Copensatory afforastation scheme for an area of 13.00 Ha. degraded forest land in Comptt. No. 271-RF in Bhandara Forest Division against diversion of Forest land for laying underground Natural Gas Pipeline alongwith Optical Fiber Cable (OFC) stretch of NAGPUR to JHARSUGUDA passing through district Nagpur, Bhandara and Gondiya (Maharashtra/MP Border) project in favour of GAIL (India) Limited.

Enclosure to Principal Chief Conservator of Forest (HoFF), M. S. Nagpur Letter No. Desk-17/CA/Nodal Cell/CR-40/1127/2019-20, Date 04/10/2019

Model Rate Structure for Compensatory Afforestation

Model No.5.

Fencing and Irrigated Plantations

Model rate structure for plantation of mixed tree species having rainfall less than 800 mm and medium quality, medium drained soil.

Compensatory Afforestation Site : Comptt. No. 271-RF Tal. Lakhandur, in District Bhandara.
Area : 13.00 ha. Range : Lakhandur, Round : Lakhandur, Beat : Antargaon-1.

	Spacement	3m x 3m							
	Size of Pits	0.45 x 0.45 x 0.45m							
	No. of Seedlings	1111 per ha	wage rate	Rs. 339.61				Rs. 450 (year 2022-23)	
					(Amount in Rs.)	For 13.00 ha.			
Sr. No	Particulars of works	Man days	Wages	Material supply	Total (Rs. Per Ha.)	Sanction Letter Dt. /Model No. /Item No.	Man days	Wages	Material supply	Total (Rs. For 13.00 Ha.)
A. Pre Monsoon Works PPO/PYO										
1	(a) Survey and demarcation	1.00	339.61	91.00	430.61	Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1a	13.00	5850.00	1183.00	7033.00
	(b) Preparation of treatment map (100 m x 50 m grid)	1.00	339.61	91.00	430.61	Item No. 1b	13.00	5850.00	1183.00	7033.00
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid.	0.40	135.84	0.00	135.84	Item No. 1c	5.20	2340.00	0.00	2340.00
	(d) Fixing 60cm x 0.05cm x12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars, Rs.75/- for each pillrs)	0.00	0.00	225.00	225.00	Item No. 1d	0.00	0.00	2925.00	2925.00
	(e) Clearing of bushes and preparation of site (As per requirement)	10.00	3396.10	91.00	3487.10	Item No. 1e	130.00	58500.00	1183.00	59683.00
2	Soil and moisture conservation works including collection of rubbles from areas upto 30 m etc	31.00	10527.91	0.00	10527.91	Item No. 2	403.00	181350.00	0.00	181350.00

3	Providing and fixing chain link fencing, 102 Rmt per ha (With one gate + two wickets gates for one site) (Rs.1494/- per Rmt of basic rate + 20% for transportation of ave. leadplus 20% for tribal/remote area (by tender process.) (Rs.1494+149+149=1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mmx50m, 8 gauge thick and fixed 75mm above ground level complete as per SSR item No.1744 for 2017-18)	0.00	0.00	182865.60	182865.60	As per SSR rates 201718 Item No. 1744	0.00	0.00	2377252.80	2377252.80
4	Alignment of pits at 3m x 3m spacement. 1111 pits per Ha (0.25 per 100 pits and M&S @ Rs. 2.24 per 50 pits.	2.78	944.12	49.77	993.89	Item No. 4	36.14	16263.00	647.01	16910.01
5	Digging of pits of size 0.45 x 0.45 x 0.45 m (1111 pits per ha) 6.60 M.D per 100 pits. **Note:-** As per local conditions provision for mechanized digging can be made.	73.33	24903.60	0.00	24903.60	Item No. 5	953.29	428980.50	0.00	428980.50
6	Construction of 5.00 Rmt wide Inspection Path 1M.D. per 100 Rmt	1.00	339.61	0.00	339.61	Item No. 6	13.00	5850.00	0.00	5850.00
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing color band and recording the same in Register (0.75 M.D.) per 100 plants	0.75	254.71	25.00	279.71	Item No. 7	9.75	4387.50	325.00	4712.50
8	Providing and fixing (4 feet x 3 feet) information board each per site	0.00	0.00	5000.00	5000.00	Item No. 8	0.00	0.00	65000.00	65000.00
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wages Rs.11.90 and M & S Rs.3.62 per plant)	46.71	15863.18	4825.46	20688.64	Item No. 9 20% Casualty replacement in place of 10%	607.23	273253.50	62730.98	335984.48
	Total	**167.97**	**57044.29**	**193263.83**	**250308.12**		**2183.61**	**982624.50**	**2512429.79**	**3495054.29**
	Contingency 3%		0.00	7509.24	7509.24			0.00	**104851.63**	**104851.63**
	Labour Welfare 4%		0.00	10012.32	10012.32			0.00	**139802.17**	**139802.17**
	Grand Total	**167.97**	**57044.29**	**193263.83**	**267829.69**		**2183.61**	**982624.50**	**2512429.79**	**3739708.09**
B. First Year Operations										
1	Part Nursery cost for maintenance of 1333 seedling per ha Rs. 3.77 per seedling (Wages Rs.2.69, M & S Rs. 0.81)	14.80	5062.23	1079.73	6141.96	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%**	192.40	86580.00	14036.49	100616.49
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	6262.41	1944.25	8206.66	Item No. 2	239.72	107874.00	25275.25	133149.25

3	Transportation of 1333 seedlings from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedlings & M.S. Rs.1.82 Per seedlings)	1.87	635.07	2426.00	3061.07	Item No. 3 10% Extra Plants to be transported	24.31	10939.50	31538.00	42477.50
4	Planting of 1111 seedlings (1.0 M.D per 100 seedlings)	11.11	3773.07	0.00	3773.07	Item No. 4	144.43	64993.50	0.00	64993.50
5	3 seedlings (1 Rmt circular) and 2 soil workings (4.00 M.D per 100 seedlings) fertilizer application Rs.0.82 per seedling	44.44	15092.27	911.02	16003.29	Item No. 5	577.72	259974.00	11843.26	271817.26
6	Watering 1111 seedlings November and December 1 time each, January to March 2 times each per seedlings 5 litre water, purchase of 1111 plastic can of 5 litre / matka @Rs.25/- each and 100 litre capacity 11 drums @Rs.400/- each for supplying water and water supply at @Rs.0.05 per litre and wages for watering 1 M.D. for 150 seedlings.	59.25	20121.89	54395.00	74516.89	Item No. 7	770.25	346612.50	707135.00	1053747.50
7	Casualty replacement (20% 222 Seedlings per ha.) (2 M.D. per 100 seedlings)	4.44	1507.87	0.00	1507.87	Item No. 6 20% instead of 10%	57.72	25974.00	0.00	25974.00
8	Part Nursery cost for causality replacement in SYO (222 seedlings per ha.) (wages Rs. 11.90 and material supply Rs.3.62 total Rs.12.55 per seedling.)	7.77	2638.77	803.64	3442.41	Item No. 8 20% instead of 10%	101.01	45454.50	10447.32	55901.82
9	Watch and ward (10 months–1 watcher per 10 ha)	27.38	9298.52	0.00	9298.52	Item No. 9	355.94	160173.00	0.00	160173.00
10	Soil working for naturally grower plants and singling (1.15 M.D. per 100 plants)	1.15	390.55	10.00	400.55	Item No. 10	14.95	6727.50	130.00	6857.50
11	Fire tracing	2.00	679.22	0.00	679.22	Item No. 12	26.00	11700.00	0.00	11700.00
	Total	**192.65**	**65461.87**	**61569.64**	**127031.51**		**2504.45**	**1127002.50**	**800405.32**	**1927407.82**
	Contingency 3%		0.00	3810.95	3810.95			0.00	57822.23	57822.23
	Labour Welfare 4%		0.00	5081.26	5081.26			0.00	77096.31	77096.31
	Grand Total	**192.65**	**65461.87**	**61569.64**	**135923.72**		**2504.45**	**1127002.50**	**800405.32**	**2062326.37**
	C. Second Year Operations									
1	Part nursery cost for seedlings for causality replacement (222 seedlings per ha) labour rate @ Rs.3.77 and M.S. Rs.1.82 per seedlings.	2.46	835.44	404.00	1239.44	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1 casualty replacement 20%**	31.98	14391.00	5252.00	19643.00
2	Transportation of 222 seedlings for causality replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D Per 100 Seedling & M.S. Rs.1.82 per seedlings	0.31	105.28	404.04	509.32	Item No. 2 20% instead of 10%	4.03	1813.50	5252.52	7066.02

3	Planting for casualty replacement 222 seedlings (2.00 M.D. per 100 seedlings)	4.44	1507.87	0.00	1507.87	Item No. 3 20% instead of 10%	57.72	25974.00	0.00	25974.00
4	2 weedings and 1 soil working, with fertilizer application 2.5 M.D. per 100 seedlings at M.S. Rs. 0.82 per seedling	27.77	9430.97	911.02	10341.99	Item No. 4	361.01	162454.50	11843.26	174297.76
5	Watering 1111 seedlings in November, December, January and June 1 time each and in February to May 2 times each total 12 times 5 litre per seedlings, replacing 10% plastic can/matka @Rs.25/- each replacing 111 cans/matka, supplying water @ Rs. 0.50/- per litre and watering 150 seedlings per M.D.	88.88	30184.54	36105.00	66289.54	Item No. 5	1155.44	519948.00	469365.00	989313.00
6	Watch and ward 12 months -1 watcher per 10.00 ha.	36.50	12395.77	0.00	12395.77	Item No. 6	474.50	213525.00	0.00	213525.00
7	Fire tracing	2.00	679.22	0.00	679.22	Item No. 8	26.00	11700.00	0.00	11700.00
	Total	**162.36**	**55139.08**	**37824.06**	**92963.14**		**2110.68**	**949806.00**	**491712.78**	**1441518.78**
	Contingency 3%		0.00	2788.89	2788.89			0.00	43245.56	43245.56
	Labour Welfare 4%		0.00	3718.53	3718.53			0.00	57660.75	57660.75
	Grand Total	**162.36**	**55139.08**	**37824.06**	**99470.56**		**2110.68**	**949806.00**	**491712.78**	**1542425.09**

D. Third Year Operations

1	1 weeding and 1 soil working (1.50 M.D per 100 seedlings) applying fertilizer @ Rs.0.82 per plant.	16.67	5661.30	911.02	6572.32	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	216.71	97519.50	11843.26	109362.76
2	Watering 556 seedlings in November, December, January and June 1 time each and February to May 2 times each total 12 times per seedlings 5 litre, water supply @Rs.0.50/- litre and watering 150 seedlings per M.D.	44.48	15105.85	16680.00	31785.85	Item No. 2	578.24	260208.00	216840.00	477048.00
3	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	Item No. 3	474.50	213525.00	0.00	213525.00
4	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 5	26.00	11700.00	325.00	12025.00
5	Fire tracing	2.00	679.22	0.00	679.22	Item No. 6	26.00	11700.00	0.00	11700.00
	Total	**101.65**	**34521.36**	**17616.02**	**52137.38**		**1321.45**	**594652.50**	**229008.26**	**823660.76**
	Contingency 3%		0.00	1564.12	1564.12			0.00	24709.82	24709.82
	Labour Welfare 4%		0.00	2085.50	2085.50			0.00	32946.43	32946.43
	Grand Total	**101.65**	**34521.36**	**17616.02**	**55787.00**		**1321.45**	**594652.50**	**229008.26**	**881317.01**

E. Fourth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	13754.21	**25.00**	**13779.21**		526.50	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**
F. Fifth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	**13754.21**	**25.00**	**13779.21**		**526.50**	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**
G. Sixth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	**13754.21**	**25.00**	**13779.21**		**526.50**	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**

H. Seventh Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	**13754.21**	**25.00**	**13779.21**		**526.50**	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**
I. Eighth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	**13754.21**	**25.00**	**13779.21**		**526.50**	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**
J. Ninth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	**40.50**	**13754.21**	**25.00**	**13779.21**		**526.50**	**236925.00**	**325.00**	**237250.00**
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**

K. Tenth Year Operations										
1	Watch and ward 12 months 1 watcher per 10.00 ha	36.50	12395.77	0.00	12395.77	**Letter Dt. 07/03/2018 Irrigated & fencing Plantation Model no. 1 Item No. 1**	474.50	213525.00	0.00	213525.00
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October.	2.00	679.22	25.00	704.22	Item No. 2	26.00	11700.00	325.00	12025.00
3	Fire tracing	2.00	679.22	0.00	679.22	Item No. 3	26.00	11700.00	0.00	11700.00
	Total	40.50	13754.21	25.00	13779.21		526.50	236925.00	325.00	237250.00
	Contingency 3%		0.00	413.38	413.38			0.00	7117.50	7117.50
	Labour Welfare 4%		0.00	551.17	551.17			0.00	9490.00	9490.00
	Grand Total	**40.50**	**13754.21**	**25.00**	**14743.75**		**526.50**	**236925.00**	**325.00**	**253857.50**

DY. CONSERVATOR OF FORESTS BHANDARA
सत्यमेव जयते

(Rahul Gawai)
Deputy Conservator of Forests,
Bhandara Division, Bhandara
Deputy Conservator of Forests
Bhandara Division

Copensatory afforastation scheme for an area of 13.00 Ha. degraded forest land in Comptt. No. 271-RF in Bhandara Forest Division against diversion of Forest land for laying underground Natural Gas Pipeline alongwith Optical Fiber Cable (OFC) stretch of NAGPUR to JHARSUGUDA passing through district Nagpur, Bhandara and Gondiya (Maharashtra/MP Border) project in favour of GAIL (India) Limited.

Abstract for Model No.5

S. N.	Year of operation	Man days	Wages	Material supply	Total	Other expenses	Total amt (rounded off)	Man days	Wages	Material supply	Total	Other expenses	Total	Total amt (rounded off)
1	Pre Monsoon works	167.97	57044.29	193263.83	250308.12	17521.57	267830	2183.61	982624.50	2512429.79	3495054.29	244653.80	3739708.09	**3739708**
2	First Year Operations	192.65	65425.87	61569.64	126995.51	8892.21	135888	2504.45	1127002.50	800405.32	1927407.82	134918.55	2062326.37	**2062326**
3	Second Year Operations	162.36	55139.08	37824.06	92963.14	6507.42	99471	2110.68	949806.00	491712.78	1441518.78	100906.31	1542425.09	**1542425**
4	Third Year Operations	101.65	34521.36	17616.02	52137.38	3649.62	55787	1321.45	594652.50	229008.26	823660.76	57656.25	881317.01	**881317**
5	Fourth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
6	Fifth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
7	Sixth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
8	Seventh Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
9	Eighth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
10	Nineth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
11	Tenth Year Operations	40.50	13754.21	25.00	13779.21	964.54	14744	526.50	236925.00	325.00	237250.00	16607.50	253857.50	**253857**
	Total	**908.13**	**308410.03**	**310448.55**	**618858.58**	**43322.62**	**662181**	**11805.69**	**5312560.5**	**4035831.15**	**9348391.65**	**654387.42**	**10002779.07**	**10002775**
					Cost per plant		596.02					Cost per plant	692.57	

1. Rates of chain linked fencing derived from SSR-2017-18 with addition for area difference and transportation lead.

2. Plantation M.D. and M.S. component derived from rate structure as approved by PCCF (HoFF) M.S. vide letter No.Desk-1/EGS/CR-10/2282/2017-18/Nagpur, Dated 07/03/2018.

DY. CONSERVATOR OF FORESTS
सत्यमेव जयते
BHANDARA

(Rahul Gawai)
Deputy Conservator of Forests,
Bhandara Division, Bhandara
Deputy Conservator of Forests
Bhandara Division