COMPENSATORY AFFORESTATION SCHEME FOR 86.332 HA (TOTAL AREA 127.332 HA – UNWORKABLE AREA 41.00 HA = 86.332 HA WORKABLE AREA)

(FROM 2017-18 TO 2028-29)

IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT TELANGANA

Towards diversion of forest land for Kaleshwaram Project (Total forest land proposed for diversion in different districts of Telangana State is 3221.2971 Ha and CA area proposed in various Districts of Telangana State)

COMPREHENSIVE SCHEME FOR COMPENSATORY AFFORESTATION FOR KALESHWARAM PROJECT, IN RESPECT OF EXECUTIVE ENGINEER, I & CAD, KALESHWARAM PROJECT CONSTN, DIVN.NO.3, IN WARANGAL (URBAN) DISTRICT OF TELANGANA

1) Introduction of the Scheme:-

The Executive Engineer, I & CAD, Kaleshwaram Project, Construction Div. No.3 has submitted proposals for diversion of 3221.2971 Ha of Forest land in (8) different Forest Divisions in different districts of Telangana State for construction of canals, Tunnels, Lift Irrigation systems and Reservoirs involving in the Project.

The Non – Forest land of 127.332 Ha., was identified in Warangal (Urban) District in Sy.Nos. 340 – 12.278 Ha, 353 – 75.042 Ha, 355 – 40.012 Ha : **Totaling: 127.332 Ha** of Gatlanarsingapur Village, Bheemdevarapally Mandal of Warangal (Urban) District in the jurisdiction of Elkathurthy Range of District Forest Officer, Warangal (Urban) District. The User Agency has submitted an Undertaking given by the District Collector & Magistrate, Warangal (Urban) District Dt:10.03.2017 duly certifying that, the above said lands are Government Revenue Lands and are free from all encumbrances and encroachments. The said lands are not assigned to any individuals/ organizations and further stated that the above said land will be transferred and mutated in the name of the Forest Department and handed over to the Forest Department on receipt of Stage-I approval under Forest (Conservation) Act,1980 for the said project in lieu of diversion of forest land for the proposed Kaleshwaram Project in (8) Districts duly handing over the Compensatory Afforestation land of 127.332 Ha., which is part of the Non–Forest land of 177.775 Ha in Warangal District in the jurisdiction of Elkathurthy Range of Warangal (Urban) District on 14-03-2017.

The survey number wise land details are as follows :

Sl. No.	Name of the Village	Sy.No.	Extent	
			Acres	Hectares
1	Gatlanarsingapur	340	30.34	12.278
2		353	185.44	75.042
3		355	98.87	40.012
	TOTAL :			**127.332**

1) Suitability of the Area:-

The Non forest land of **127.332 Ha.**, is mainly hilly with gentle slope on fringe areas is a small hillock with boulders and rocks and very less existed tree growth viz., Vepa, Moduga, Balusu, Rela and thorny bushes. This area is having about 32% rocky patch, hence the **unworkable area is 41.00 Ha** in Sy.No.353 & 355 of Gatlanarsingapur Village. The area is suitable for protection purpose and SMC works like check dams, percolation tanks, Continuous contour trenches and Rock fill dams. In view of the above stated reasons the above identified land in Sy.Nos. 340 – 12.278 Ha, 353 – 75.042 Ha, 355 – 40.012 Ha; **Totaling: 127.332 Ha** of Gatlanarsingapur Village, Bheemdevarapally Mandal of Warangal (Urban) District is suitable for taking up SMC works besides protecting the same from wildlife point of view. As per the instructions of the Prl. Chief Conservator of Forests, A.P., Hyderabad Rc.No.54480/2008/F4, Dt.16.11.2008 has issued instructions as **"Not to reject Non-forest land offered for Compensatory Afforestation unless it is a sheet rock and cannot be afforested by adopting any site specific suitable afforestation techniques".** In view of the above recommended to consider the above Compensatory Afforestation land and to protect the C.A. Area from further degradation and carrying out soil and moisture conservation works and digging of staggered contour trenches to protect the land in view of wildlife importance and ecological balance

The Compensatory Afforestation is proposed in the project for **86.332 Ha** with an outlay of **Rs.1171.519 Lakhs**. The following item of works are proposed viz., Raising and maintenance of Primary beds & Bag plants Nursery, Nursery Infrastructure, Advance Operations for raising of Miscellaneous Plantations, Raising of Miscellaneous Plantations and maintenance of Miscellaneous Plantations for (9) years, Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha for 20.00 Ha, Digging of (20) Nos. Bore wells, Fixing of Motors with Connecting Pipelines, Construction of Quarter for Forest Range Officer, Elkathurthy, Camping facilities for Officers - Construction of Guest House, Construction of (4) Nos. Protection cum Supervisory Huts/ Towers, Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A. Area, Digging of (5) Nos. Bore wells with Solar Power System with connecting pipelines, Catchment area treatment to the SMC works like Staggered Contour Trenches (SCT's), Percolation Tanks (PT's) and Check dams (CD's) are to be taken in the affected area, Engaging of Technical Person (Retired F.S.O.) for (5) Years, Engaging of Technical Asst./ Computer Operator (2) Nos. for 5 Years, Engaging of Protection Watchers (8) Nos. for (10) years,

Purchasing of Toyota Innova Vehicle (1) No. for higher authorities of Warangal Circle for Forest Monitoring and vigilance Purpose, Purchasing of Mahindra Scorpio Vehicle (1) No. for higher authorities of District Office, Warangal (Urban) & Jangaon for Forest Monitoring Purpose and Administration & Monitoring Cost (10%) etc.,

2) Planting Techniques :-

The proposed C.A. area is mostly hilly and stone area hills, trees and shrubs. In view of the suitability and management point of view, it is proposed to take up, part of the area with trench cum pitting and planting and part of the area with blasting and pitting and planting. The blasting cost of the rocky area and column digging excavator charges is @ 3.00 Lakhs per Ha. Further it is proposed to fill the column by importing red soil and making the saucer around the respective columns which is suitable for raising of the plantation with Miscellaneous Forestry species under Barren Hill Afforestation Method in **86.332 Ha** each at an espacement of 5M x 5M.

The plantation under this scheme is proposed to be raised by adopting Labour intensive method. Miscellaneous Forestry species plantations will be taken up under labour intensive method.

One Circular weeding, Circular weeding cum deep soil working are provided. The Plantations will be provided with (8) Nos. of Watchers up to 10th year maintenance of plantations. The entire area of C.A will be planted within Three years i.e., from 2017–18 to 2019 – 20.

3) Scheme Implementation Agency:-

The District Forest Officer, Warangal (Urban) & Jangaon will be the project implementation and monitoring agency and works will be taken up through the concerned Forest Range Officer.

Raising of C.A. Plantations essentially requires additional man power. Hence, it is proposed to hire the services of (2) Nos. Technical Asst./ Computer Operators for the project period. Accordingly provisions are made in the scheme.

4) Monitoring Mechanism :-

The District Forest Officer, Warangal (Urban) & Jangaon and Conservator of Forests. Warangal Circle, Warangal will be closely monitor the implementation of C.A. Scheme by regular inspections and ensuing maintenance of connected records like Nursery Journals,

Plantation Journals, Cash Books, Work Registers, Measurement Books and other records etc., Monthly Progress of Planting and Maintenance along with expenditure will be submitted to the Prl. Chief Conservator of Forests, Telangana, Hyderabad. Other Senior Officers of Forest Department of Telangana and Chief Conservator of Forests (Central), Bangalore will also be monitoring the implementation of the C.A. Scheme.

5) Period of the Scheme :-

Period of the Scheme is for (10) years which includes 1st year, 2nd year and 3rd year of Nursery raising, 1st year, 2nd year and 3rd year of raising of miscellaneous Plantations and (9) years of maintenance of Plantations commencing from 2017 - 18 to 2028 - 29.

6) Cost Structure:-

The cost of the scheme is worked out adopting present F.S.R. of 2016 - 17 and wage structure of Rs.509/- per day (as approved by the District Collector, Warangal (Urban). The Total year wise Cost Structure of the project to an extent of 127.332 Ha., is shown in Annexure – 1. The details of requirement of funds and year wise Action Plan are shown in Annexure – 2. Unit costs of different planting techniques are shown in Annexure – 3 to 13. The **ABSTRACT** of the scheme is as follows :

ANNEXURE - 1

YEAR WISE DETAILED ABSTRACT OF C.A. SCHEME IN BARREN HILL AFFORESTATION FOR 127.332 HA IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT

Sl. No.	Item of Work	Total Outlay	
		Phy	Fin
	Nurseries:		
1	a) Raising of Primary beds & Bag plants	51799	6.858
2	b) Maintenance of bag plants	51799	2.977
3	c) Infrastructure (Hut, Pipelines, Water Tanks, Borewells etc.,)	Ls.	15.000
	Nurseries Total:		**24.834**
	Planting Activities:		
4	Advance Operations	86.332	220.391
5	Raising	86.332	41.309
6	1st Year Maintenance	86.332	13.165
7	2nd Year Maintenance	86.332	14.952
8	3rd Year Maintenance	86.332	16.448
9	4th Year Maintenance	86.332	18.092
10	5th Year Maintenance	86.332	19.902
11	6th Year Maintenance	86.332	21.891
12	7th Year Maintenance	86.332	24.081

13	8th Year Maintenance	86.332	26.488
14	9th Year Maintenance	86.332	29.137
	Plantation Total :		**445.856**
	Other Works:		
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	20.000	60.000
16	Digging of Borewell, Fixing Motor with Connecting Pipelines.	20.0	100.000
17	Construction of F.R.O. Quarter	1	25.000
18	Camping facilities for Officers - Construction of Guest House.	1	35.000
19	Construction of Protection cum Supervisory Huts/ Towers (2) Nos.	4	80.000
20	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A.Area.	7.52 Kms	63.563
21	Digging of Borewell with Solar Power System with connecting pipelines.	5.0	52.500
22	Catchment area treatment to the SMC works like SCT's, PT's and CD's are to be taken in the effected area.	Ls.	70.000
23	Engaging of Technical Person (Retired F.S.O.) for 5 Years	1	9.000
24	Engaging of Technical Asst./ Computer Operators (2) Nos. for 5 Years @ Rs.15,000/ Per month	2	18.000
25	Engaging of Protection Watchers (8) members for 10 years "6 x 9000 per month X 120 months"	8	103.680
26	Purchasing of Toyota Innova Vehicle (1) No. for higher authorities of Circle Office, Warangal for Forest Monitoring Purpose	1	22.000
27	Purchasing of Mahindra Scorpio Vehicle (1) No. for higher authorities of District Office, Warangal Urban District for Forest Monitoring Purpose	1	17.500
28	Administration & monitoring Cost (10%)	Ls.	44.586
	Other works Total :		**700.828**
	Grand Total :		**1171.519**

Total No. of beds and seedlings required to be raised from 2017-18 to 2019 - 20

Sl. No.	Model	Es-pacement	Species	Area in Ha	No. of plants	Replacement of Casualities (20%)		Loss due to trans-portation (5%)	Grand Total no. of seedlings required	No. of beds required (500 seedling / bed)	Remarks
						Raising	Maint. Year				
1	Barren Hill Affor estation	Gap plantation	Misc.,	36.332	14533	2907	3633	727	21799	44	**2017-18**
				30.000	12000	2400	3000	600	18000	36	**2018-19**
				20.000	8000	1600	2000	400	12000	24	**2019-20**
Total:				**86.332**	**34533**	**6907**	**8633**	**1727**	**51799**	**104**	

ABSTRACT OF NURSERIES

Sl. No.	Model	Year of raising	Target Area in Ha	Cost of raising of Nursery			Year of main-tenance	Cost of Maint. of Nursery beds (April to July)			Total
				Phy. In Ha	Phy (Nos)	Fin		Phy. In Ha	Phy (Nos)	Fin	Fin
1	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	86.332 Ha	36.332	21799	3.26988	2018-19	36.332	21799	1.30795	4.57783
		2018-19		30.000	18000	2.07000	2019-20	30.000	18000	0.96300	3.03300
		2019-20		20.000	12000	1.51800	2020-21	20.000	12000	0.70560	2.22360
Grand Total:				**86.332**	**51799**	**6.85788**		**86.332**	**51799**	**2.97655**	**9.83443**

SMC Works : SMC works like Staggered Contour Trenches (SCT's), Percolation Tanks (PT's) and Check Dams (CD's) are to be taken in the affected area. These structures will be constructed in the specified locations as a measure of Soil Moisture Conservation works. These structures will increase and improve the available ground water table in that area.

ii) PROVISION OF FUNDS AND THE MECHANISM TO ENSURE THAT THE FUNDS WILL BE UTILIZED FOR RAISING AFFORESTATION.

The funds will be utilized from the funds to be deposited by the Chief Engineer, Kaleshwaram Project, Jalasoudha Building, Errum Manzil, Hyderabad towards the Compensatory Afforestation.

6. Details of proposed monitoring mechanism.

The concerned Forest Beat Officer and the Forest Section Officer will execute the works proposed under the guidance of the Forest Range Officer, Elkathurthy Supervised by the District Forest Officer, Conservator of Forests, Warangal Circle, Warangal and other Higher Officers. The Plantation model wise, year wise activities and their unit costs worked out and annexed.

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT OF NURSERIES

Sl. No.	Model	Year of raising	Target Area in Ha	Cost of raising of Nursery			Year of main-tenance	Cost of Maint. of Nursery beds (April to July)			Total
				Phy. In Ha	Phy (Nos)	Fin		Phy. In Ha	Phy (Nos)	Fin	Fin
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		2018-19		30.000	18000	2.07000	2019-20	30.000	18000	0.96300	3.03300
		2019-20		20.000	12000	1.51800	2020-21	20.000	12000	0.70560	2.22360
Grand Total:				**86.332**	**51799**	**6.85788**		**86.332**	**51799**	**2.97655**	**9.83443**

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District Forest Officer,
Warangal (Urban) & Jangaon

BARREN HILL AFFORESTATION METHOD

ANNEXURE - 1

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3	c) Infrastructure (Hut, Pipelines, Water Tanks, Borewells etc.,)	Ls.	15.000
	Nurseries Total:		**24.834**
	Planting Activities:		
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5	Raising	86.332	41.309
6	1st Year Maintenance	86.332	13.165
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11	6th Year Maintenance	86.332	21.891
12	7th Year Maintenance	86.332	24.081
13	8th Year Maintenance	86.332	26.488
14	9th Year Maintenance	86.332	29.137
	Plantation Total :		**445.856**
	Other Works:		
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	20.000	60.000
16	Digging of Borewell, Fixing Motor with Connecting Pipelines	20.0	100.000
17	Construction of F.R.O. Quarter	1	25.000
18	Camping facilities for Officers- Construction of Guest House.	1	35.000
19	Construction of Protection cum Supervisory Huts/ Towers (2) Nos.	4	80.000
20	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A.Area.	7.52 Kms	63.563
21	Digging of Borewell with Solar Power System with connecting pipelines.	5.0	52.500
22	Catchment area treatment to the SMC works like SCT's, PT's and CD's are to be taken in the effected area.	Ls.	70.000
23	Engaging of Technical Person (Retired F.S.O.) for 5 Years	1	9.000
24	Engaging of Technical Asst./ Computer Operators (2) Nos. for 5 Years @ Rs.15,000/ Per month	2	18.000
25	Engaging of Protection Watchers (8) members for 10 years "6 x 9000 per month X 120 months"	8	103.680
26	Purchasing of Toyota Innova Vehicle (1) No. for C.F., Warangal for Forest Protection Purpose	1	22.000
27	Purchasing of Mahindra Scorpio Vehicle (1) No. for C.F., Warangal for Forest Protection Purpose	1	17.500
28	Administration & monitoring Cost (10%)	Ls.	44.586
	Other works Total :		**700.828**
	Grand Total :		**1171.519**

District Forest Officer,
Warangal (Urban) & Jangaon.

ANNEXURE - 2

YEAR WISE DETAILED ABSTRACT OF C.A. SCHEME IN BARREN HILL AFFORESTATION FOR 127.332 HA IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT.

S.No	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Nurseries																												
1	a) Raising of Primary beds & Bag plants	51799	6.858	21799	3.270	18000	2.070	12000	1.518																			51799	6.858
2	b) Maintenance of bag plants	51799	2.977	21799	1.308	18000	0.963	12000	0.706																			51799	2.977
	c) Nursery Infrastructure (Hut, Pipelines, Water Tanks, Borewells etc.,)	Ls	15.000		5.000		5.000		5.000																			Ls.	15.000
	Nurseries Total:		**24.834**		**9.578**		**8.033**		**7.224**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**				**24.834**
	Planting activities																												
4	Advance Operations	86.33	220.391	36.3	85.610	30.00	77.759	20.00	57.023																			86.33	220.391
5	Raising	86.33	41.309	36.3	16.046	30.00	14.575	20.00	10.688																			86.33	41.309
6	1st Year Maintenance	86.33	13.165			36.33	5.114	30.00	4.645	20.00	3.406																	86.33	13.165
7	2nd Year Maintenance	86.33	14.952					36.33	5.808	30.00	5.275	20.00	3.869															86.33	14.952
8	3rd Year Maintenance	86.33	16.448							36.33	6.389	30.00	5.803	20.00	4.256													86.33	16.448
9	4th Year Maintenance	86.33	18.092									36.33	7.028	30.00	6.383	20.00	4.681											86.33	18.092
10	5th Year Maintenance	86.33	19.902											36.33	7.731	30.00	7.022	20.00	5.149									86.33	19.902
11	6th Year Maintenance	86.33	21.891													36.33	8.504	30.00	7.724	20.00	5.664							86.33	21.891
12	7th Year Maintenance	86.33	24.081															36.33	9.354	30.00	8.496	20.00	6.231					86.33	24.081
13	8th Year Maintenance	86.33	26.488																	36.33	10.289	30.00	9.346	20.00	6.853			86.33	26.488
14	9th Year Maintenance	86.33	29.137																			36.33	11.318	30.00	10.280	20.0	7.539	86.33	29.137
	Plantation Total :	**127.33**	**445.856**	**72.7**	**101.656**	**96.33**	**97.447**	**106.3**	**78.164**	**86.33**	**15.071**	**86.3**	**16.699**	**86.3**	**18.369**	**86.33**	**20.206**	**86.33**	**22.227**	**86.33**	**24.449**	**86.33**	**26.894**	**50.00**	**17.134**	**20.0**	**7.539**	**127.33**	**445.856**
	Other Works																												
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	20.00	60.000	20.00	60.000																							20.000	60.000
16	Digging of Borewell, Fixing Motor with Connecting Pipelines.	20.00	100.000	12	60.000	8	40.000																					20.0	100.000

Sl.	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
17	Construction of F.R.O. Quarter	1	25.000	1	15.000		10.000																					1	25.000
18	Camping facilities for Officers- Construction of Guest House.	1	35.000	1	25.000		10.000																					1	35.000
19	Construction of Protection cum Supervisory Huts/ Towers (4) Nos.	4	80.000	2	40.000	2	40.000																					4	80.000
20	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A.Area.	7.52 Kms	63.563		23.563		20.000		20.000																			7.52 Kms	63.56280
	Digging of Borewell with Solar Power System with connecting pipelines.	5	52.500	2	21.000	2	21.000	1	10.500																			5	52.500
	Catchment area treatment to the SMC works like SCT's, PT's and CD's are to be taken in the effected area.	Ls.	70.000	Ls.	25.000	Ls.	20.000	Ls.	10.000	Ls.	10.000	Ls.	5.000															Ls.	70.000
	Engaging of Technical Person (Retired F.S.O.) for 5 Years	1	9.000	1	1.800	1	1.800	1	1.800	1	1.800	1	1.800															1	9.000
24	Engaging of Technical Asst./ Computer Operator (2) Nos. for 5 Years @ Rs.15,000/ Per month	2	18.000	2	3.600	2	3.600	2	3.600	2	3.600	2	3.600															2	18.000
25	Engaging of Protection Watchers (8) members for 10 years "5 x 9000 per month X 120 months	8	103.680	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	8.640	8	103.680
2	Purchasing of Toyota Innova Vehicle (1) No. for C.F., Warangal for Forest Protection Purpose.	1	22.000	1	22.000																							1	22.000

Sl. No	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
27	Purchasing of Mahindra Scorpio Vehicle (1) No. for D.F.O., Warangal (Urban) & Jangaon for Forest Protection Purpose.	1	17.500	1	17.500																							1	17.500
28	Administration & monitoring Cost (10%)	Ls.	44.586		10.166		9.745		7.816		1.507		1.670		1.837		2.021		2.223		2.445		2.689		1.713		0.754		44.586
	Other works Total :		**700.828**		**333.268**		**184.785**		**62.356**		**25.547**		**20.710**		**10.477**		**10.661**		**10.863**		**11.085**		**11.329**		**10.353**		**9.394**		**700.828**
	Grand Total :		**1171.519**		**444.502**		**290.265**		**147.744**		**40.618**		**37.409**		**28.846**		**30.867**		**33.090**		**35.534**		**38.224**		**27.487**		**16.933**		**1171.519**

District Forest Officer,
Warangal (Urban) & Jangaon.

ANNEXURE - 3

Unit Cost for Advance operations during 2016 - 17 under Pit and Planting Method as per FSR 2016 - 17

Sl. No.	FSR Item No.	Item of work	Units	Qty	Rate	Per	Amount
1	2	3	4	5	6	7	8
1	02.19.01	Survey with GPS (Only staff to carry out)) (Staff to carryout GPS Survey. One manday is allowed for assistance)	Rmt	1	311.04	1	311.00
2	02.19.03	Alignment and staking including laying base line in espacement 5m x 5m (400 Nos)	Nos	400	98.77	100	395
3	02.19.04	Cost of 0.45 M Stake preparation and transportation to site.	Nos	400	47.30	100	189
4	02.09.08	Digging of pits in hard Gravelly soils(January - March)					
		Digging of 100 cms x 100 cms x 100 cms	Nos	400	233.29	1	93316.00
5	SSR 2013-14 M-092	Earth cost or Compensation for earth taken from private lands	Cum	400	40	1	16000.00
6	SSR 2013-14	Transport to earth from private lands to plantation site including loading and unloading upto 5 Km lead	Cum	400	80.00	1	32000.00
7	SSR 2013-14	Transport to earth from private lands to plantation site including including loading and unloading beyond 5 Km - extra for every each Km. (15 Kms)	Cum	400	180.00	1	72000.00
		Unit cost for 2016 - 17		**Total:**			**214211**
		Unit cost for 2017 - 18		**Total:**			**235632**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNEXURE - 4

UNIT COST FOR RAISING OF HILL AFFORESTATION PLANTATION

400 Plants / Ha 5 Mts x 5 Mts Espacement

Sl. No	FSR code No.	Item of the Work.	Unit	Qty	Rate	Per	Amount
		Digging of Staggerred Contour trenches					
1	02.19.14	Digging of Staggerred Contourtrenches in hard Gravelly soils.	Cmt	250	272.71	1	68178
2		Filling of pits with tank silt	Nos	400	9351.36	1000	3741
	02.19.17	Transport of Bag plants plants from nursery site to plantation site including loading and unloading upto 5 Km lead					
3	A/a.	Cost of 20X30cm (8"X12") bag plants	Nos	400	40.00	1	16000
	02.19.19	Transport of Bag plants plants from Nursery site to plantation site including loading and unloading beyond 5 Km - extra for every each Km. (20 Kms)					
4	02.02.06	20X30cm (8"X12") bag plants	100 nos per km	400	135.00	100	540
	02.19.23	Internal transport of bag plants to planting points on head loads.					
5	02.02.12	20X30cm (8"X12") bag plants	Nos	400	117.94	100	472
		Planting bag plants					
6	Prop. Rate (02.20.04)	100cm X 100cm X 100cm pits	Nos	400	807.49	100	3230
7	02.20.02	Cost of SSP, Chloridine dust (50gm) or Chloropyriphos	A/a	400	1.00	1	400
8	02.20.01	Application of 50gm of SSP per pit (1 day before planting) for root growth and early establishment of plant after planting.	Nos	400	32.62	100	130
9	02.21.01	Dibbling of overnight-soaked Neem seeds, including cost of seeds on the mound	Nos	400	90.50	100	362
		Weeding & Soil working					
10	02.21.06	1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
11	02.21.07	2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
12	02.21.09	For hard gravelly soil	Nos	400	545.08	100	2180
13	02.19.25	Replacement of Casualties 20% during Raising (50% of rate of original pitting rate during raising year and 100% during maintenance years. Planting, Transportation and internal transportation as prescribed above).	Nos	80	1350.57	100	1080
14	02.21.04	Cost of DAP @ 25gm/planting point	A/a	400	1.00	1	400

Sl. No	FSR code No.	Item of the Work.	Unit	Qty	Rate	Per	Amount
15	02.21.04	Application of fertilizer in August (30days after planting) by making 3 holes of 10cm depth with crow bar holes at a distance of 10cm away from plant and putting fertilizers and closing.	Nos	400	32.62	100	130
16	02.21.10	Creation of Fire lines 3mts wide inside the plantation	Rmt	400	5.08	1	2032
17	02.21.11	Pruning of lower branch initials by scicature upto 1/3 rd height (to be undertaken during October)	Nos	400	103.19	100	413
18	02.21.12	Fencing the brush wood fencing with locally available thorny species is limited to length which is not covered by trench	Rmt	400	24.12	1	9648
19		Cost of publicity board including cost of board, painting charges, transportation, fixing etc.,	A/a	1	300.00	1	300
20	02.16.20	Watering the Plants manually	No.	400	539.35	100	2157
21	02.21.14	Watch & Ward (One watcher is allowed for 10 - 30 ha. plantation. If the area is less than 10 ha, prior approval of Conservator of Forests is required.)	Per Ha	1	7500.00	1	7500
						Unit cost for 2016 - 17	**119724**
						Unit cost for 2017 - 18	**131696**
						Unit cost for 2018 - 19	**144866**
						Unit cost for 2019 - 20	**159353**
						Unit cost for 2020 - 21	**175288**
						Unit cost for 2021 - 22	**192817**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNEXURE - 5

UNIT COST FOR 1ST YEAR MAINTENANCE OF HILL AFFORESTATION PLANTATION(Per Ha)

S. No.	FSR Code	Item of work	Unit	Quantity	Rate	Per	Amount
1	02.22.01	Replacement of Casualties 25% in 1st year	Nos	100	1467.21	100	1467
2	02.22.02	1st Circular weeding to a radius of 0.5 Mts around the plant after 30 days of planting (July - Aug)	Nos	100	103.79	100	104
3	02.22.03	2nd Circular weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	100	103.79	100	104
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
4	02.22.05	For hard gravelly soil	Nos	100	545.08	100	545
5	02.23.03	Pruning of lower branch initials by scicature upto 1/3 rd height (to be undertaken during October)	Nos	400	103.19	100	413
6	02.17.06	Watering the Plants manually	No.	400	539.35	100	2157
7	02.23.05	Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	I	9000.00	1	9000
						Unit cost for 2016 - 17	**13790**
						Unit cost for 2017 - 18	**15169**
						Unit cost for 2018 - 19	**16686**
						Unit cost for 2019 - 20	**18355**
						Unit cost for 2020 - 21	**20190**
						Unit cost for 2021 - 22	**22209**

District ~~Forest~~ Officer,
Warangal (Urban) & Jangaon

ANNEXURE - 6

UNIT COST FOR 2ND YEAR MAINTENANCE OF HILL AFFORESTATION PLANTATION (Per Ha)

S. No.	FSR Code	Item of work	Unit	Quantity	Rate	Per	Amount
1	02.24.01	1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2	02.24.02	2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3	02.24.04	For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
4	02.25.03	Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 7

UNIT COST FOR 3RD YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025-26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 8

UNIT COST FOR 4TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 9

UNIT COST FOR 5TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 10

UNIT COST FOR 6TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 11

UNIT COST FOR 7TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 12

UNIT COST FOR 8TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**
						Unit cost for 2026 - 27	**36748**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 13

UNIT COST FOR 9TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**
						Unit cost for 2026 - 27	**36748**
						Unit cost for 2027 - 28	**40423**

District Forest Officer,
Warangal (Urban) & Jangaon

M.S.Earth Movers
Developers
Door No.9-16-24,
Ahmedpura Colony,
Nizamabad.503 001.
Cell:+91-8686137867
Email:mohsifaisal4u@gmail.com

To
The Divisional Forest officer,
Medak Forest Division,
Medak.

ESTIMATE

S.No.	Particulars	Qty.	Amount
1	Blasting Cost	1mtr x 1mtr x 1mtr	450.00
2.	Colum Digging Excavator Charges	1mtr x 1mtr x 1mtr	300.00
	Total :		**750.00**

Terms & Conditions:

1.Minimum 1000 columns no transportation charges.
2.As per marking work will be done.

Copy to:
GSPL India Transco Limited (GITL)
GSPL Bhavan, GIDC Electronic Estate, Sector-26
Gandhi Nagar -380 028, Gurat, India.

M.S.Earth Movers
Developers

Total No. of beds and seedlings required to be raised from 2017-18 to 2019 - 20

Sl. No	Model	Espacement	Species	Area in Ha	No. of plants	Replacement of Casualities (20%)		Loss due to transportation (5%)	Grand Total no. of seedlings required	No. of beds required (500 seedling / bed)	Remarks
						Raising	Maint. Year				
1	Barren Hill Afforestation	Gap plantation	Misc.,	36.332	14533	2907	3633	727	21799	44	**2017-18**
				30.000	12000	2400	3000	600	18000	36	**2018-19**
				20.000	8000	1600	2000	400	12000	24	**2019-20**
Total:				**86.332**	**34533**	**6907**	**8633**	**1727**	**51799**	**104**	

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT OF NURSERIES

Sl. No.	Model	Year of raising	Target Area in Ha	Cost of raising of Nursery			Year of maintenance	Cost of Maint. of Nursery beds (April to July)			Total
				Phy. In Ha	Phy (Nos)	Fin		Phy. In Ha	Phy (Nos)	Fin	Fin
1	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	86.332 Ha	36.332	21799	3.26988	2018-19	36.332	21799	1.30795	4.57783
		2018-19		30.000	18000	2.07000	2019-20	30.000	18000	0.96300	3.03300
		2019-20		20.000	12000	1.51800	2020-21	20.000	12000	0.70560	2.22360
Grand Total:				**86.332**	**51799**	**6.85788**		**86.332**	**51799**	**2.97655**	**9.83443**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR ADVANCE WORKS FOR RAISING OF PLANTATIONS UNDER BARREN HILL AFFORESTATION METHOD

Sl. No	Model	Year of Advance operations	Target Area in Ha	Cost of Advance operations		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	86.332 Ha	36.332	2.35632	85.60982
		2018-19		30.000	2.59195	77.75856
		2019-20		20.000	2.85115	57.02294
Grand Total:				**86.332**		**220.39132**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR RAISING OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	Year of Raising	Target Area in Ha	Cost of raising		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	86.332 Ha	36.332	0.44166	16.04639
		2018-19		30.000	0.48583	14.57478
		2019-20		20.000	0.53441	10.68817
Grand Total:				**86.332**		**41.30934**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 1st - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	1st year maintenance	Target Area in Ha	Cost of 1st year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2018-19	86.332 Ha	36.332	0.14075	5.11373
		2019-20		30.000	0.15483	4.64475
		2020-21		20.000	0.17031	3.40615
			Grand Total:	**86.332**		**13.16463**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 2nd - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	2nd year maintenance	Target Area in Ha	Cost of 2nd year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2019-20	86.332 Ha	36.332	0.15986	5.80803
		2020-21		30.000	0.17585	5.27538
		2021-22		20.000	0.19343	3.86861
			Grand Total:	**86.332**		**14.95203**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 4th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	4th year maintenance	Target Area in Ha	Cost of 4th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2021 - 22	86.332 Ha	36.332	0.19343	7.02770
		2022 - 23		30.000	0.21277	6.38319
		2023 - 24		20.000	0.23405	4.68101
			Grand Total:	**86.332**		**18.09189**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 5th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	5th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2022 - 23	86.332 Ha	36.332	0.21278	7.73072
		2023 - 24		30.000	0.23406	7.02174
		2024 - 25		20.000	0.25746	5.14928
			Grand Total:	**86.332**		**19.90174**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 6th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	6th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2023 - 24	86.332 Ha	36.332	0.23405	8.50350
		2024 - 25		30.000	0.25746	7.72365
		2025 - 26		20.000	0.28320	5.66401
Grand Total:				**86.332**		**21.89116**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 7th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	7th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2024 - 25	86.332 Ha	36.332	0.25746	9.35404
		2025 - 26		30.000	0.28321	8.49618
		2026 - 27		20.000	0.31153	6.23053
Grand Total:				**86.332**		**24.08075**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 8th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	8th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2025 - 26	86.332 Ha	36.332	0.28320	10.28922
		2026 - 27		30.000	0.31152	9.34560
		2027 - 28		20.000	0.34267	6.85344
Grand Total:				**86.332**		**26.48826**

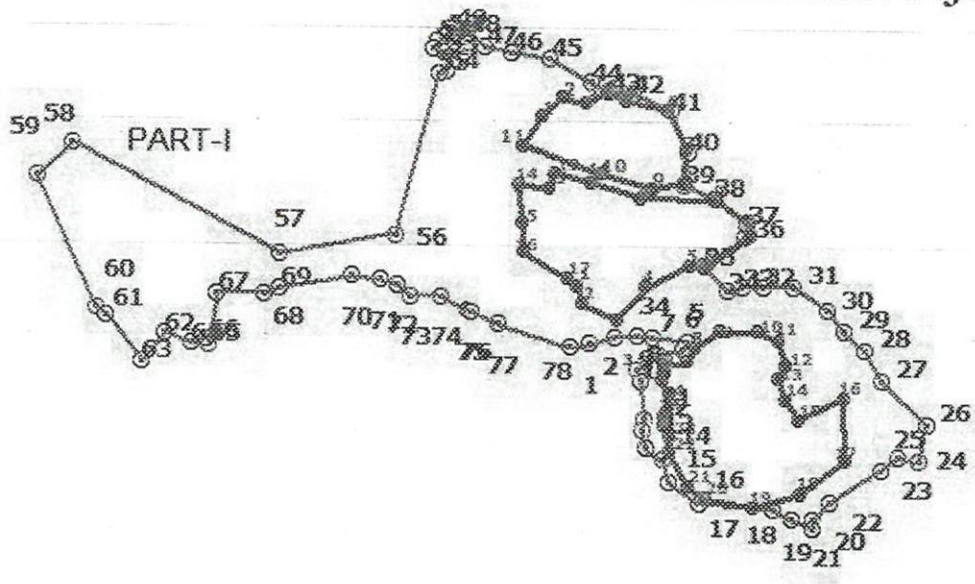
District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 9th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	9th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2026 - 27	86.332 Ha	36.332	0.31152	11.31814
		2027 - 28		30.000	0.34267	10.28016
		2028 - 29		20.000	0.37694	7.53878
Grand Total:				**86.332**		**29.13709**

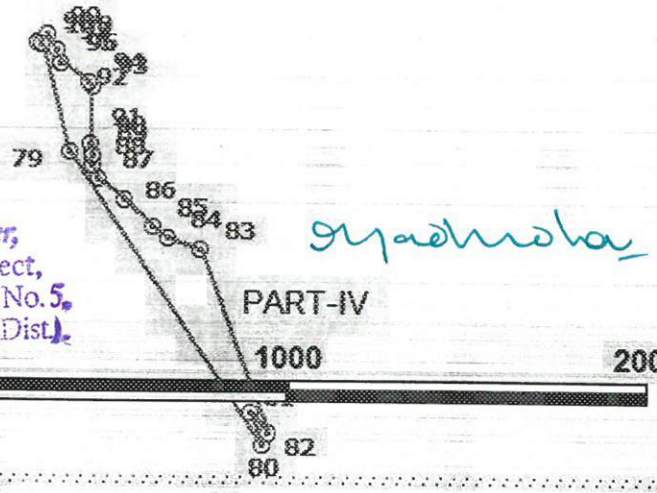
District Forest Officer,
Warangal (Urban) & Jangaon

Map showing proposed CA Land to be taken over in Gatlanarsingapur (V), Bheemadevarapally (M), Warangal Urban District in lieu of forest proposed for diversion for Kaleshwaram Project



1:20000

PART-I AREA: 116.99 HA
PART-IV AREA: 10.07 HA
TOTAL AREA : 127.06 HA



UN-WORKABLE AREA

PATCH - I AREA : 17.47 HA
PATCH - II AREA : 14.79 HA
PATCH - III AREA : 8.38 HA

TOTAL AREA : 40.64 HA

1000 0 1000 2000 Meters

Deputy Executive Engineer
Sub. Division No. 2
Construction Division No. 3
Jangaon

Executive Engineer,
Kaleshwaram Project,
Construction Division No. 5,
Jagadevpur, Siddipet (Dist).

Chief Engineer
Kaleshwaram Project
Jalasoudha Building,
Errum Manzil, Hyderabad.

GATLA NARSINGAPUR

Sl.No	P.No	Latitude	Longitude
1	1	18.09294	79.30439
2	2	18.09310	79.30498
3	3	18.09315	79.30556
4	4	18.09311	79.30596
5	5	18.09301	79.30682
6	6	18.09280	79.30670
7	7	18.09269	79.30610
8	8	18.09245	79.30577
9	9	18.09231	79.30556
10	10	18.09202	79.30564
11	11	18.09104	79.30576
12	12	18.09077	79.30568
13	13	18.09034	79.30580
14	14	18.09005	79.30621
15	15	18.08948	79.30639
16	16	18.08897	79.30711
17	17	18.08880	79.30897
18	18	18.08880	79.30897
19	19	18.08857	79.30944
20	20	18.08856	79.31001
21	21	18.08836	79.31001
22	22	18.09801	79.31043
23	23	18.08982	79.31168
24	24	18.09004	79.31265
25	25	18.09016	79.31213
26	26	18.09098	79.31283
27	27	18.09206	79.31170
28	28	18.09283	79.31128
29	29	18.09329	79.31074
30	30	18.09380	79.31334
31	31	18.09439	79.30948
32	32	18.09441	79.30872
33	33	18.09438	79.30820
34	34	18.09428	79.30782
35	35	18.09489	79.30721
36	36	18.09564	79.30823
37	37	18.09594	79.30829
38	38	18.09659	79.30745
39	39	18.09692	79.30668
40	40	18.09773	79.30679
41	41	18.09877	79.30635
42	42	18.09920	79.30542
43	43	18.09923	79.30482
44	44	18.09946	79.30435
45	45	18.10006	79.30333
46	46	18.10022	79.30236
47	47	18.10036	79.30172
48	48	18.10066	79.30129
49	49	18.10086	79.30092
50	50	18.10065	79.30080

Sl.No	P.No	Latitude	Longitude	
51	51	18.10050	79.30053	
52	52	18.10030	79.30044	
53	53	18.10019	79.30072	
54	54	18.09973	79.30076	
55	55	18.09968	79.30055	
56	310	18.09565	79.29950	
57	309	18.09515	79.29663	
58	321	18.09785	79.29144	
59	320	18.09704	79.29055	
60	276	18.09379	79.29202	
61	277	18.09358	79.29230	
62	278	18.09313	79.29375	
63	279	18.09245	79.29318	
64	284	18.09291	79.29441	
65	285	18.09288	79.29486	
66	286	18.09300	79.29482	
67	287	18.09416	79.29506	
68	288	18.09417	79.29623	
69	289	18.09430	79.29662	
70	290	18.09461	79.29840	
71	291	18.09451	79.29913	
72	292	18.09439	79.29955	
73	293	18.09411	79.29989	
74	294	18.09411	79.30065	
75	295	18.09376	79.30132	
76	296	18.09373	79.30141	
77	297	18.09342	79.30207	
78	298	18.09285	79.30391	
79	299	18.07637	79.29507	PART-IV
80	197	18.06901	79.29992	
81	198	18.06983	79.29968	
82	199	18.06928	79.30009	
83	200	18.07390	79.29837	
84	201	18.07420	79.29755	
85	202	18.07447	79.29720	
86	203	18.07518	79.29645	
87	204	18.07567	79.29582	
88	205	18.07601	79.29565	
89	206	18.07635	79.29567	
90	207	18.07654	79.29563	
91	208	18.07624	79.29565	
92	209	18.07796	79.29564	
93	210	18.07798	79.29565	
94	211	18.07808	79.29556	
95	212	18.07857	79.29486	
96	213	18.07856	79.29487	
97	214	18.07885	79.29474	
98	215	18.07908	79.29428	
99	216	18.07926	79.29451	
100	300	18.07902	79.29437	

PATCH-I (17.47 Ha)

S.No	Latitude	Longitude
1	18.09091	79.30621
2	18.09117	79.30624
3	18.09131	79.30632
4	18.09172	18.30637
5	18.09204	79.30617
6	18.09242	79.30623
7	18.09251	79.30682
8	18.09288	79.30700
9	18.09329	79.30762
10	18.09329	79.30855
11	18.09305	79.30908
12	18.09246	79.30928
13	18.09211	79.30908
14	18.09157	79.30929
15	18.09107	79.30961
16	18.09164	79.31074
17	18.09006	79.31079
18	18.08922	79.30967
19	18.08887	79.30848
20	18.08909	79.30726
21	18.08940	79.30685
22	18.09026	79.30637
23	18.09064	79.30638

PATCH-II (14.79 Ha)

S.No	Latitude	Longitude
1	18.09439	79.30406
2	18.09395	79.30417
3	18.09354	79.30502
4	18.09437	79.30577
5	18.09492	79.30685
6	18.09490	79.30728
7	18.09566	79.30835
8	18.09600	79.30830
9	18.09654	79.30751
10	18.09660	79.30562
11	18.09696	79.30435
12	18.09722	79.30346
13	18.09681	79.30334
14	18.09690	79.30255
15	18.09594	79.30268
16	18.09523	79.30269
17	18.09456	79.30378

PATCH-III (8.38 Ha)

S.No	Latitude	Longitude
1	18.09861	79.30313
2	18.09908	79.30366
3	18.09894	79.30424
4	18.09926	79.30576
5	18.09903	79.30523
6	18.09877	79.30627
7	18.09791	79.30707
8	18.09700	79.30678
9	18.09684	79.30590
10	18.09718	79.30463
11	18.09788	79.30267

COMPENSATORY AFFORESTATION SCHEME FOR 50.443 HA

(FROM 2017-18 TO 2028-29)

IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT TELANGANA

IN ADDITION TO THE

DIVERSION OF 177.775 HA OF FOREST LAND FOR KALESHWARAM PROJECT IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT

ABSTRACT

Sl. No	Model	Area in Ha	Espacement
1	Barren Hill Afforestation Method	50.443	GAP PLANTATION 400 PLANTS PER HA
Total :		**50.443**	

COMPREHENSIVE SCHEME FOR COMPENSATORY AFFORESTATION FOR KALESHWARAM PROJECT, IN RESPECT OF EXECUTIVE ENGINEER, I & CAD, KALESHWARAM PROJECT CONSTN, DIVN.NO.3, IN WARANGAL (URBAN) DISTRICT OF TELANGANA

1) Introduction of the Scheme:-

The Executive Engineer, I & CADD, Kaleshwaram Project Construction Div.No.3 has submitted proposals for diversion of 3221.2971 Ha of Forest land in (8) different Forest Divisions in different districts of Telangana State for construction of Canals, Tunnels, Lift Irrigation systems and Reservoirs involving the Kaleshwaram Project.

The Non – Forest land of 50.443 Ha., was identified in Warangal (Urban) District in Sy.No.197 – 37.906 Ha of Mulkanoor village, Sy.No.124 – 12.537 Ha of Mutharam Village **Totaling: 50.443 Ha** of Bheemdevarapally Mandal of Warangal (Urban) District in the jurisdiction of Elkathurthy Range of District Forest Officer, Warangal (Urban) District. The User Agency has submitted an Undertaking given by the District Collector & Magistrate, Warangal (Urban) District Dt:10.03.2017 duly certifying that, the above said lands are Government Revenue Lands and are free from all encumbrances and encroachments. The said lands are not assigned to any individuals/ organizations and further stated that the above said land will be transferred and mutated in the name of the Forest Department and handed over to the Forest Department on receipt of Stage-I approval under Forest (Conservation) Act,1980 for the said project in lieu of diversion of forest land for the proposed Kaleshwaram Project in (8) Districts duly handing over the Compensatory Afforestation land of 50.443 Ha., which is part of the Non–Forest land of 177.775 Ha in Warangal District in the jurisdiction of Elkathurthy Range of Warangal (Urban) District on 14-03-2017. The survey number wise land details are as follows :

Sl. No.	Name of the Village	Sy.No.	Extent	
			Acres	Hectares
1	Mulukanoor	197	93.67	37.906
2	Mutharam	124	30.98	12.537
	TOTAL :			**50.443**

1) Suitability of the Area:-

The proposed C.A. Land is Non forest land of 50.443 Ha., is mainly hills and stones with trees and shrubs and the fringe area of the hill is a small hillock with boulders

and rocks and very less existed tree growth viz., Vepa, Moduga, Balusu, Rela and thorny bushes. The area is suitable for protection purpose and SMC works like check dams, percolation tanks, Continuous contour trenches and Rock fill dams. In view of the above stated reasons the above identified land in Sy.No.197 – 37.906 Ha of Mulukanoor village, Sy.No.124 – 12.537 Ha of Mutharam Village **Totaling: 50.443 Ha** is suitable for taking up SMC works besides protecting the same from wildlife point of view. As per the instructions of the Prl. Chief Conservator of Forests, A.P., Hyderabad Rc.No.54480/2008/F4, Dt.16.11.2008 has issued instructions as **"Not to reject Non-forest land offered for Compensatory Afforestation unless it is a sheet rock and cannot be afforested by adopting any site specific suitable afforestation techniques".** In view of the above recommended to consider the above Compensatory Afforestation land and to protect the C.A. Area from further degradation and carrying out soil and moisture conservation works and digging of staggered contour trenches to protect the land in view of wildlife importance and ecological balance.

The Compensatory Afforestation is proposed in the project with an outlay of **Rs.836.004 Lakhs**. The following item of works are proposed viz., Raising and maintenance of Primary beds & Bag plants Nursery, Nursery Infrastructure, Advance Operations for raising of Miscellaneous Plantations, Raising of Barren Hill Afforestation and their maintenance for (9) years. Some of the areas are having rocky boulders which requires blasting for pitting and planting. The Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha for 15.00 Ha, Digging of (10) Nos. Bore wells, Fixing Motor with Connecting Pipelines, Construction of Water Tanks (30,000 Ltrs Capacity) including connecting pipelines @ Rs.20.00 lakhs per Tank, Construction of F.S.O. Quarter, Construction of F.B.O. Quarter, Construction of (2) Nos. Protection cum Supervisory Huts/ Towers, Fixing of 2.50 Metres height Hot dipped Galvanized Iron Chain Link fencing around the 3.80 Kms periphery of the C.A. Area is proposed since it is very much essential because of the wildlife protection and also due to agricultural land surrounding the area for protection, Digging of (3) No. Bore wells with Solar Power system for recharging the Percolation tank for providing water in summer season to the Wild animals. Catchment area treatment to the SMC works like Staggered Contour Trenches (SCT's), Percolation Tanks (PT's) and Check dams (CD's) are to be taken in the area for supporting growth of the natural vegetation, Engaging of Technical Person (Retired F.S.O.) for (5) Years, Engaging of Technical Asst./ Computer Operator (1) No. for 5 Years, Purchasing of Mahindra Thar Jeeps (2) Nos. for Forest Protection and

vigilance purpose, Engaging of Protection Watchers (5) members for (10) years and Administration & Monitoring Cost (10%) etc.,

2) Planting Techniques :-

The proposed C.A. area is mostly hilly and stone area hills, trees and shrubs. In view of the suitability and management point of view, it is proposed to take up, part of the area with trench cum pitting and planting and part of the area with blasting and pitting and planting. The blasting cost of the rocky area and column digging excavator charges is @ 3.00 Lakhs per Ha. Further it is proposed to fill the column by importing red soil and making the saucer around the respective columns which is suitable for raising of the plantation with Miscellaneous Forestry species under Barren Hill Afforestation Method in 50.443 Ha each at an espacement of 5M x 5M.

The plantation under this scheme is proposed to be raised by adopting Labour intensive method. Miscellaneous Forestry species plantations will be taken up under labour intensive method.

One Circular weeding, Circular weeding cum deep soil working are provided. The Plantations will be provided with (5) Nos. of Watchers up to 10th year maintenance of plantations. The entire area of C.A. will be planted within Three years i.e., during 2017–18 and 2019-20.

3) Scheme Implementation Agency :-

The District Forest Officer, Warangal (Urban) & Jangaon will be the project implementation and monitoring agency and works will be taken up through the concerned Forest Range Officer.

Raising of C.A. Plantations essentially requires additional man power. Hence, it is proposed to hire the services of (2) Nos. Technical Asst./ Computer Operators for the project period. Accordingly provisions are made in the scheme.

4) Monitoring Mechanism :-

The District Forest Officer, Warangal (Urban) & Jangaon and Conservator of Forests, Warangal Circle, Warangal will be closely monitor the implementation of C.A. Scheme by regular inspections and ensuing maintenance of connected records like Nursery Journals, Plantation Journals, Cash Books, Work Registers, Measurement Books and other records etc.,

Monthly Progress of Planting and Maintenance along with expenditure will be submitted to the Prl. Chief Conservator of Forests, Telangana, Hyderabad. Other Senior Officers of Forest Department of Telangana and Chief Conservator of Forests (Central), Bangalore will also be monitoring the implementation of the C.A. Scheme.

5) Period of the Scheme :-

Period of the Scheme is for (10) years which includes 1st year of Nursery raising, 1st year raising of miscellaneous Plantation and (9) years of maintenance of Plantations commencing from 2018 - 19 to 2026 - 27.

6) Cost Structure:-

The cost of the scheme is worked out adopting present F.S.R. of 2016 - 17 and wage structure of Rs.509/- per day (as approved by the District Collector, Warangal (Urban). The Total year wise Cost Structure of the project to an extent of 50.443 Ha., is shown in Annexure – 1. The details of requirement of funds and year wise Action Plan are shown in Annexure – 2. Unit costs of different planting techniques are shown in Annexure – 3 to 13. The **ABSTRACT** of the scheme is as follows:

ANNEXURE - 1

YEAR WISE DETAILED ABSTRACT OF C.A. SCHEME IN BARREN HILL AFFORESTATION FOR 50.443 HA IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT

Sl. No	Item of Work	Total Outlay	
		Phy	Fin
	Nurseries:		
1	a) Raising of Primary beds & Bag plants	30266	3.979
2	b) Maintenance of bag plants	30266	1.731
3	c) Infrastructure (Hut, Pipelines, Water Tanks, Bore wells etc.,)	Ls.	15.000
	Nurseries Total:		**20.710**
	Planting Activities:		
4	Advance Operations	50.443	128.521
5	Raising	50.443	71.831
6	1st Year Maintenance	50.443	8.274
7	2nd Year Maintenance	50.443	10.286
8	3rd Year Maintenance	50.443	11.314
9	4th Year Maintenance	50.443	12.446
10	5th Year Maintenance	50.443	13.690
11	6th Year Maintenance	50.443	15.059
12	7th Year Maintenance	50.443	16.565
13	8th Year Maintenance	50.443	18.221

14	9th Year Maintenance	50.443	20.043
	Plantation Total :		**326.250**
	Other Works:		
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	15.00	45.000
16	Digging of Bore wells, Fixing Motor with Connecting Pipelines.	10.0	50.000
17	Construction of Water Tanks (30,000 Ltrs Capacity) including connecting pipelines @ Rs.20.00 lakhs per Tank	3	60.000
18	Construction of F.S.O. Quarter	1	23.00
19	Construction of F.B.O. Quarter	1	20.00
20	Construction of Protection cum Supervisory Huts/ Towers (2) Nos.	2	40.000
21	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A.Area.	3.80 Kms	32.120
22	Digging of Borewell with Solar Power system.	3	31.500
23	Catchment area treatment to the SMC works like SCT's, PT's and CD's are to be taken in the effected area.	Ls.	50.000
24	Engaging of Technical Person (Retired F.S.O.) for 5 Years	1	9.000
25	Engaging of Technical Asst./ Computer Operators (2) Nos. for 5 Years @ Rs.15,000/ Per month	2	18.000
26	Engaging of Protection Watchers (5) members for 10 years "6 x 9000 per month X 120 months"	5	64.800
27	Purchasing of Mahindra Thar Jeeps for protection purpose.	2	13.000
28	Administration & monitoring Cost (10%)	Ls.	32.625
	Other works Total :		**489.044**
	Grand Total:		**836.004**

Total No. of beds and seedlings required to be raised from 2017-18 to 2019 - 20

Sl. No.	Model	Es-pacement	Species	Area in Ha	No. of plants	Replacement of Casualities (20%)		Loss due to trans-portation (5%)	Grand Total no. of seedlings required	No. of beds required (500 seedling / bed)	Remarks
						Raising	Maint. Year				
1	Barren Hill Afforestation	Gap plantation	Misc.,	20.443	8177	1635	2044	409	12266	25	**2017-18**
				20.000	8000	1600	2000	400	12000	24	**2018-19**
				10.000	4000	800	1000	200	6000	12	**2019-20**
Total:				**50.443**	**20177**	**4035**	**5044**	**1009**	**30266**	**61**	

ABSTRACT OF NURSERIES

Sl. No.	Model	Year of raising	Target Area in Ha	Cost of raising of Nursery			Year of mainte-nance	Cost of Maint. of Nursery beds (April to July)			Total
				Phy. In Ha	Phy (Nos)	Fin		Phy. In Ha	Phy (Nos)	Fin	Fin
I	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	50.443 Ha	20.443	12266	1.83987	2018-19	20.443	12266	0.73595	2.57582
		2018-19		20.000	12000	1.38000	2019-20	20.000	12000	0.64200	2.02200
		2019-20		10.000	6000	0.75900	2020-21	10.000	6000	0.35280	1.11180
Grand Total:				**50.443**	**30266**	**3.97887**		**50.443**	**30266**	**1.73075**	**5.70962**

SMC Works : SMC works like Staggered Contour Trenches (SCT's), Percolation Tanks (PT's) and Check Dams (CD's) are to be taken in the affected area. These structures will be constructed in the specified locations as a measure of Soil Moisture Conservation works. These structures will increase and improve the available ground water table in that area.

ii) PROVISION OF FUNDS AND THE MECHANISM TO ENSURE THAT THE FUNDS WILL BE UTILIZED FOR RAISING AFFORESTATION.

The funds will be utilized from the funds to be deposited by the Chief Engineer, Kaleshwaram Project, Jalasoudha Building, Errum Manzil, Hyderabad towards the Compensatory Afforestation.

6. Details of proposed monitoring mechanism.

The concerned Forest Beat Officer and the Forest Section Officer will execute the works proposed under the guidance of the Forest Range Officer, Elkathurthy Supervised by the District Forest Officer, Conservator of Forests, Warangal Circle, Warangal and other Higher Officers. The Plantation model wise, year wise activities and their unit costs worked out and annexed.

Divisional Forest Officer,
Warangal (Urban) & Jangaon

ANNEXURE - 1

YEAR WISE DETAILED ABSTRACT OF C.A. SCHEME IN BARREN HILL AFFORESTATION FOR 50.443 HA IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT

Sl. No	Item of Work	Total Outlay	
		Phy	Fin
	Nurseries:		
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3	c) Infrastructure (Hut, Pipelines, Water Tanks, Borewells etc.,)	Ls.	15.000
	Nurseries Total:		**20.710**
	Planting Activities:		
4	Advance Operations	50.443	128.521
5	Raising	50.443	71.831
6	1st Year Maintenance	50.443	8.274
7	2nd Year Maintenance	50.443	10.286
8	3rd Year Maintenance	50.443	11.314
9	4th Year Maintenance	50.443	12.446
10	5th Year Maintenance	50.443	13.690
11	6th Year Maintenance	50.443	15.059
12	7th Year Maintenance	50.443	16.565
13	8th Year Maintenance	50.443	18.221
14	9th Year Maintenance	50.443	20.043
	Plantation Total :		**326.250**
	Other Works:		
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	15.00	45.000
16	Digging of Borewell, Fixing Motor with Connecting Pipelines.	10.0	50.000
17	Construction of Water Tanks (30.000 Ltrs Capacity) including connecting pipelines @ Rs.20.00 lakhs per Tank	3	60.000
18	Construction of F.S.O. Quarter	1	23.00
19	Construction of F.B.O. Quarter	1	20.00
20	Construction of Protection cum Supervisory Huts/ Towers (2) Nos.	2	40.000
21	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of the C.A.Area.	3.80 Kms	32.120
22	Digging of Borewell with Solar Power System with connecting	3	31.500
23	Catchment area treatment to the SMC works like SCT's, PT's and CD's are to be taken in the effected area.	Ls.	50.000
24	Engaging of Technical Person (Retired F.S.O.) for 5 Years	1	9.000
25	Engaging of Technical Asst./ Computer Operators (2) Nos. for 5 Years @ Rs.15,000/ Per month	2	18.000
26	Engaging of Protection Watchers (5) members for 10 years "6 x 9000 per month X 120 months"	5	64.800
27	Purchasing of Mahindra Thar Jeeps for protection purpose.	2	13.000
28	Administration & monitoring Cost (10%)	Ls.	32.625
	Other works Total :		**489.044**
	Grand Total:		**836.004**

District Forest Officer,
Warangal (Urban) & Jangaon.

ANNEXURE - 2

YEAR WISE DETAILED ABSTRACT OF C.A. SCHEME IN BARREN HILL AFFORESTATION FOR 50.443 HA IN ELKATHURTHY RANGE OF WARANGAL (URBAN) DISTRICT.

Sl. No	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
	Nurseries																												
	a) Raising of Primary beds & Bag plants	30266	3.979	12266	1.840	12000	1.380	6000	0.759																			30266	3.979
	b) Maintenance of bag plants	30266	1.731	12266	0.736	12000	0.642	6000	0.353																			30266	1.731
3	c) Nursery Infrastructure (Hut, Pipelines, Water Tanks, Borewells etc.,)	Ls	15.000		5.000		5.000		5.000																			Ls.	15.000
	Nurseries Total:		**20.710**		**7.576**		**7.022**		**6.112**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**		**0.000**				**20.710**
	Planting activities																												
4	Advance Operations	50.443	128.521	20.443	48.170	20.00	51.839	10.00	28.511																			50.44	128.521
5	Raising	50.443	71.831	20.443	26.923	20.00	28.973	10.00	15.935																			50.44	71.831
6	1st Year Maintenance	50.443	8.274			20.443	3.101	20.00	3.337	10.00	1.835																	50.44	8.274
7	2nd Year Maintenance	50.443	10.286					20.44	3.855	20.00	4.149	10.00	2.282															50.44	10.286
8	3rd Year Maintenance	50.443	11.314							20.44	4.240	20.00	4.563	10.00	2.510													50.44	11.314
9	4th Year Maintenance	50.443	12.446									20.44	4.665	20.00	5.020	10.00	2.761											50.44	12.446
10	5th Year Maintenance	50.443	13.690											20.44	5.131	20.00	5.522	10.00	3.037									50.44	13.690
11	6th Year Maintenance	50.443	15.059													20.44	5.644	20.00	6.074	10.00	3.341							50.44	15.059
12	7th Year Maintenance	50.443	16.565															20.44	6.209	20.00	6.681	10.00	3.675					50.44	16.565
13	8th Year Maintenance	50.443	18.221																	20.44	6.829	20.00	7.350	10.00	4.042			50.44	18.221
14	9th Year Maintenance	50.443	20.043																			20.44	7.512	20.00	8.085	10.0	4.447	50.44	20.043
	Plantation Total:	**50.44**	**326.250**	**40.9**	**75.093**	**60.44**	**83.913**	**60.4**	**51.639**	**50.44**	**10.225**	**50.4**	**11.510**	**50.4**	**12.661**	**50.44**	**13.927**	**50.44**	**15.320**	**50.44**	**16.852**	**50.44**	**18.537**	**30.00**	**12.127**	**10.0**	**4.447**	**127.33**	**326.250**
	Other Works																												
15	Blasting cost of Rock and column digging excavator charges @ 3.00 Lakhs per Ha.	15.0	45.000	15.0	45.000																							15.000	45.000
16	Digging of Borewell, Fixing Motor with Connecting Pipelines.	10	50.000	4	20.000	3	15.000	3	15.000																			10	50.000

S.. No	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
17	Construction of Water Tanks (30,000 Ltrs Capacity) including connecting pipelines @ Rs.20.00 lakhs per Tank	3	60.000	2	40.000	1	20.000																					3	60.000
18	Construction of F.S.O. Quarter	1	23.000	1	13.000		10.000																					1	23.000
19	Construction of F.B.O. Quarter	1	20.000	1	10.000		10.000																					1	20.000
2(	Construction of Protection cum Supervisory Huts/ Towers (2) Nos.	2	40.000	1	20.000	1	20.000																					2	40.000
21	Fixing of Hot dipped Galvanized Iron Chain Link mesh around the periphery of he C.A.Area.	3.80 Kms	32.120	3.80	32.120																							3.80 Kms	32.11950
22	Digging of Borewell vith Solar Power System with connecting ipelines.	3	31.500	2	21.000	1	10.500																					3	31.500
23	Catchment area reatment to the SMC works like SCT's, PT's nd CD's are to be taken in the effected area.	Ls.	50.000	Ls.	15.000	Ls.	10.000	Ls.	10.000	Ls.	10.000	Ls.	5.000															Ls.	50.000
24	ngaging of Technical Person (Retired F.S.O.) r 5 Years	1	9.000	1	1.800	1	1.800	1	1.800	1	1.800	1	1.800															1	9.000
25	Engaging of Technical sst./ Computer Operator (2) Nos. for 5 Years @ Rs.15,000/ Per onth	2	18.000	2	3.600	2	3.600	2	3.600	2	3.600	2	3.600															2	18.000
26	ngaging of Protection vatchers (5) members for 10 years "5 x 9000 r month X 120 months	5	64.800	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	5.400	5	64.800

Sl. No	Item of Work	Total Outlay		2017 - 18		2018 - 19		2019 - 20		2020 - 21		2021 - 22		2022 - 23		2023 - 24		2024 - 25		2025 - 26		2026 - 27		2027 - 28		2028 - 29		Grand Total	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
2	Purchasing of Mahindra Thar Jeep for Forest protection purpose.	2	13.000	1	6.500	1	6.500																					2	13.000
2a	Administration & monitoring Cost (10%)	Ls.	32.625		7.509		8.391		5.164		1.022		1.151		1.266		1.393		1.532		1.685		1.854		1.213		0.445		32.625
	Other works Total:		**489.044**		**240.929**		**121.191**		**40.964**		**21.822**		**16.951**		**6.666**		**6.793**		**6.932**		**7.085**		**7.254**		**6.613**		**5.845**		**489.044**
	Grand Total :		**836.004**		**323.598**		**212.127**		**98.715**		**32.047**		**28.461**		**19.327**		**20.720**		**22.252**		**23.937**		**25.790**		**18.739**		**10.291**		**836.004**

District Forest Officer,
Warangal (Urban) & Jangaon.

BARREN HILL AFFORESTATION METHOD

ANNEXURE - 3

Unit Cost for Advance operations during 2016 - 17 under Pit and Planting Method as per FSR 2016 - 17

Sl. No.	FSR Item No.	Item of work	Units	Qty	Rate	Per	Amount
1	2	3	4	5	6	7	8
1	02.19.01	Survey with GPS (Only staff to carry out)) (Staff to carryout GPS Survey. One manday is allowed for assistance)	Rmt	1	311.04	1	311.00
2	02.19.03	Alignment and staking including laying base line in espacement 5m x 5m (400 Nos)	Nos	400	98.77	100	395
3	02.19.04	Cost of 0.45 M Stake preparation and transportation to site.	Nos	400	47.30	100	189
4	02.09.08	Digging of pits in hard Gravelly soils(January - March)					
		Digging of 100 cms x 100 cms x 100 cms	Nos	400	233.29	1	93316.00
5	SSR 2013-14 M-092	Earth cost or Compensation for earth taken from private lands	Cum	400	40	1	16000.00
6	SSR 2013-14	Transport to earth from private lands to plantation site including loading and unloading upto 5 Km lead	Cum	400	80.00	1	32000.00
7	SSR 2013-14	Transport to earth from private lands to plantation site including including loading and unloading beyond 5 Km - extra for every each Km. (15 Kms)	Cum	400	180.00	1	72000.00
		Unit cost for 2016 - 17		**Total:**			**214211**
		Unit cost for 2017 - 18		**Total:**			**235632**

District Forest Officer,
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ANNEXURE - 4

UNIT COST FOR RAISING OF HILL AFFORESTATION PLANTATION

400 Plants / Ha 5 Mts x 5 Mts Espacement

Sl. No	FSR code No.	Item of the Work.	Unit	Qty	Rate	Per	Amount
		Digging of Staggerred Contour trenches					
1	02.19.14	Digging of Staggerred Contourtrenches in hard Gravelly soils.	Cmt	250	272.71	1	68178
2		Filling of pits with tank silt	Nos	400	9351.36	1000	3741
	02.19.17	Transport of Bag plants plants from nursery site to plantation site including loading and unloading upto 5 Km lead					
3	A/a.	Cost of 20X30cm (8"X12") bag plants	Nos	400	40.00	1	16000
	02.19.19	Transport of Bag plants plants from Nursery site to plantation site including loading and unloading beyond 5 Km - extra for every each Km. (20 Kms)					
4	02.02.06	20X30cm (8"X12") bag plants	100 nos per km	400	135.00	100	540
	02.19.23	Internal transport of bag plants to planting points on head loads.					
5	02.02.12	20X30cm (8"X12") bag plants	Nos	400	117.94	100	472
		Planting bag plants					
6	Prop. Rate (02.20.04)	100cm X 100cm X 100cm pits	Nos	400	807.49	100	3230
7	02.20.02	Cost of SSP, Chloridine dust (50gm) or Chloropyriphos	A/a	400	1.00	1	400
8	02.20.01	Application of 50gm of SSP per pit (1 day before planting) for root growth and early establishment of plant after planting.	Nos	400	32.62	100	130
9	02.21.01	Dibbling of overnight-soaked Neem seeds, including cost of seeds on the mound	Nos	400	90.50	100	362
		Weeding & Soil working					
10	02.21.06	1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
11	02.21.07	2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
12	02.21.09	For hard gravelly soil	Nos	400	545.08	100	2180
13	02.19.25	Replacement of Casualties 20% during Raising (50% of rate of original pitting rate during raising year and 100% during maintenance years. Planting, Transportation and internal transportation as prescribed above).	Nos	80	1350.57	100	1080
14	02.21.04	Cost of DAP @ 25gm/planting point	A/a	400	1.00	1	400

ANNEXURE - 5

UNIT COST FOR 1ST YEAR MAINTENANCE OF HILL AFFORESTATION PLANTATION(Per Ha)

S. No.	FSR Code	Item of work	Unit	Quantity	Rate	Per	Amount
1	02.22.01	Replacement of Casualties 25% in 1st year	Nos	100	1467.21	100	1467
2	02.22.02	1st Circular weeding to a radius of 0.5 Mts around the plant after 30 days of planting (July - Aug)	Nos	100	103.79	100	104
3	02.22.03	2nd Circular weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	100	103.79	100	104
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
4	02.22.05	For hard gravelly soil	Nos	100	545.08	100	545
5	02.23.03	Pruning of lower branch initials by scicature upto 1/3 rd height (to be undertaken during October)	Nos	400	103.19	100	413
6	02.17.06	Watering the Plants manually	No.	400	539.35	100	2157
7	02.23.05	Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**13790**
						Unit cost for 2017 - 18	**15169**
						Unit cost for 2018 - 19	**16686**
						Unit cost for 2019 - 20	**18355**
						Unit cost for 2020 - 21	**20190**
						Unit cost for 2021 - 22	**22209**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNEXURE - 6

UNIT COST FOR 2ND YEAR MAINTENANCE OF HILL AFFORESTATION PLANTATION (Per Ha)

S. No.	FSR Code	Item of work	Unit	Quantity	Rate	Per	Amount
1	02.24.01	1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2	02.24.02	2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3	02.24.04	For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
4	02.25.03	Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 7

UNIT COST FOR 3RD YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025-26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 8

UNIT COST FOR 4TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
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ANNXURE - 9

UNIT COST FOR 5TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
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ANNXURE - 10

UNIT COST FOR 6TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 11

UNIT COST FOR 7TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**

District Forest Officer,
Warangal (Urban) & Jangaon

ANNXURE - 12

UNIT COST FOR 8TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is required. Provided the survival is 80% at the end of raising year.)	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**
						Unit cost for 2026 - 27	**36748**

District Forest Officer,
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ANNXURE - 13

UNIT COST FOR 9TH YEAR MAINTENANCE OF HILL AFFORESTATION

Sl. No.	FSR code No.	Description of item of the Work.	Unit	Qty	Rate	Per	Amount
1		1st Ciriclar weeding to a radius of 0.5 Mts around the plant after 30days of planting (July - Aug)	Nos	400	103.79	100	415
2		2nd Ciriclar weeding to a radius of 0.5 Mts around the plant after 90days of planting (Sept-Oct)	Nos	400	103.79	100	415
		Deep soil working to a radius of 0.5 m and to a depth of 10cm (to be carried out during Nov - Dec)					
3		For hard gravelly soil	Nos	400	545.08	100	2180
4	02.18.01	Watering the Plants manually	No.	400	539.35	100	2157
5		Watch & Ward (One watcher is allowed for 20 ha. plantation. If the area is less prior approval of Conservator of Forests is	Per Ha	1	9000.00	1	9000
						Unit cost for 2016 - 17	**14168**
						Unit cost for 2017 - 18	**15585**
						Unit cost for 2018 - 19	**17143**
						Unit cost for 2019 - 20	**18858**
						Unit cost for 2020 - 21	**20743**
						Unit cost for 2021 - 22	**22818**
						Unit cost for 2022 - 23	**25100**
						Unit cost for 2023 - 24	**27610**
						Unit cost for 2024 - 25	**30370**
						Unit cost for 2025 - 26	**33407**
						Unit cost for 2026 - 27	**36748**
						Unit cost for 2027 - 28	**40423**

District Forest Officer,
Warangal (Urban) & Jangaon

M.S.Earth Movers Developers
Door No.9-16-24,
Ahmedpura Colony,
Nizamabad.503 001.
Cell:+91-8686137867
Email:mohsifaisal4u@gmail.com

To
The Divisional Forest officer,
Medak Forest Division,
Medak.

ESTIMATE

S.No.	Particulars	Qty.	Amount
1	Blasting Cost	1mtr x 1mtr x 1mtr	450.00
2.	Colum Digging Excavator Charges	1mtr x 1mtr x 1mtr	300.00
	Total :		**750.00**

Terms & Conditions:

1.Minimum 1000 columns no transportation charges.
2.As per marking work will be done.

Copy to:
GSPL India Transco Limited (GITL)
GSPL Bhavan, GIDC Electronic Estate, Sector-26
Gandhi Nagar -380 028, Gurat, India.

M.S.Earth Movers
Developers

Total No. of beds and seedlings required to be raised from 2017-18 to 2019 - 20

Sl. No	Model	Espacement	Species	Area in Ha	No. of plants	Replacement of Casualities (20%)		Loss due to transportation (5%)	Grand Total no. of seedlings required	No. of beds required (500 seedling / bed)	Remarks
						Raising	Maint. Year				
1	Barren Hill Afforestation	Gap plantation	Misc.,	20.443	8177	1635	2044	409	12266	25	**2017-18**
				20.000	8000	1600	2000	400	12000	24	**2018-19**
				10.000	4000	800	1000	200	6000	12	**2019-20**
Total:				**50.443**	**20177**	**4035**	**5044**	**1009**	**30266**	**61**	

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT OF NURSERIES

Sl. No.	Model	Year of raising	Target Area in Ha	Cost of raising of Nursery			Year of maintenance	Cost of Maint. of Nursery beds (April to July)			Total
				Phy. In Ha	Phy (Nos)	Fin		Phy. In Ha	Phy (Nos)	Fin	Fin
1	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	50.443 Ha	20.443	12266	1.83987	2018-19	20.443	12266	0.73595	2.57582
		2018-19		20.000	12000	1.38000	2019-20	20.000	12000	0.64200	2.02200
		2019-20		10.000	6000	0.75900	2020-21	10.000	6000	0.35280	1.11180
Grand Total:				**50.443**	**30266**	**3.97887**		**50.443**	**30266**	**1.73075**	**5.70962**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR ADVANCE WORKS FOR RAISING OF PLANTATIONS UNDER BARREN HILL AFFORESTATION METHOD

Sl. No	Model	Year of Advance operations	Target Area in Ha	Cost of Advance operations		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	50.443 Ha	20.443	2.35632	48.17025
		2018-19		20.000	2.59195	51.83904
		2019-20		10.000	2.85115	28.51147
Grand Total:				**50.443**		**128.52076**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR RAISING OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	Year of Raising	Target Area in Ha	Cost of raising		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2017-18	50.443 Ha	20.443	1.31696	26.92269
		2018-19		20.000	1.44866	28.97320
		2019-20		10.000	1.59353	15.93526
Grand Total:				**50.443**		**71.83115**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 1st - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	1st year maintenance	Target Area in Ha	Cost of 1st year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2018-19	50.443 Ha	20.443	0.15169	3.10100
		2019-20		20.000	0.16686	3.33718
		2020-21		10.000	0.18354	1.83545
			Grand Total:	**50.443**		**8.27363**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 2nd - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	2nd year maintenance	Target Area in Ha	Cost of 2nd year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2019-20	50.443 Ha	20.443	0.18858	3.85514
		2020-21		20.000	0.20744	4.14876
		2021-22		10.000	0.22818	2.28182
			Grand Total:	**50.443**		**10.28572**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 3rd - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	3rd year maintenance	Target Area in Ha	Cost of 3rd year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2020 - 21	50.443 Ha	20.443	0.20743	4.24049
		2021 - 22		20.000	0.22817	4.56346
		2022 - 23		10.000	0.25099	2.50990
Grand Total:				**50.443**		**11.31385**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 4th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	4th year maintenance	Target Area in Ha	Cost of 4th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2021 - 22	50.443 Ha	20.443	0.22818	4.66468
		2022 - 23		20.000	0.25100	5.01996
		2023 - 24		10.000	0.27610	2.76098
			Grand Total:	**50.443**		**12.44562**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 5th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	5th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2022 - 23	50.443 Ha	20.443	0.25100	5.13119
		2023 - 24		20.000	0.27610	5.52200
		2024 - 25		10.000	0.30371	3.03710
			Grand Total:	**50.443**		**13.69029**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 6th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	6th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2023 - 24	50.443 Ha	20.443	0.27610	5.64431
		2024 - 25		20.000	0.30371	6.07420
		2025 - 26		10.000	0.33408	3.34081
Grand Total:				**50.443**		**15.05932**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 7th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	7th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2024 - 25	50.443 Ha	20.443	0.30370	6.20854
		2025 - 26		20.000	0.33407	6.68140
		2026 - 27		10.000	0.36748	3.67477
Grand Total:				**50.443**		**16.56471**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 8th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

Sl. No	Model	8th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
I	BHA Misc., GAP Plantation 400 Plants per Ha	2025 - 26	50.443 Ha	20.443	0.33407	6.82939
		2026 - 27		20.000	0.36748	7.34954
		2027 - 28		10.000	0.40422	4.04225
Grand Total:				**50.443**		**18.22118**

District Forest Officer,
Warangal (Urban) & Jangaon

ABSTRACT FOR 9th - YEAR MAINTENANCE OF PLANTATIONS IN BARREN HILL AFFORESTATION METHOD

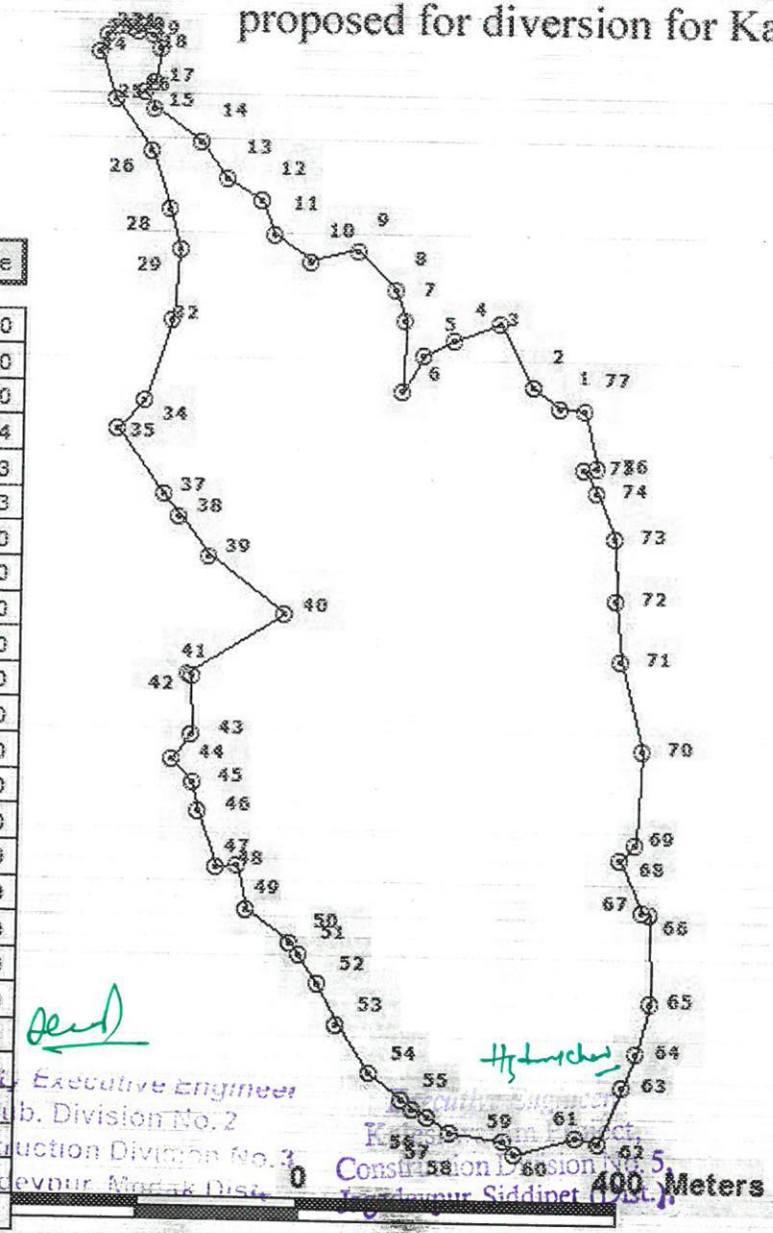
Sl. No	Model	9th year maintenance	Target Area in Ha	Cost of 5th year maintenance		
				Phy. (Area In Ha)	Unit Cost (Rs. In Lakhs)	Fin (Rs. In Lakhs)
1	BHA Misc., GAP Plantation 400 Plants per Ha	2026 - 27	50.443 Ha	20.443	0.36748	7.51239
		2027 - 28		20.000	0.40423	8.08456
		2028 - 29		10.000	0.44465	4.44651
Grand Total:				**50.443**		**20.04346**

District Forest Officer,
Warangal (Urban) & Jangaon

Map showing the proposed CA Land to be taken over in Sy. No. 197, Mulknoor (V), Sy.No. 124, Mutharam (V) of Bheemadevarapally (M) , Warangal Urban in lieu of Forest land proposed for diversion for Kaleshwaram Project

AREA: 50.341 HA

1:9000



Si.no	Latitude	Longitude
1	18.067383	79.356920
2	18.067609	79.356620
3	18.068318	79.356240
4	18.068126	79.355734
5	18.067952	79.355393
6	18.067545	79.355163
7	18.068344	79.355170
8	18.068690	79.355060
9	18.069120	79.354630
10	18.068990	79.354100
11	18.069290	79.353690
12	18.069670	79.353540
13	18.069900	79.353150
14	18.070300	79.352870
15	18.070680	79.352320
16	18.070870	79.352210
17	18.070970	79.352330
18	18.071350	79.352390
19	18.071500	79.352300
20	18.071550	79.352130
21	18.071590	79.352040
22	18.071600	79.351880
23	18.071500	79.351780
24	18.071320	79.351710
25	18.070790	79.351880
26	18.070198	79.352310

Si.no	Latitude	Longitude
28	18.069560	79.352520
29	18.069100	79.352640
32	18.068310	79.352560
34	18.067410	79.352270
35	18.067095	79.351956
37	18.066360	79.352490
38	18.066120	79.352670
39	18.065670	79.353010
40	18.065019	79.353872
41	18.064335	79.352790
42	18.064310	79.352830
43	18.063657	79.352847
44	18.063370	79.352630
45	18.063109	79.352852
46	18.062784	79.352928
47	18.062160	79.353140
48	18.062191	79.353382
49	18.061701	79.353481
50	18.061342	79.353976
51	18.061208	79.354073
52	18.060876	79.354288
53	18.060430	79.354500
54	18.059895	79.354890
55	18.059597	79.355254
56	18.059492	79.355392

Si.no	Latitude	Longitude
57	18.059402	79.355560
58	18.059232	79.355824
59	18.059151	79.356406
60	18.058990	79.356551
61	18.059190	79.357220
62	18.059136	79.357483
63	18.059766	79.357750
64	18.060154	79.357902
65	18.060709	79.358046
66	18.061690	79.358032
67	18.061720	79.357942
68	18.062295	79.357685
69	18.062477	79.357860
70	18.063524	79.357919
71	18.064526	79.357657
72	18.065210	79.357590
73	18.065910	79.357570
74	18.066440	79.357360
75	18.066690	79.357208
76	18.066710	79.357369
77	18.067354	79.357215

Deputy Executive Engineer
Sub. Division No. 2
Construction Division No. 3
Mandevpur, Medak Dist.

Executive Engineer
Kaleshwaram Project
Construction Division No. 5
Yeddumpur, Siddipet Dist.

Chief Engineer
Kaleshwaram Project
Jalasoudha Building,
Errum Manzil, Hyderabad.