

**CHECK LIST NO. 32**

Detail Reclamation Plan, whenever required. It should be realistic exhaustive and complete in all respects along with relevant maps in distinct colours. It should also include the details of back fillings, afforestation and execution of such works, whenever required.

Diversion of 2.37 hectare of forest land has been proposed for the construction of motorable Link road from Rajera (Bhaniya) Bailly Km. 0/0 to 4/500 in Tehsil & District Chamba. The construction of this road will generate muck to the extent of 88395.55 Cubic Metre. By taking a swell factor of 40% on Pick+Jumper work and 25% on Blast work the total muck become 182807.15 cubic metre (Detail attached at Page 61) Out of this 109684.29 cubic metre of muck will be used locally in filling, construction of masonry walls in dumping place and in leveling of road. The remaining 73122.85 Cubic metre of muck will require safe disposal. The user agency has identified 3 No. dumping sites for the disposal of this muck. The dumping site has been identified along the proposed site and the capacity of these dumping sites has been worked out to be 75400.00 cubic metre (Detail attached at Page 64) which is sufficient to hold the muck to be generated.

Thus all the muck generated will be dumped in the designated dumping sites. 3 number dumping site designated as DS-I & III had been identified 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 environmental management consideration arising out of the necessity to stabilize the dumping sites at the earliest. Therefore, 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 aesthetics of the dumping grounds/ dumping site by planting suitable Plants and trees species thereby increasing the forest cover in the area.
4. To stabilize the dumping site by vegetative and engineering structures.

**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 pronged approach will be followed for reclamation of dumping sites. In the first instance crate wall will be erected around the dumping site so that required capacity for dumping of muck is created at the sites. The detailed drawings of the crate work to be undertaken are enclosed. The primary objective of the crate works will be to arrest the dumped muck at the dumping sites itself and not allow its spillage to adjoining areas and eventually to nearby drainage lines. The capacity of the dumping sites has been calculated as detailed in the table and will be enough to hold the muck required 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 grasses, bushes, shrubs and tree 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. Hence it will be desirable to increase the nutrient status of the top soil to make it conducive to tree/ vegetal growth. For this purpose maturing of top soil shall be done. If required, imported soil shall be brought to replenish the top soil. Instantly grasses and bushes will be planted in the area to improve the soil condition. Once these grasses and bushes take hold of the site, tree species will be planted in next phase. The tree species to be planted will be namely Robinia, Lucinea, albizia, Drek Amla Bamboo, Khair and Shisham.



Grasses like Steria and Napier will also be propagated. Trees will be Planted as the closer spacing so that canopy is closed at the earliest. Hence the spacing will be kept at 1.5 mtr. x 1.5 mtr. The total area involved in dumping is 7500 Square metre. Thus in all 5133 number plants will be planted at dumping site will be fenced with barbed wire fencing to prevent the entry of stray cattle, thereby ensuring the protection of plants from grazing. Also due to inert nature of soil, plants will need extra care for their establishment. For this purpose, imported soil/ organic manure will be added in each pit for easy establishment of plants. Watering of the plant in dry season will be provided to prevent mortality. The plantation will be further maintained at project cost for next five year beating up of failure will be done.

**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 forest department after implementing the reclamation plan, if so stipulated by Govt. of India. However if at the time of so reverting back the areas to forest department if any activities as per this reclamation plan is found wanting then the forest department may realize the cost that activity from the user agency at the prevailing wages rates applicable in forest department and may get the same done departmentally at the project cost.

Place : Chamba

Dated :- 6/8/018

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