

## **Reclamation Plan for Dumping Site in respect of FCA proposal for construction of Tranh-Charoli SHP-2 MW, in Tehsil Kupvi Distt. Shimla H.P.**

Diversion of 2.8573 Ha. of forest land has been proposed for the construction of Tranh-Charoli SHP-2 MW by M/s Hydro More Power Pvt. Ltd. in Tehsil Kupvi Distt. Shimla H.P.

The total length of the Transmission Line w.r.t. Tranh-Charoli SHP-2 MW which passes through Forest land is 860 Mtrs. and width is 18 Mtrs. and the length passing through the Non-Forest land is 810 Mtrs. and width is 18 Mtrs. A total quantity of muck 18000 cumm of muck will be generated during the construction of this Project. Since after excavation of earth there will be some increase in volume of soil which is calculated at 25%. The serviceable material will be stacked at site in the form of stone/aggregate i.e. 2700 m<sup>3</sup> and will be used in dry masonry & edge wall, nearly 20% of muck will have to be disposed off in the identified dumping sites as per reclamation plan.

Thus all the muck generated will be dumped in the designated dumping sites. Two numbers dumping sites designated as DS-1 & DS-2 have been indentified for dumping of muck/debris to be produced during the construction phase of the project. It is proposed that the dumping sites are treated in such a manner that these do not pose any problem to the environment management of the locality. This reclamation plan has been formulated with the following objectives:-

1. To arrest the dumped muck in situ so that it does not find its way to the nearby drainage channels, thus altering the drainage pattern of the area.
2. To rehabilitate the dumped area over a period of time so that it merges with the adjoining natural landscape and does not stand out as a sore point.
3. To improve the aesthetic view of the dumping grounds/dumping site by planting suitable plants and trees species thereby increasing the vegetable cover in the area.
4. To stabilize the dumping site by vegetative and engineering structure.

### **Implementation**

The proposal will be implemented by the user agency itself at its own cost as detailed in this plan. The implementation of the plan will be supervised by the forest department from time to time and the progress will be periodically monitored. In case of default the sanction of diverted land may be revoked with suitable penalty as decided by the Govt. of India.



## Strategy

The two phased approach will be followed for reclamation of the dumping sites. In the first instance crate walls will be created around the dumping site so that required capacity for dumping of muck is created at the sites. The detailed drawings of the Crate works to be undertaken are enclosed. The primary objective of the crate works will be to arrest the dumping muck to the dumping site and not to allow its spillage to the adjoining area eventually to nearby drainage lines. The capacity of the dumping sites has been calculated i.e. 20,000 cumm and will be enough to hold the muck to be dumped in each of the sites.

In the second phase once the dumping is complete it will be ensured that the dumping site is planted with the grasses, bushes shrubs so that it gives an aesthetic look. This vegetal cover will also help in binding the soil and will prevent its erosion. For vegetating the dumping sites suitable local species will be preferred. However, it may be noted that bulk of the muck to be dumped will be excavated material which will be lacking in essential nutrients and organic matter and hence it will be desirable to increase the nutrients status of the top soil to be conducive to tree vegetal growth. For this purpose maturing of the top soil be done if required, the imported soil be brought to replenish the top soil. Intently the grasses and bushes will be planted in the area to improve soil condition. Once these grasses and bushes take hold to the site, the tree species will be planted. In the next phase. The tree species to be planted will be mainly Deodar, Chil, Ban and other B/L will also propagated. Trees will be planted at the closer spacing so that canopy is closed at the earliest. Hence, the spacing will be kept at 1.5x1.5 mtrs. The total area involved in the dumping site is 6600 Sqm. Shrubs and bushes will be planted in between these trees. The dumping site will be fenced with bared wire fencing to prevent the entry of the stray cattle thereby ensuring the protection of the plant from grazing. Also, due to inert nature of the soil, plant will need extra care for their establishment for the purpose imported soil/organic matter will be added in each pit for easy establishment of plants. Watering of the plant in dry session will be provided to prevent mortality. The plantation will be further maintained in project cost for ten years when beating up of failure will be done.

The cost estimate of dumping site is enclosed as Annexure R and the cost of trees will be met from the yearly programme of plantation during rainy season. The plantation

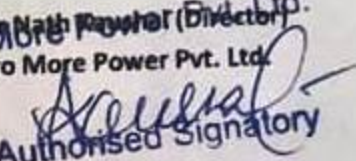
work will be started from the year following the completion of dumping site. However, creation of the crate walls around the dumping sites will be done prior to actual dumping.

**The total cost of the reclamation Plan and Engineering Structure is Rs. 8,28,735 /- only.**

**Post Reclamation arrangement:**

Since the area in question is required by the user agency only for the temporary use of dumping, hence the area will be reverted back to the forest department after implementing the reclamation plan, if so stipulated by Govt. of India. However, it at the time of so reverting back the forest department if any activity as per this reclamation plan is found wanting then the forest department may realize the cost of that activity from the user agency at the prevailing wage rates applicable in forest department and may get the same done departmentally at the project cost.

  
Deputy Conservator of Forests  
Chopal Forest Division

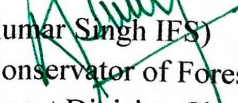
M/S Aman Nath Power Pvt. Ltd.  
Hydro More Power Pvt. Ltd.  
  
Authorised Signatory



**CHECK LIST SERIAL NO:-32**

**Bill for dumping scheme over 0.66 hectare of forest land in lieu of diversion of 02-85-73 ha for the construction of Tabh- Charoli Small Hydro Electric Project 2 MW, within the jurisdiction of Chopal forest division District Shimla HP.**

Area proposed for Muck Dumping in ha.								0.6600			
Plants to be planted per ha.								1100			
Total No. of plants to be planted								531			
Rate per plant								28/-			
Species to be planted								Deodar, Chil, Ban & other B/L			
Particulars of works	Area in Ha.	Unfit cost at wages structure per ha. for 2022-23 including plants cost	Total Amount Col 2x3	No. of plants planted 1 ha.	Total No. of plants planted (2X5)	Total amount of plants @ 28 of each plant	Total amount ( Unfit cost+Plant Cost (4+7)	Year of execution of works	Cost exaction	Amount of cost escalation.	Total amount (Col. 4+7)
1	2	3	4	5	6	7	8	9	10	11	12
Initial cost CA over an area of CA	0.6600	94500	62370	1100	726	20328	82698	2023-24	10%	8270	90968
1St year Maintenance	0.6600	11400	7524	330	218	6098	13622.4	2024-25	20%	2724	16347
2nd year Maintenance	0.6600	7700	5082	220	145	4066	9147.6	2025-26	30%	2744	11892
3rd year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2026-27	40%	1843	6450
4th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2027-28	50%	2303	6910
5th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2028-29	60%	2764	7371
6th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2029-30	70%	3225	7832
7th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2030-31	80%	3685	8292
8th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2031-32	90%	4146	8753
9th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2032-33	100%	4607	9214
10th year Maintenance	0.6600	3900	2574	110	73	2033	4606.8	2033-34	110%	5067	9674
			<b>Total</b>		<b>1670</b>						<b>183702</b>
						<b>Contingencies charges @ 5%</b>					<b>9185</b>
						<b>Total</b>					<b>192887</b>
						<b>Departmental Charges 17.50%</b>					<b>33755</b>
						<b>G. Total</b>					<b>226642</b>

  
 ( Ankit Kumar Singh IFS )  
 Deputy Conservator of Forests,  
 Chopal Forest Division Chopal