

Full Title of the Project: Diversion of 0.09252 hac. (instead of 0.0095 hac.) of forest land for approach access to the proposed retail outlet of Indian Oil Corporation Ltd. on Gurgaon-Jhajjar Road KM 10-11 L/side at village Budhera, under Forest Divison & Distt. Gurugram.

File No. : FP/HR/Approach/149814/2021

Date of Proposal: -----

CHECK LIST SERIAL NUMBER: - 18
“SCHEME FOR COMPENSATORY AFFORESTATION

Detail scheme for Compensatory Afforestation in lieu of proposal for diversion of 0.09252 hac of forest land for Approach access to the proposal retail outlet outlet of Indian Oil Corporation Ltd. on Gurugram-Jhajjar Road KM 10-11 R/side at village Budhera Tehsil Harsaru, under Forest Divison & Distt. Gurugram.

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

District: -Gurugram	Tehsil: Gurugram
Forest Division: - Gurugram	Range: Gurugram
Block/Compt/Survey No.:-	Bandhwari Section 4&5 of PLPA 1900
Area to be afforested:	185 plants will be planted.
GPS Reading:- N 28°23'46" E 77°9'4"	

2. Description of the Area:

- **Whether the site selected for Compensatory Afforestation is a land bank (Yes or No):** No
- **If the CA site is other than the land bank, reasons are given:** There is no land bank in District Gurugram. Plantation will be carried out in degraded forest area closed under Sec 4 & 5 of PLPA 1900 and areas covered under Aravalli Project Plantation. These areas have been considered as forest for the purpose of Forest Conservation Act as per orders of Hon'ble Supreme Court. A Land Bank will be created on degraded areas of Aravallis in Gurugram Forest Division.
- **In case of Non-Forest area identified for CA, then what is the distance of CA site from adjoining forest boundary:** The CA is proposed to be carried out in Bandhwari Sec 4 & 5 area which is forest land by virtue of Hon'ble Supreme Court Order.
- **Soil type:** Mostly Loamy soil with huge boulders & sand stones on Aravalli Hills and Hill Slopes and sandy loam to sandy in foothills.
- **Topography:**

a. Hilly/Undulating/Plain	:Hilly
b. Slope: Steep/Medium/Gentle	: Gentle slope.
- **Whether the area is bearing any root stock of vegetation:** Rootstock at some places is available; the area has degraded vegetation of Aravallis and bushes of Prosopis juliflora & dhok.

3. Plantation Model:-

Trench cum pit method :- Pits of 45cm x 45cm x 45cm along with trench of size 2m x 0.45m x 0.45m will be dug over the whole area plants of 3 feet height of 20x30 cum size P.Bags will be planted during raining season. Trench will be on the upper side of pit on contours. Saplings of Ronj khairi, Holoptelia, Dhok, Bar, Pipal, Neem, Pilkhan, Imli etc will be planted with escapement 4m x 5m in staggered manner in contours so as to conserve all the water flowing out there.

a. Climate and edaphic conditions:

The climatic conditions are also most harsh in the Aravalli region and the annual average rainfall in the region is 400-500 mm only. The site conditions are extremely degraded with shallow depth of soil and prone to soil erosion. So, to ensure survival of plantations raised under CA, it is prescribed that the plantation scheme should be site specific and it should not be generalized. It is also not possible to do watering in the hills, therefore, site specific species plantation with advance trench work and seeding of Aravalli species and closure of the area may give better results than any other method.

b. Survey & Demarcation and Closure of the area:

There is lot of biotic pressure in the area and the land near habitations is under encroachment. Therefore, protection of the area will be utmost requirement. The proposed area is closed under Sec 4 & 5 of PLPA 1900 and also covered under Aravalli. Project will be demarcated after DGPS survey.

The existing wage rate for un-skilled labour in District Gurugram is Rs. 388/- per day during the year 2022-23. Since the proposed Compensatory Afforestation will be carried out in the year to come (say start year will be 2023-24, as Steering Committee Meeting for 2022-23 has already been held and agenda has been approved), so, the cost estimation has been done considering 10% enhanced wage rate every year starting from the year 2022-2023 as per details given under to avoid any kind of funds hardship in future. The cost of CA for 1000 plants per hac. (planting to be done in 2 hac. physical area) The detailed cost norms and year wise schedule of works proposed under the scheme has already been sent.

4. Schedule of Plantation Programme:-

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

The Plantation is calculated at **4m X 5m spacing** as at the wages rate of **Rs.388/- per day** as under with 10% enhanced wage rate every year starting from the year 2022-2023 as per details given under to avoid any kind of funds hardship in future:-

Sr. No.	Year	Cost norm per plant
1	1 st Year Plantation	437.41/- Per Plant
2	2 nd Year Maintenance	167.83/- Per Plant
3	3 rd Year Maintenance	129.69/- Per Plant
4	4 th Year Maintenance	82.05/- Per Plant
5	5 th Year Maintenance	24.80/- Per Plant
6	6 th Year Maintenance	13.80/- Per Plant
7	7 th Year Maintenance	13.80/- Per Plant
8	8 th Year Maintenance	13.80/- Per Plant
9	9 th Year Maintenance	13.80/- Per Plant
10	10 th Year Maintenance	13.80/- Per Plant
	Total Cost.	910.78/-

Area to be diverted: **0.09252 hec**

Area to be planted (One/two/ten times the diverted area) = **185 Plants will be planted**

No. of trees to be felled= **4**

No. of Plants to be damaged= **0**

Number of Plants to be planted (@ 1000 Plant per Hec.) = **185 Plants will be planted**

	Description	No. of Plants	Rate	Total Amount (Rs.)
	Compensatory Afforestation Charges			
1	1st Year Plantation	185	437.41/-Per plant	80920.85
2	2nd Year Plantation	185	167.83 /-Per plant	31048.55
3	3rd Year Plantation	185	129.69/-Per plant	23992.65
4	4th Year Plantation	185	82.05 /-Per plant	15179.25
5	5th Year Plantation	185	24.80 /-Per plant	4588.00
6	6th Year Plantation	185	13.80 /-Per plant	2553.00
7	7th Year Plantation	185	13.80 /-Per plant	2553.00
8	8th Year Plantation	185	13.80/-Per plant	2553.00
9	9th Year Plantation	185	13.80/-Per plant	2553.00
10	10th Year Plantation	185	13.80 /-Per plant	2553.00
A	Total Charges of (A Above)			168494.30
B	Barbed Wire Fencing Charge	0.7	Rs. 200000/- Per RKM	140000.00
C	Supervisory/Overhead/Miscellaneous Charges		10% On the total CA Charges	16849.43
D	Soil & Moisture Vonservation Charges		30% of Total CA	50548.29
E	Felling Charges Volume=	3.40	Rs.1200/- per m3	4080.00
F	Exigency Charges 3% of the Total Cost of (A+B+C+D+E)			11399.16
TOTAL (A+B+C+D+E+F)				391371.18 or Say 391371.00

5. Technical details:

a. General details:

Aravallis hills are the one of the oldest mountain range on earth and are the prominent landforms shaping the west-Indian climate and biodiversity. Aravallis with its lush green forests used to act as green barrier and acted as an effective shield against desertification. The forests of Aravalli range in Haryana are now the most degraded forests in India, most of the indigenous plant species have disappeared. The rapid deforestation and developmental activities are destroying the unique landscape that requires immediate conservation attention. These vulnerable areas used to be biologically rich and supported several unique elements of flora and fauna.

b. Spacing:

Pits of 45cm 45 cm x 45cm along with trench of size 2m x 0.45m x 0.45m will be dug over the whole area plants of 3 feet height of 20x30 cum size P.Bags will be planted during rainy season.

c. Species:

Since the site proposed for CA is a hilly track of Aravalli region/foot hills, so indigenous species belonging to Aravalli region/arid regions will be given priority. Ronj khairi, Holoptelia, Dhor, Bar, Pipal, Neem, Pilkhan, Imli etc will be planted.

d. Plantation Method:

Scattered Contour Trench plantation or pit plantation on the availability of space on hilly terrain will be carried out with Aravalli species in whole are in order to restore the whole area closed with boundary wall.

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e. Soil and Moisture Conservation Works:

Soil and moisture conservation works will be carried out along with plantation on pattern of Catchment Area Treatment. Contour trenching will be done to check soil erosion and conserve the run off.. Check dam/vegetative barriers will be created in the nalas and valleys. Proposed cost will be as per norms of 30% of cost of CA.

f. Protection and silvicultural operations:

There is lot of pressure on the site. Cutting of trees (even the indigenous trees). grazing of cattle, goats and sheep is in practice at site and these are the main reasons for degradation of area. Therefore, one mali-cum-protection watcher will be engaged for every two and half hectare (2500 plants) of area during first five year and after five year, one mali on every 5 ha. for protection and silvicultural operations in the area. The employment will be given to local people of the villages and the payments will be ensured through Biodiversity Management Committees or Village Forest management Committees to these protection watchers.

g. Proposed Monitoring Mechanism:

At Division and Circle level, DFO and Conservator will keep proper monitoring on the sites. Forest department is also having its Monitoring & Evaluation (M&E) Wing for monitoring the success of plantations. Conservator, FCA-cum Nodal Officer, Panchkula and the officers of Northern Regional Office of MoEF are the top agencies which will also be reviewing the success of plantations besides other senior officers of Forest Department.

6. Justification for the Cost of Site Specific Scheme:

There is great need to protect the fragile ecosystem of Aravallis in National Capital Region for the environmental sustainability of the region. 185 plants will be planted. No extra machinery charges are included.


Divisional Forests Officer
Gurugram

Date.....

Place :- Gurugram