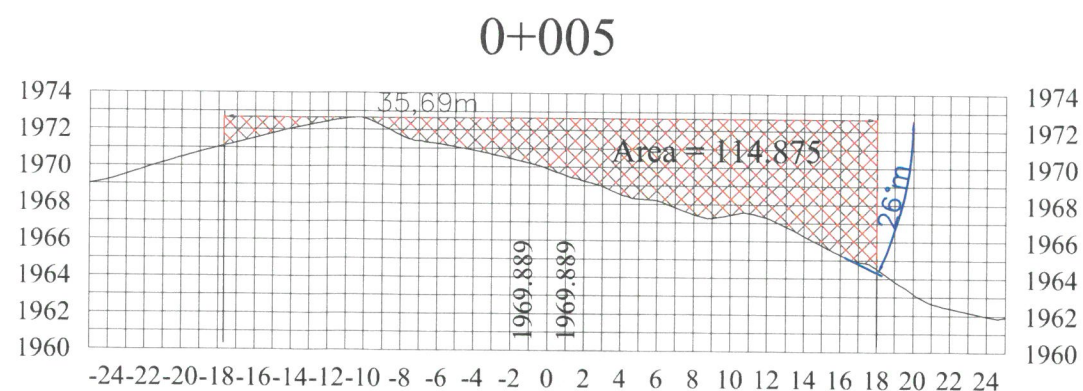
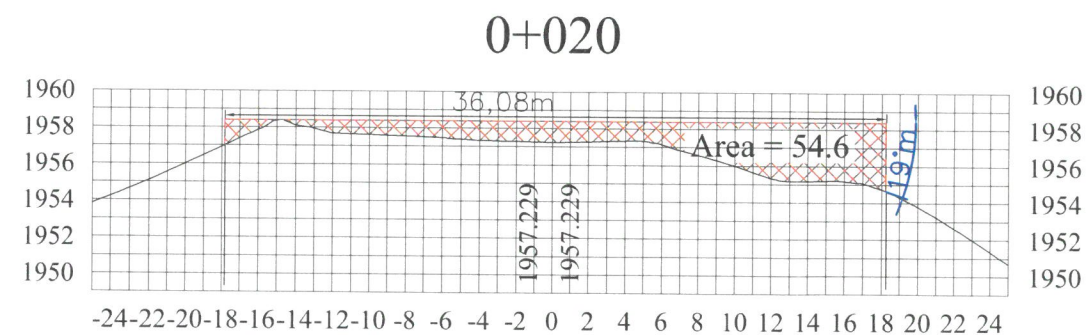
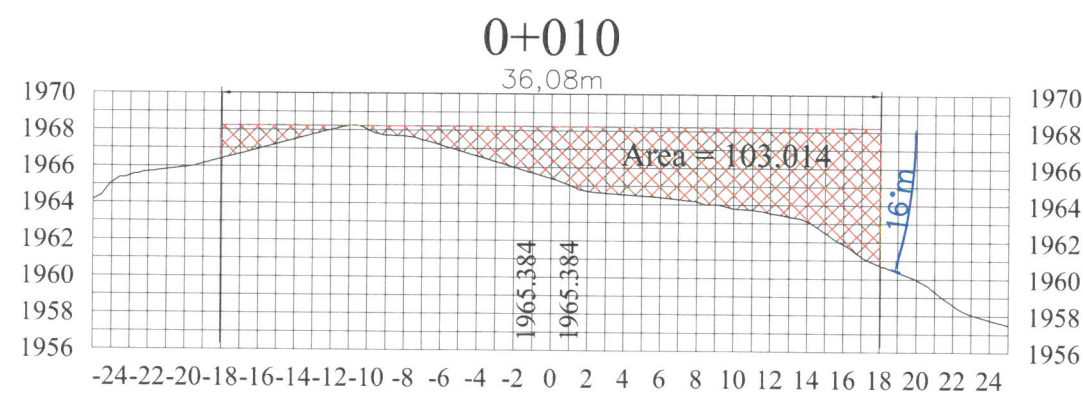


For Cliff Invest Pvt. Ltd.
Authorised Signatory

Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (P.B.)

X-SECTION OF MUCK DUMPING AREA NEAR FOREBAY SITE

Area = B



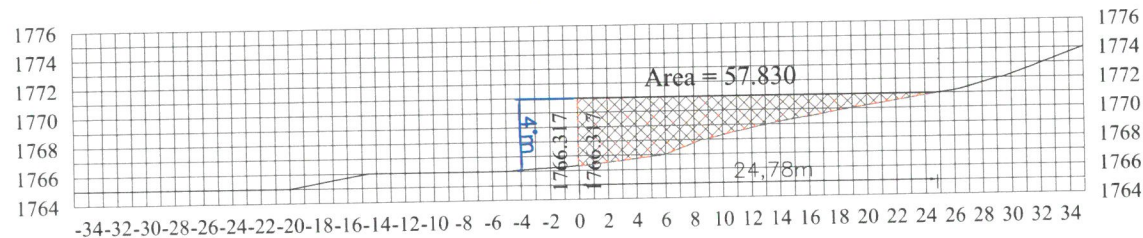
For Cliff Finvest Pvt. Ltd.
[Signature]
Authorised Signatory

[Signature]
Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (H.P.)

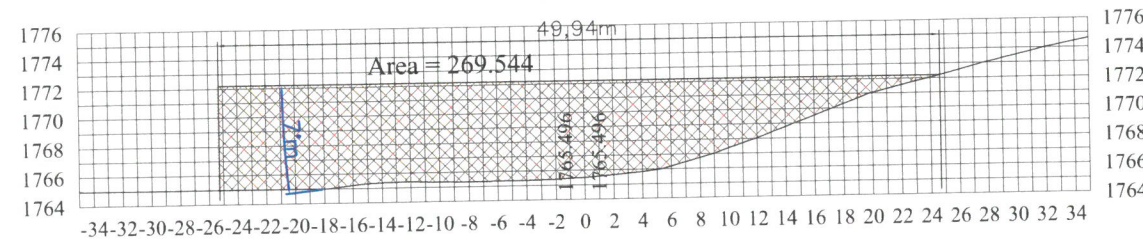
X-SECTION OF MUCK DUMPING AREA POWER HOUSE

Muck Dumping Area Power House Site Thaltukhod Stage-I				
RD	Area in Sqm	AV/Area	Distance	Quantity in cum
0.000	57.830	0.000	0.000	0.000
10.000	269.544	163.687	10.000	1636.870
20.000	301.643	285.593	10.000	2855.930
30.000	307.990	304.816	10.000	3048.160
40.000	325.055	316.522	10.000	3165.220
44.339	80.547	202.801	4.339	879.954
			Total Area=	11586.134
Considering Swell Factor			0.68	
Total Dumping Capacity				7878.571

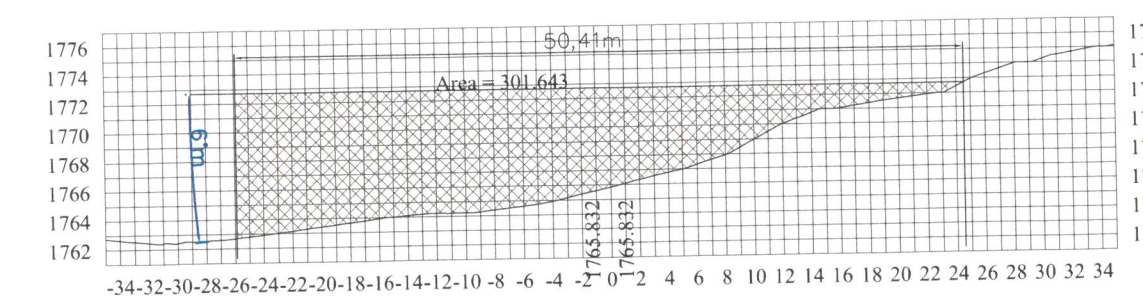
0+000



-0+010

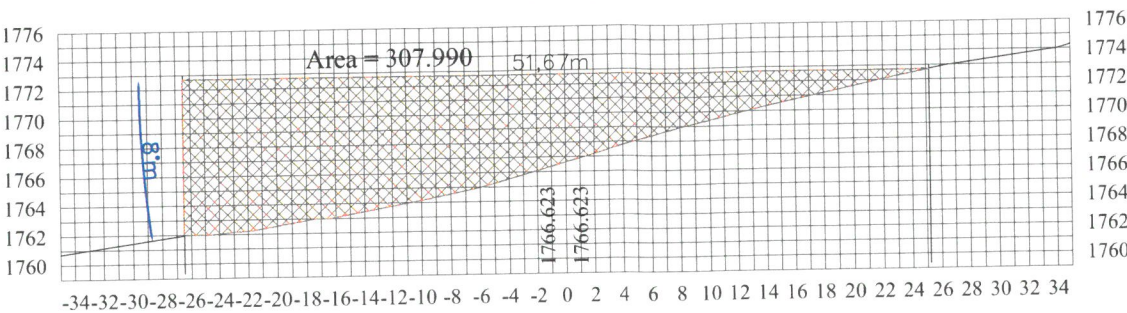


-0+020

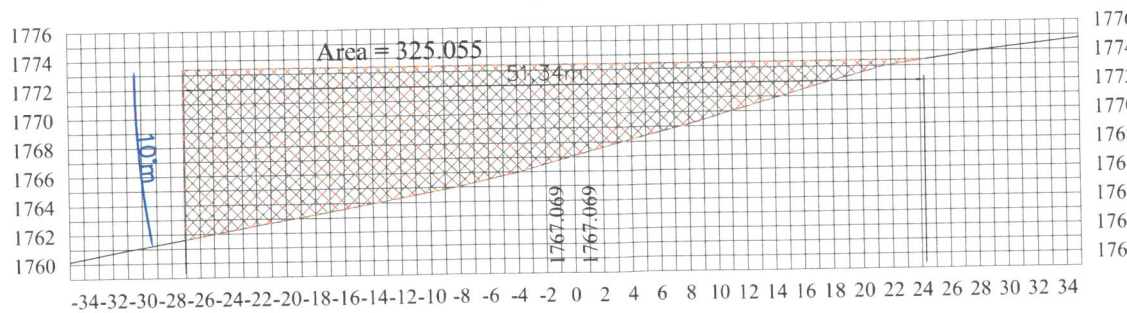


For Cliff Forest Pvt. Ltd.
[Signature]
Authorised Signatory

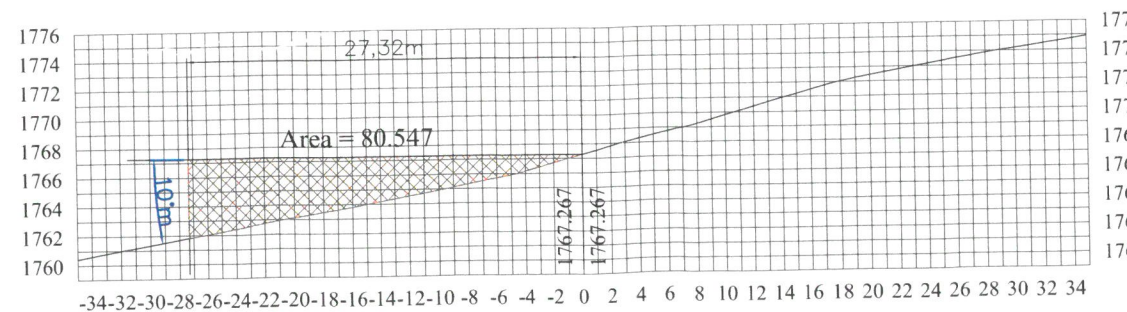
-0+030



-0+040



-0+044.339



[Signature]
Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (H.P.)

Full Title of the Project: Thaltukhod Stage-I Hydro Electric Project 5.00 MW
File No.: SW/79579/2018
Date of Proposal: 20.09.2018

CHECK LIST SERIAL NUMBER- 32

Reclamation plan of muck generated in respect of Thaltukhorh HEP stage -1

Component wise details of actual muck generated from different works of the project as per DPR of the Thaltukhorh HEP stage I:-


i) Trench weir (Common excavation and excavation in rock)	=	1950 cum.
ii) Intake and Shingle excluder pipe	=	1270 cum.
iii) Feeder Pipe	=	540 cum.
iv) D-tank and collection pool	=	4390 cum.
v) Connecting pipe	=	1197 cum
vi) Tunnel	=	22605 cum
vii) Adit to tunnel	=	1160 cum.
viii) Forebay	=	2970 cum.
ix) Penstock	=	11939 cum.
x) Power House	=	2618 cum.
xi) Energy Dissipator	=	212 cum.
xii) Switch Yard	=	360 cum.
xiii) Tail race	=	62 cum
Muck generated	=	51273 cum
Factor increase in volume for dumping 40%	=	20509 cum
	=	51273 + 20509
Total muck generated	=	71782 cum

Out of the muck generated of this will be used in:-

- 1) Filling behind retaining wall, Rock pieces/Boulders which are dressable will be used for construction of wire creates, retaining walls & breast wall = 25%.
- 2) Collected pieces of rock from underground as well as open excavation will be carried to crusher site & crushed to different grades for use in lining of HRT tunnel and other RCC structures where ever suitable = 20%.
- 3) Rest of the muck will be used in soling work in roads i.e. approach road to power house & other components of the project & link roads near project area = 10%.

55% of this quantity is = $0.55 \times 71782 = 39480$ cum.
Hence balance muck to be disposed off = $71782 - 39480 = 32302$ cum.

For Cliff Invest Pvt. Ltd.
 Authorised Signatory

 **Divisional Forest Officer**
Joginder Nagar Forest Division
Joginder Nagar (H.P.)

**Abstract of total dumping capacity created for the execution of Thaltukhorh HEP stage I
(Details as per annexure attached)**

i) Capacity of muck dumping area near the weir site	=	1589 Cum
ii) Capacity of muck dumping area near Adit.	=	8902 Cum
iii) Capacity of muck dumping area near Forebay	=	14066 Cum
iv) Capacity of muck dumping area near Power House	=	7878 Cum
<hr/>		
Total capacity of muck dumping yards.	=	32435 Cum

The dumping space created is very much sufficient, hence Okay.

For Cliff Finvest Pvt. Ltd.

Authorised Signatory




Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (H.P.)

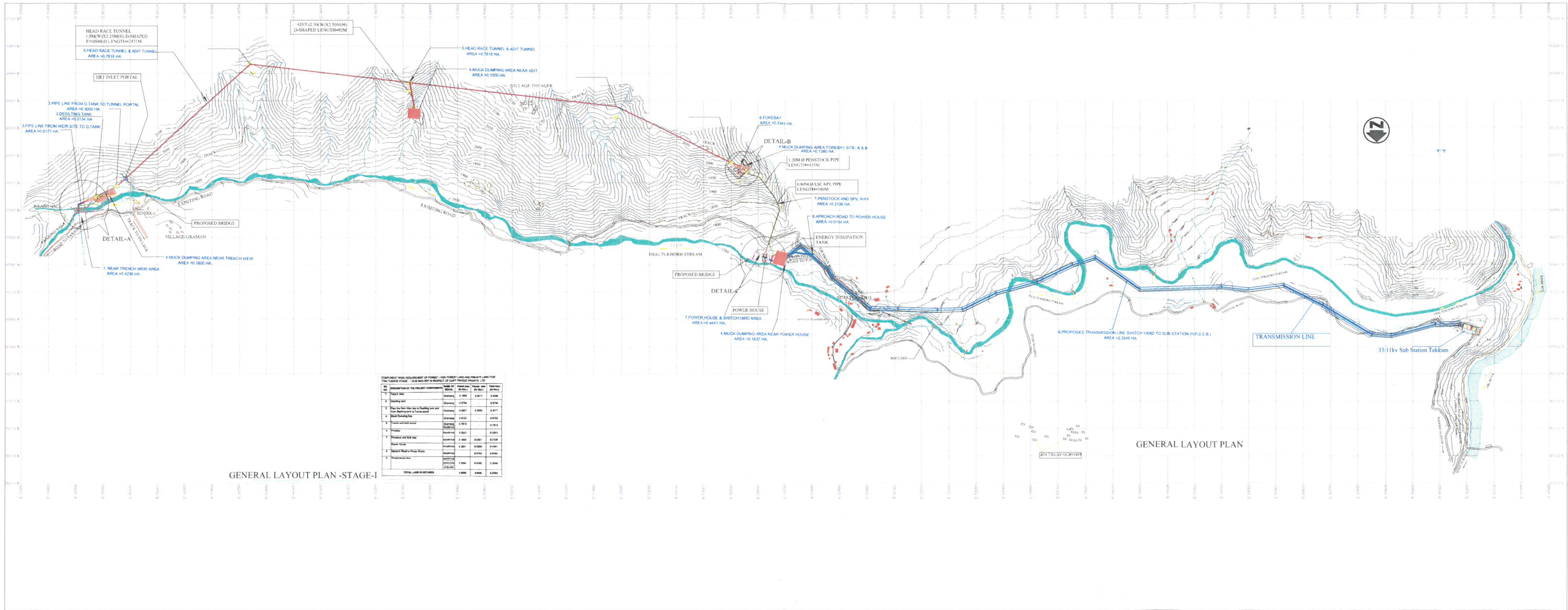
COMPONENT WISE REQUIREMENT OF FOREST / NON FOREST LAND AND PRIVATE LAND FOR
THALTUKHOD STAGE - 1 (5.00 MW) HEP IN RESPECT OF CLIFF FINVEST PRIVATE LTD.

SR. NO.	DESCRIPTION OF THE PROJECT COMPONENTS	NAME OF MOHAL	Forest area (In Hec.)	Private area (In Hec.)	Total Area (In Hec.)
1	Trench Weir	Gramang	0.1565	0.2671	0.4236
2	Desilting tank	Gramang	0.0734	-	0.0734
3	Pipe line from Weir site to Desilting tank and from Desilting tank to Tunnel portal	Gramang	0.0627	0.2550	0.3177
4	Muck Dumping Site	Gramang	0.6122	-	0.6122
5	Tunnel and Adit tunnel	Gramang KHARIYAN	0.7818	-	0.7818
6	Forebay	KHARIYAN	0.3343	-	0.3343
7	Penstock and Spill way	KHARIYAN	0.1635	0.0501	0.2136
8	Power House area	KHARIYAN	0.3841	0.0600	0.4441
9	Approach Road to Power House	KHARIYAN		0.0154	0.0154
10	Transmission line	KHARIYAN DHAMCHYAN CHELING	2.3384	0.0162	2.3546
TOTAL LAND IN HETARES			4.9069	0.6638	5.5707

For Cliff Finvest Pvt. Ltd.

 Authorised Signatory


 Divisional Forest Officer
 Joginder Nagar Forest Division
 Joginder Nagar (H.P.)



GENERAL LAYOUT PLAN -STAGE-I

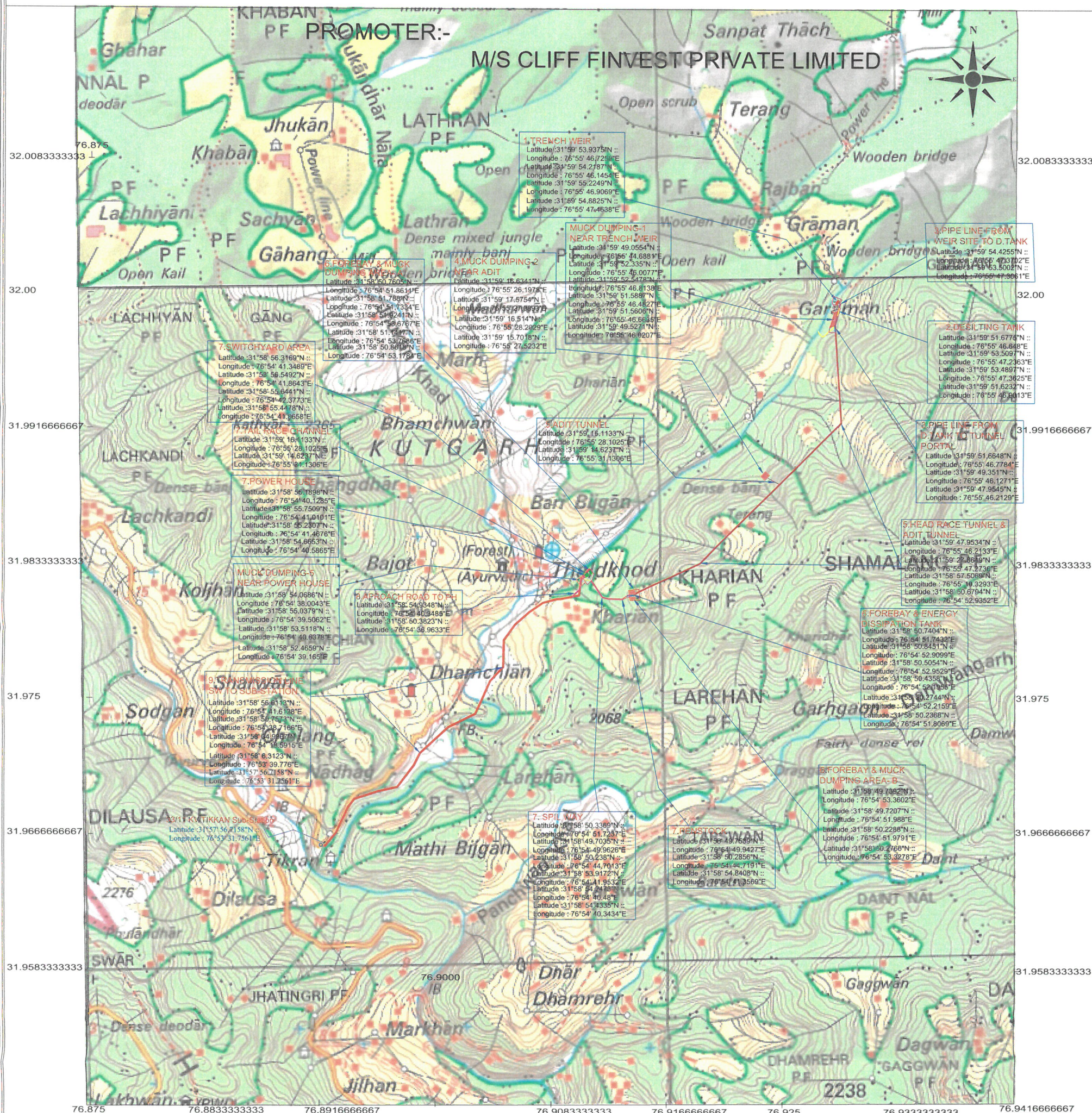
GENERAL LAYOUT PLAN

For Cliff Finvest Pvt. Ltd.

 Authorised Signatory

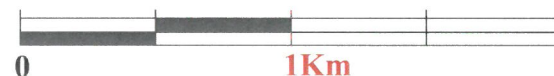
Divisional Forest Officer
 Tekken

Digital/Geo-Reference Map OF Thaltukhorh-I HEP (5.00 MW) Village -Thaltukhorh, Tehil-Padhar Distt.-Mandi (Himachal Pradesh)



- 1. Trench Weir
- 3. Pipe line from Weir Site to Desilting Tank
- 2. Desilting Tank
- 3. Pipe Line from Desilting Tank to Tunnel Portal
- 4. Muck Dumping Site
- 5. Head Race Tunnel & Adit Tunnel
- 6. Forebay
- 7. Penstock Line
- 7. Spilway
- 7. Power House & Switchyard
- 7. Tailrace
- 8. Approach Road to Power House
- 9. Proposed Transmission Line

2cm to 1km



SOI Toposheet Scale 1:50,000
Sheet No.53 A/13(H43 E13)
52 D/16 (I43 W16)

For Cliff Finvest Pvt. Ltd.
Tham
Authorised Signatory

[Signature]
Divisional Forest Officer
Jodinder Nagar Forest Division

Digital/SOI Toposheet Map OF Thaltukhorh-I HEP (5.00 MW) Village -Thaltukhorh, Tehil-Padhar Distt.-Mandi (Himachal Pradesh)



- 1. Trench Weir
- 3. Pipe line from Weir Site to Desilting Tank
- 2. Desilting Tank
- 3. Pipe Line from Desilting Tank to Tunnel Portal
- 4. Muck Dumping Site
- 5. Head Race Tunnel & Adit Tunnel
- 6. Forebay
- 7. Penstock Line
- 7. Spillway
- 7. Power House & Switchyard
- 7. Tailrace
- 8. Approach Road to Power House
- 9. Proposed Transmission Line

2cm to 1km



SOI Toposheet Scale 1:50,000
Sheet No.53 A/13(H43 E13)
52 D/16 (I43 W16)

For Cliff Finvest Pvt. Ltd.
Authorised Signatory

Divisional Forest Officer
Joginder Nagar Forest Division
Joginder Nagar (H.P.)