

**SCHEME PROPOSALS FOR COMPENSATORY AFFORESTATION OVER 91.346 Ha NON FOREST LAND IN
NIRMAL DIVISION IDENTIFIED BY THE USER AGENCY I.e., SE, I & CADD BELLAMPALLY IN LIEU OF
DIVERSION OF FOREST LAND FOR DR. B.R.AMBEDKAR PRANAHITHA PROJECT PACKAGE - II & IV.**

1.0 INTRODUCTION

The Superintending Engineer, I & CADD, Belampally has identified non forest land for Compensatory Afforestation in SY.NO. 171 OF AREPALLY VILLAGE OF MAMDA MANDAL AREA IN HA (5.7225) , SY.NO. 441/1 OF KUSLI (V) OF DILAWARPUR MANDAL AREA IN HA (23.2571), SY.NO. 132/1 & 130 OF BHOSI VILLAGE & SY. NO. 191 OF MAHALINGI (V) OF TANOOR MANDAL AREA IN HA (25.859), SY.NO. 55 OF GAIDIPALLY VILLAGE OF MAMDA MANDAL AREA IN HA (31.2722) and SY.NO. 143 OF KUPTI (V) OF SARANGAPUR MANDAL AREA IN HA (5.2352) for construction of Dr. B.R.Ambedkar PRANAHITHA PROJECT PACKAGE - II & IV.

1.1 Accordingly the non forest land identified by the user agency is hilly, undulating and sloping. Most of the area is with small stones and very hard and less soil. Since the area is of undulating and hilly terrain, soil & moisture conservation works (RFDs), Check Dams, Mini Percolation Tamks, SCTs are required intensively, are to be done with machinery as the soil is stony.

The following compensatory afforestation proposed as follows.

- | | | | |
|-----|-------|--------------------------|---------------------------|
| I. | (i) | Village | : Arepally |
| | (ii) | Sy. No. | : 171 |
| | (iii) | Area taken over | : 5.7225 Ha. |
| | (iv) | Name of the RF adjacent | : Mamda |
| | (v) | Distance from RF to land | : 0.5 Kms (Approximately) |
| II. | (i) | Village | : Kusli |
| | (ii) | Sy. No. | : 441/1 |
| | (iii) | Area taken over | : 23.2571 Ha. |
| | (iv) | Name of the RF adjacent | : Narsapur |
| | (v) | Distance from RF to land | : 0.5 Kms (Approximately) |

- III. (i) Village : Bhosi and Mahalingi
(ii) Sy. No. : 132/1, 130 & 191
(iii) Area taken over : 25.859 Ha.
(iv) Name of the RF adjacent : Khadki
(v) Distance from RF to land : 3.00 Kms (Approximately)
- IV. (i) Village : Gaidpally
(ii) Sy. No. : 55
(iii) Area taken over : 31.2722 Ha.
(iv) Name of the RF adjacent : Mamda
(v) Distance from RF to land : 0.01 Kms (Approximately)
- V. (i) Village : Kupti
(ii) Sy. No. : 143
(iii) Area taken over : 5.2352 Ha.
(iv) Name of the RF adjacent : Jam
(v) Distance from RF to land : 0.5 Kms (Approximately)

Hence proposals have been prepared with a cost of Rs 100080968/-. The year wise scheme proposals are as hereunder

Year	Forestry works
2018-19	24773161
2019-20	36643005
2020-21	5064281
2021-22	3748362
2022-23	4111945
2023-24	4309116
2024-25	4940989
2025-26	2480958
2026-27	2837572
2027-28	3237887
2028-29	3702349
2029-30	4231343
Total	100080968 Or say 100081000/-

This scheme will be monitored through the machinery of Forest Department at various levels.

The Compensatory Afforestation scheme is prepared over an area of 91.346 Ha. for a period of 12 years basing on the Forest Schedule of Rates for the year 2016-17 of Zone-II of Telangana Forest Department with an escalation of 15% for 2016-17 and with an annual escalation of 15% for the subsequent years, provided the funds are to be deposited and released during the year 2018-19.

2.0 AIMS AND OBJECTIVES:

The objectives of the scheme are as follows.

- 2.1 To create small timber and fuel wood resources to meet the needs of the local public.
- 2.2 To reduce pressure on the already depleted resource requirements of small timber, fuel and fodder of local tribal people.
- 2.3 To fulfill broader objective of sustainable environmental conservation for the general good of the people.

To fulfill the above objectives, it is proposed to take up the afforestation over an area proposed for diversion for non-forestry purpose, i.e., 91.346 Ha. The plantations will be taken up with the species like Hardwood species etc.

3.0 ELEMENTS OF THE PROJECT

3.1 Details of the lands identified for raising compensatory afforestation are as follows.

Sl. No.	Division	Range	Mandal	Sy No.	Village	Area proposed
1	Nirmal	Mamda	Mamda	171	Arepally	5.7225 Ha
2	Nirmal	Nirmal	Dilawarpur	441/1	Kusli	23.2571 Ha
3	Nirmal	Nirmal	Tanoor	132/1, 130 & 191	Bhosi Mahalingi	25.859 Ha
4	Nirmal	Mamda	Mamda	55	Gaidpally	31.2722 Ha
5	Nirmal	Nirmal	Sarangapur	143	Kupti	5.2352 Ha
	TOTAL					91.346 Ha

3.2 NAME OF THE SCHEME

Compensatory Afforestation for DR. B.R.AMBEDKAR PRANAHITHA PROJECT PACKAGE - II & IV.

3.3 SITUATION

- 1) The proposed Compensatory Afforestation area is situated in Arepally village of Mamda Mandal, Kusli Village of Dilwarpur Mandal, Bhosi and Mahalingi Villages of Tanur Mandal, Gaidpally Village of Mamda Mandal and Kupty Village of Sarangapur Mandal are fit for CA scheme. .

3.4 GEOLOGY

The geology of the proposed area for Compensatory Afforestation is Sub-Cretaceous – Eocene – Deccan Trap, Late Precambrian – Salluvai series, Archaean Granites, Gneisses and schists.

3.5 SOIL

The soils of area proposed for Compensatory Afforestation area is hilly, undulating and sloping. Most of the area is with small stones and very hard and less soil.

3.6 CLIMATE :

The climate is fairly dry with very hot summer and cool winters. During summer, the temperature rises upto 47 degree centigrade. Summer and winter are separated by prolonged rainy season. The area is served by South-West Monsoon. However, Cyclonic rains are common during October – December.

3.7 RAINFALL :

Rainfall is mostly from the Southwest monsoon, cyclonic rains during October – December are quite common. The normal rainfall in a year ranges from 1000 mm to 1100 mm. The average rainfall for the past (12) years is 1051 mm.

3.8 EXISTING VEGETATION:

The area is having shrub vegetation of *Diospyros Melanoxylon*, *Terminalia tomentosa*, *Tectona grandis*, *Butea monosperma*, *Boswellia serrata*, *Azadiracta indica*, *Madhuca indica*, *Vagumadd*, *Palakodisa*, *Togari mogali* etc.

3.9 AGENCY RESPONSIBLE FOR AFFORESTATION:

The afforestation program will be implemented by the Telangana Forest Department through the Deputy Director, Kawal Tiger Reserve, Nirmal.

3.10 DETAILS OF WORK SCHEDULE PROPOSED FOR COMPENSATORY AFFORESTATION

The details of work schedule proposed for compensatory afforestation year wise is as follows.

2018-19	i.	Advance Operations (Pre-Planting Operation) under BHA (LI)
	ii.	Constrcution of Boundary Pillars
2019-20	i.	Raising of Nursery
	ii.	Infrastructure Development for Nursery
	iii.	Raising of Plantations
	iv.	Digging of Peripheral Trench
	v.	Errection of Chainlink fencing
	vi	Soil and Moisture conservation works
2020-21	i	1 st year maintenance of the Compensatory Afforestation plantation including Nursery
2021-22	i.	2 nd year maintenance of plantation
2022-23	i.	3 rd year maintenance of plantation
2023-24	i.	4 th year maintenance of plantation
2024-25	i.	5 th year maintenance of plantation
2025-26	i	6 th year Maintenance of plantation
2026-27	i	7 th year Maintenance of plantation
2027-28	i	8 th year Maintenance of plantation
2028-29	i	9 th year Maintenance of plantation
2029-30	i	10 th year Maintenance of plantation

3.11 COST STRUCTURE:

A compensatory afforestation scheme for Rs.100080968/- is prepared (Appendix-I).
The year wise expenditure will be as hereunder.

Year	Forestry works
2018-19	24773161
2019-20	36643005
2020-21	5064281
2021-22	3748362
2022-23	4111945
2023-24	4309116
2024-25	4940989
2025-26	2480958
2026-27	2837572
2027-28	3237887
2028-29	3702349
2029-30	4231343
TOTAL	100080968
OR	100081000

This scheme will be monitored through the machinery of Forest Department at various levels.

Thus the total cost for the Compensatory Afforestation Scheme comes to.
Rs. 100081000 /- as per Appendix I.

4.0 SCHEME COMPONENT:

The area identified for Compensatory Afforestation is hilly, undulating and sloping. Most of the area is with small stones and very hard and less soil. It is proposed to take up afforestation with Labour Intensive Method , which coprices of clearance of unwanted growth , heaping the bushes, ploughing with heavy duty tractor, taking up afforestation with species like Hardwood etc. Protect the plantation with SCTs, watch and ward and from fire by way of control, burning of the fire lines. The plantation would be maintained for (10) years after planting.

4.1 COST STRUCTURE OF PLANTATIONS :

The cost structure of Compensatory Afforestation including the cost structure for various components of raising and maintenance of planting stock and the plantation is appended (Appendix-I).

4.2 PROVISION OF FUNDS :

The funds for the Compensatory Afforestation have to be deposited by the user agency i.e., Superintending Engineer, I & CADD, Belampally DR. B.R.AMBEDKAR PRANAHITHA PROJECT PACKAGE - II & IV in favour of Telangana Forest Department. These funds will be utilized by the Deputy Director, Kawal Tiger Reserve, Nirmal for raising plantations and their maintenance as per the detailed annual plan after obtaining the approval and funds from the competent authority.

5.0 PLANTING TARGETS AND STAFF REQUIREMENT :

The area identified for the Compensatory Afforestation to an extent of 91.346 Ha's is located in SY.NO. 171 OF AREPALLY VILLAGE OF MAMDA MANDAL AREA IN HA (5.7225) , SY.NO. 441/1 OF KUSLI (V) OF DILAWARPUR MANDAL AREA IN HA (23.2571), SY.NO. 132/1 & 130 OF BHOSI VILLAGE & SY. NO. 191 OF MAHALINGI (V) OF TANOOR MANDAL AREA IN HA (25.859), SY.NO. 55 OF GAIDIPALLY VILLAGE OF MAMDA MANDAL AREA IN HA (31.2722) and SY.NO. 143 OF KUPTI (V) OF SARANGAPUR MANDAL AREA IN HA (5.2352) of Deputy Director, Kawal Tiger Reserve, Nirmal.

5.1 OFFICE EXPENSES AND CONTINGENCIES RECURRING :

The amount proposed towards office expenses, contingent expenses are appended (Appendix-I)

5.2 CAPITAL EXPENDITURE NON – RECURRING


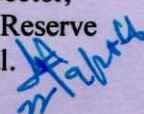
No amount is proposed towards non-recurring expenditure (salaries etc)

5.3 SCHEME PERIOD :

This scheme will be implemented over a period of (12) years commencing from 2018-19. The details of cash flow required for the entire project period for recurring and non recurring expenditure is furnished in Appendix-I.

5.4 DETAILS OF PROPOSED MONITORING MECHANISM:

The Field Director, Project Tiger Reserve, Nirmal shall monitor the implementation of the conditions of Compensatory Afforestation and the survival of the plants planted.


22/9/2016
Deputy Director,
Kawal Tiger Reserve
Nirmal. 

APPENDIX - I

ABSTRACT FOR ADVANCE AND RAISING PLANTATION AND UPTO 10TH YEAR MAINTENANCE IN NON FOREST LAND of 91.3460 Ha IDENTIFIED in NIRMAL DIVISION IN DIFFERENT PLACES BY THE USER AGENCY I.e., SE. I & CADD BELLAMPALLY

Sl. No.	Item of work	YEAR WISE REQUIREMENT OF FUNDS																														Total						
		During 2018-19			During 2019-20			During 2020-21			During 2021-22			During 2022-23			During 2023-24			During 2024-25			During 2025-26			During 2026-27			During 2027-28				During 2028-29			During 2029-30		
		Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount	Qty.	Rate	Amount		Qty.	Rate	Amount			
1	Advance operations (Area in Ha.)	91.3460	29672	2710419																																		2710419
2	Raising of Nurseries				121784	12.27	1494047																															1494047
3	Infrastructure Development for Nursery						2020000																															2020000
4	Raising of plantation				91.3460	53860	4919896																															4919896
5	Digging of Peripheral Trench around the CA land (in Km)				12.0000	207600	2491200																															2491200
6	Erection of Chainlink Fencing around the CA Lands (in Km)				12.0000	1500000	18000000																															18000000
	SMC Works																																					0
7	Check dam in Nos				7	329000	2303000																															2303000
8	Rock fill dam in Nos				24	15570	373680																															373680
9	Mini Percolation tank in Nos				9	170000	1530000																															1530000
10	Construction of Boundar Pillars	1850	10620	19647000																																		19647000
11	Replacement of Casualties (Nursery)							25394	13.50	342822																												342822
12	1st Year maintenance of plantation (Area in Ha.)							91.346	44480	4063070																												4063070
13	2nd Year maintenance of plantation (Area in Ha.)										91.346	34920	3189802																									3189802
14	3rd Year maintenance of plantation (Area in Ha.)													91.346	38300	3498552																						3498552
15	4th Year maintenance of plantation (Area in Ha.)																91.346	40000	3653840																			3653840
16	5th Year maintenance of plantation (Area in Ha.)																			91.346	46000	4201916																4201916
17	6th Year maintenance of plantation (Area in Ha.)																						91.346	21200	1936535													1936535
18	7th Year maintenance of plantation (Area in Ha.)																								91.346	24400	2228842											2228842
19	8th Year maintenance of plantation (Area in Ha.)																											91.346	28000	2557688								2557688
20	9th Year maintenance of plantation (Area in Ha.)																															91.346	32200	2941341				2941341
21	10th Year maintenance of plantation (Area in Ha.)																																91.346	37000	3379802			3379802
	Sub-Total			22367419			33131823			4405892			3189802			3498552			3653840			4201916			1936535			2228842			2557688			2941341			3379802	87483452
22	Wages to the Data Entry Operator in Division Office			180000			198000			217800			239580			263538			289892			318881			350769			385846			424431			466874			513561	3849171.1
23	Administrative Cost 10%			2235742			3313182			440589			318980			349855			365384			420192			193654			222884			255769			294134			337980	8748345
	TOTAL:			24773161			36643005			5064281			3748362			4111945			4309116			4940989			2480956			2837572			3237887			3702349			4231343	100080968
																																						100081000

Deputy Director
Kawal Tiger Reserve
Nirmal

STATEMENT
ABSTRACT FOR ADVANCE AND RAISING PLANTATION AND UPTO 10TH YEAR MAINTENANCE IN NON FOREST LAND of 91.3460 Ha IDENTIFIED in NIRMAL DIVISION IN DIFFERENT PLACES BY THE USER AGENCY
I.e., SE, I & CADD BELLAMPALLY

Sl No	Component	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Total	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Advance operations (Area in Ha.)	2710419												2710419	
2	Raising of Nurseries		1494047											1494047	
3	Infrastructure Development for Nursery		2020000											2020000	
4	Raising of plantation		4919896											4919896	
5	Digging of Peripheral Trench around the CA land		2491200											2491200	
6	Erection of Chainlink Fencing around the CA Land		18000000											18000000	
	SMC Works														
7	Check dam in Nos		2303000											2303000	
8	Rock fill dam in Nos		373680											373680	
9	Mini Percolation tank in Nos		1530000											1530000	
10	Construction of Boundar Pillars	19647000												19647000	
11	Replacement of Casualities (Nursery)			342822										342822	
12	1st Year maintenance of plantation (Area in Ha.)			4063070										4063070	
13	2nd Year maintenance of plantation (Area in Ha.)				3189802									3189802	
14	3rd Year maintenance of plantation (Area in Ha.)					3498552								3498552	
15	4th Year maintenance of plantation (Area in Ha.)						3653840							3653840	
16	5th Year maintenance of plantation (Area in Ha.)							4201916						4201916	
17	6th Year maintenance of plantation (Area in Ha.)								1936535					1936535	
18	7th Year maintenance of plantation (Area in Ha.)									2228842				2228842	
19	8th Year maintenance of plantation (Area in Ha.)										2557688			2557688	
20	9th Year maintenance of plantation (Area in Ha.)											2941341		2941341	
21	10th Year maintenance of plantation (Area in Ha.)												3379802	3379802	
	TOTAL:	22357419	33131823	4405892	3189802	3498552	3653840	4201916	1936535	2228842	2557688	2941341	3379802	87483452	
22	Wages to the Data Entry Operator in Division Office	180000	198000	217800	239580	263538	289892	318881	350769	385846	424431	466874	513561	3849171	
23	Administrative Cost 10%	2235742	3313182	440589	318980	349855	365384	420192	193654	222884	255769	294134	337980	8748345	
	GRAND TOTAL:	24773161	36643005	5064281	3748362	4111945	4309116	4940989	2480958	2837572	3237887	3702349	4231343	100080968	

Or SAY 100081000

Deputy Director
Kawal Tiger Reserve
Nirmal

Unit cost of Advance Operations (Pre-Planting Operation) under BHA (LI) for the year 2018-19

Sl. No.	FSR Item No.	Item of work	Quantity		Rate	Amount	Remarks
1		2	4		5	7	
		ADVANCE OPERATION (PRE-PLANTING OPERATION) - All advance-operation works of plantations to be raised shall be completed before March. Perambulation of site, preparing site inspection report including type of vegetation and density, approval of site suitability and the category of jungle growth clearance, taking the images of the existing vegetation, preparation of treatment plan shall be prepared and approved in writing by DFO before taking up advance operation.					
1	02.01.01	Survey with hand-held GPS (staff to carry out) and demarcation - one manday is allowed for assistance. The surveyed sketch with exact effective area statement will be uploaded in MIS platform latest by December end.	1	No.	311.04	311	
		Clearing unsalable unwanted jungle growth (leaving all the tree species of good form particularly the hardwood tree species like Teak, Nallamaddi, Yegisa, Narepa, Sorni, Jitregi, Billudu, Chenangi etc. and NTFP species like Ippa, Morri, Tani, Karaka, Vepa, Maredu, Tapasi, Tuniki, Chinta, Usuri, Nallajeedi etc.); Spreading the cut material all over the site; and Burning the same twice till completely burnt. All the above operations should be completed before December.					
2	02.01.04	Light Jungle Growth (> 20% and upto 30% ground area covered with Jungle growth) with prior written approval of DFO based on the field inspection of DFO.	1	Ha	5207.65	5208	
3	02.01.05	Formation of Sector Lines / Fire Lines to a width of 3 m by giving surface treatment (sector to be in conformity with slope direction). All stumps to be cut to ground level. This operation is applicable for plantations other than Semi- Mechanical Plantation.	400	Rmt	5.08	2032	
		ALIGNMENT & STACKING INCLUDING DEMARCATION OF BASE LINE					
4	02.01.07	iii) 3X3 m espacement = 1111 planting points	1111	No.	74.20	824	
		Digging of Pits - Manual (As per RSSR): All efforts shall be made to complete pitting works before March-end. Under exceptional circumstances (if the target of plantation is given in the month of March-April), the pitting can be done during June and July. But any pitting done during June-July, plants can only be planted after the pits are verified by field inspections of FROs and DFOs of proper dimensions to avoid simultaneous pitting and planting which may result in higher percentage of casualties					
		Between January - March					
		b) Hard Soil like gravel and moram					
5	02.01.13	ii) 45 cm ³ pits	1111	No.	21.23	236	
		Between June - July					
		b) Hard Soil like gravel and moram					
6	02.01.17	ii) 45 cm ³ pits	1111	No.	16.97	189	
		Digging of Staggered Contour Trenches (SCTs) for impounding rain water - Manual - Size: 6m Length, 0.45 m top-width, 0.30 m bottom-width and 0.45 m depth; earthwork volume per trench: 1.012 cum - Max. of 50 no. per ha. If they are made with machine, the works can be done by calling for tender. However, if they are intended to be done through machine, it has to be informed in advance. All the SCTs shall be completed before January.					
		Between January - March					
7	02.01.19	ii) Hard soils like gravel and morum	50	Cum	272.71	13636	
		Total				22436	

Unit Rate:


22436.00 As per FSR 2016-17

25801.40 as per FSR 2017-18 (15% escalation charges added)

29671.61 as per FSR 2018-19 (15% escalation charges added)

OR

29672 per Ha


 Deputy Director
 Kawal Tiger Reserve
 Nirmal

Unit Cost for Raising of 20,000 Bamboo/Misc. Species seedlings in (5" X 9") Size Bags and Converted to

As per 2016-17


Sl. No	Items of works	F.S.R. Item	Qty	Rate in Rs	Per		Amount in Rs.
1	2	3	4	5	6		7
	20000/1700 bags=12 Beds						
1	Cost of Polythene Bags (5X9) (250 Guage) 20000/293= 68 + 7 (10% wear and tear) = 75 Kgs	01.03.03	75	159	1	Kg	11925
2	Site preparation for old site - Clearing of growth, weeds, grass etc.,	01.03.02	12	11.56	1	Bed	139
3	Cost and transport of ingradient for Potting mixture Red Soil and Clayey Soil in 2:1 ratio.						
	15 cm X 30 cm (6" X 12") 2.15 cum.	01.03.06	20000	348.16	1000	Nos.	6963
	Alignment of beds including alignment of inspection path etc.,	01.03.11	12	6.59	1	Bed	79
5	Preparation of potting mixture Red Soil and Clayey Soil in 2:1 ratio by powdering of various ingradient, sieving and mixing them in the prescribed proporation, Opening the bags and filling with potting mixture and gently pressing the same with finger tips and arranging in beds.						
	15 cm X 30 cm (6" X 12") 2.15 cum.	01.03.10	20000	830.95	1000	Nos.	16619
7	Sowing /dibbling of pre-treated seed directly into the bags including cost of treatment.	01.03.13	20000	73.01	1000	Bags	1460
8	Watering the plants twice a day for 10 m X 1 m size bed (2600 4" X 7" bags; 1700 5" X9" bags ; 1100 6"X12" bags and 800 8"X12" bags)	01.03.14	12	238.19	1	Bed / month	17150
9	Weeding three times for 10 m X 1 m size bed (2600 4" X 7" bags; 1700 5" X9" bags ; 1100 6"X12" bags and 800 8"X12" bags)	01.03.16 01.03.17 01.03.18	12	43.74	1	Bed / weeding	1050
10	Shifting and grading and re-arranging in beds for 10 m X 1 m size bed (2600 4" X 7" bags; 1700 5" X9" bags ; 1100 6"X12" bags and 800 8"X12" bags) Only once.	01.03.19	12	204.28	1	Bed / shifting	2451
11	Repacement of casualities after sorting out the emty bags and keeping at one end of the bed.	01.03.20	4000	58.00	1000	Bags	232
12	Contingencies/ Cost of Pipes/ Nursery Board/ Nursery implements/ Electricity Bill/ Running and Maintenance Charges of Oil Engine (Bills to be verified and certified by the ACF/DFO) etc.			As per actuals (Subject to maximum of 10% of estimate cost during raising year)			8690
13	Cost of chemicals, insecticides, pesticides etc.,	01.03.21	As per actuals				400
14	Pay of watcher (6 months) October to March		6	7500	Per	Month	45000
	Conversion of Bag Plants from 5 x 9 to 8 x 12						
1	Transportation of soil mixture 5 x 9 to 8 x12 polybags	01.03.33	20000	864.05	1000	Bags	17281
2	Preparation of potting mixture	01.03.38	20000	1478.68	1000	Bags	29574
3	Weeding the Plants - 2 Weedings	01.03.44 01.03.45	20000	43.74	1000	Bags	1750
4	Shifting , Grading and rearranging in secondary Beds	01.03.46	20000	204.28	1000	Bags	4086
5	Watering the plants twice a day for 10 m X 1 m size bed (2600 4" X 7" bags; 1700 5" X9" bags ; 1100 6"X12" bags and 800 8"X12" bags)	01.03.47	20000	238.19	1000	Bags	4764
6	Cost of chemicals, insecticides, pesticides etc.,	01.03.50	As per actuals				400
7	Contingencies/ Cost of Pipes/ Nursery Board/ Nursery implements/ Electricity Bill/ Running and Maintenance Charges of Oil Engine (Bills to be verified and certified by the ACF/DFO) etc.			As per actuals (Subject to maximum of 5% of estimate cost during raising year)			2850
8	Pay of watcher (4 months) April to July		4	7500	Per	Month	30000
	Total		Amount for 20,000 seedlings				202862

Amount per seedling 10.14

Amount per seedling including 10% escalation during 2017-18 11.16

Amount per seedling including 10% escalation during 2018-19 12.27



Amount per seedling including 10% escalation during 2019-20 13.50


 Deputy Director
 Kawal Tiger Reserve
 Nirmal

Amount required for Nursery Infrastructure

Rs. In Lakhs

Sl. No	Items of works	Amount
1	2	3
1	Digging of Borewell and Fixing of pump	1.200
2	Fixing of Sprinklers	6.000
3	Errection of Nursery shed	5.000
4	Construction of Over Head Tank	8.000
	TOTAL	20.200


Deputy Director
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Nirmal 

Unit cost of Raising under BHA (LI) for the year 2019-20

Sl. No	ESR Item No.	Item of work	Quantity		Rate	Amount	Remarks
1		2	3		4	5	6
		Raising Year					
		Transportation of Planting Stock (including loading and unloading) from Nursery site to plantation site upto upto 5 Km lead					
1	02.19.17	ii) 15 X 30 cm (6"X12") bag plants	1111	Nos	96.79	1075	
		From nursery to plantation site - beyond 5 Km lead					
		i) For every extra km beyond 5 km upto 25 km					
2	02.19.19	15 X 30 cm (6"X12") bag plants	1111	100 Nos /	67.60	751	
		Internal transportation of bag plants to planting points on head loads					
3	02.19.23	15 X 30 cm (6"X12") bag plants	1111	Nos	95.31	1059	
		PLANTING: Seedlings of local hillock species will have to be chosen for planting. The minimum height of the planting stock to be planted is 0.75 m height (excluding the height of the bag) Species to be preferred are Ficus (except <i>Ficus racemosa</i>), Yepi (<i>Hardwickia binata</i>), Nemalinara (<i>Holoptelea integrifolia</i>), Pala kodisha (<i>Wrightia tinctoria</i>) Nirudi (<i>Dolichandrone crista</i>), Simarouba (at the base of hillock), Poniki (<i>Gyrocarpus jacquini</i>), Narlingi (<i>Albizia amara</i>), Sandra (<i>Acacia chundra</i>) etc.					
4	02.20.01	Application of 50 gm of SSP per pit (1 day before planting) for root growth and early establishment of plant after planting. Similarly, the bag plants to be planted are to be dipped inside Chloropyriphos solution (5ml Chloropyriphos in 1 lit water) either at nursery site before transport or at plantation site before planting	1111	Nos	32.62	362	
5	02.20.02	Cost of SSP, Chloridine dust (50 gm) or Chloropyriphos $1111 \times 50 / 1000 / 50 = 1.11$ Kg	1.11	Kg	500.00	555	
		Planting					
6	02.20.04	ii) 45 cm ³	1111	Nos	363.37	4037	
	2.21	SEED BROADCASTING / DIBBLING					
7	02.21.01	a) Dibbling of overnight-soaked Neem seeds , including cost of seeds on the mound (excavated soil) of staggered contour trenches @ 10 seeds / mound (4.5 kg of seeds per ha since 2500 seeds weigh per kg) in the month of July when the site experiences rain and the mound soil is moist since neem seeds are recalcitrant and short-viable. This operation has to be done in presence of Forest Range Officer and the date of dibbling has to be recorded in Plantation Journal.	1	Ha	90.50	91	
8	02.21.02	b) Broadcasting of orthodox hard-coated treated seeds (with hot water treatment) of Sandra (<i>Acacia chundra</i>), Narlingi (<i>Albizia amara</i>), Moduga (<i>Butea monosperma</i>), Vepa (<i>Azadirachta indica</i>) and Rela (<i>Cassia fistula</i>) seeds - 2 kg seeds of each of the above species per ha (including cost of seeds) mixed uniformly and broadcasted. The broadcasting of seeds needs to be done in July when the rains is there and the soil is adequately moist. This operation has to be done in presence of Forest Range Officer and the date of broadcast has to be recorded in Plantation Journal. This operation has to be carried out every year for 2 years.	1	Ha	1080.00	1080	
		Replacement of Casualties					
	02.21.03	Replacement of Casualties: 20% during Raising Year. The casualty replacement should be done in 3 stages at an interval of 15 days immediately after planting during raising year. 50% of rate of original pitting of raising and 100% during maint. Year. Planting, transportation and internal transportation as prescribed above					
9		a) Pitting (50% of Original rate)	556	Each	7.49	4164	

*Sl. No	FSR Item - Nö.	Item of work	Quantity		Rate	Amount	Remarks
1		2	3		4	5	6
10		b) Transportation of Seedlings upto 5 Kms	556	100	96.79	538	
11		5 to 25 Kms	556	100	67.60	376	
12		c) Internal transportation	556	100	95.31	530	
13		d) Planting	556	100	363.37	2020	
		Application of Fertilizers					
14	02.21.04	Cost of DAP @ 25 gm / planting point (1111x25/1000/50=0.55)	0.55	Bags	1400.00	770	
15	02.21.05	Application of fertilizer in August (30 days after planting) by making 3 holes of 10 cm depth with crow bar holes at a distance of 10 cm away from plant and putting fertilizers and closing. Ensure that the soil is really wet at the time of DAP application.	1111	100	32.62	362	
		WEEDING & SOIL WORKING					
16	02.21.06	a) 1 st circular weeding to a radius of 0.50 m around the plant after 30 days of planting (i.e. July - Aug)	1111	100	103.79	1153	
17	02.21.07	b) 2 nd circular weeding to a radius of 0.50 m around the plant 90 days after planting (i.e. Sept - Oct)	1111	100	103.79	1153	
		c) Deep soil working to a radius of 0.5 m and to a depth of 10 cm (to be done by pick-axe only) without damaging the plant (to be carried out during Nov - Dec)					
18	02.21.09	ii) For hard gravelly soil	1111	100	545.08	6056	
19	02.21.10	Creation of Fire lines 3 mts wide inside the plantation.	400	Rmt	5.08	2032	
20	02.21.13	Enumeration of row-wise survival and average growth twice a year - Number of plants planted and Number surviving (to be undertaken during Oct. and Jan) and entered in Plantation Journal. The number of germinated neem seeds on the soil mound per ha and the impact of broadcasted seeds of Sandra, Narlingi, Moduga and Rela (Fair: if 10%; satisfactory: if 25%; Good: if 40-50% and Very good: if more than 50%) also shall be assessed and entered in Plantation Journal.	To be done by the staff (plantation-in-charge) with help of Plantation Watcher				
21	02.21.14	Cost of Protection: One Watcher is allowed for 10-30 ha. plantation; One more Watcher for more than 30 ha; and if the area is less than 10 ha, prior approval of Conservator of Forests is required. Identity Photo of Watchers shall be pasted in respective Plantation Journal. Every month payment to be made after satisfaction by Plantation-in-charge that there is no fire and cattle damage. The guiding principle for continuation of the services of a Plantation Watcher is at least 80% survival at the end of raising year	9.00	Month	750.00	6750	
22		Misc.				500	
		Total				35414	

Unit Rate:

35414.00 As per FSR 2016-17

40726.10 as per FSR 2017-18 (15% escalation charges added)

46835.00 as per FSR 2018-19 (15% escalation charges added)

53860.26 as per FSR 2019-20 (15% escalation charges added)

OR

53860 per Ha

Deputy Director
Kawal Tiger Reserve
Nirmal

Estimate for providing chain link fencing with Iron Angulars in CA Lands

S No	Description of work	Nos	L	B	D	Qty	Units	Rate	Per	Amount Rs.
1	2	3	4	5	6	7	8	9	10	11
	Total length of the plot = 91346 meters. Providing and fixing 2.55 meters height Iron angular poles of size 65 mm x 65 mm x 6 mm at an espacement 3.00mtr (91346 Rmt / 3Mtr = 30449 + Add 5% supporting poles = 1522 = 31971)									
1	Earth work excavation For Iron angular Poles	30449	0.30	0.30	0.45	1233.18				
	For:- boddu under chain link fencing	91346	0.30	0.30	0.10	822.11				
	Total					2055.30				
	Deduct angular portion	30449	0.065	0.065	0.100	12.86				
	Net quantity					2042.43	Cum	1274.00	10	260206
2	CC 1:3:6 with 20mm metal for erection of angular poles	30449	0.30	0.30	0.45	1233.18				
	For boddu laying along the peripheral length	91346	0.30	0.30	0.40	3288.46				
	Total					4521.64				
	Deduct angular portion	30449	0.065	0.065	0.400	51.46				
	Net quantity					4470.18	Cum	4152.32	1	18561625
3	Procurement of Iron Angular Poles of 65 mm x 65 mm x 6 mm for length of 2.55 m (0.40 m to be burried in the ground and 2.15m above the ground level) (2.55 mm x 5.75 Kgs / m x 30449 poles = 446458 Kgs)					446458	Kgs	44100.00	1000	19688798
4	Supplying and fixing of Chain link fencing of 1.85 mtr height along the periphery of size 8 guage (4.0 MM) as per IS 2721-1979 : 4" x 4" - (102 mm x 102 mm)	1	91346.00		1.85	168990.10	Sqm	240.046	1	40565398
	Total									79076027
5						15% escalation for 2017-18				90937431
6						15% escalation for 2018-19				104578043
7						15% escalation for 2019-20				120264749


 Deputy Director
 Kawal Tiger Reserve
 Nirmal

ESTIMATE OF CHECK DAM

As per SSR 2016-17

Sl. No.	Description of Item	No.	Measurments			Qty	Rate	Per	Amount
			L	B	D				
1	2	3	4	5	6	7	8	9	10
1	Earthwork work excavation for foundations and depositing on bank for all lifts and with an initial lead of 10m including all operational, labour charges such as shoring sheeting, planking, strutting, etc., Complete for finished item of work including seigniorage excluding dewatering charges etc., as per SS-20B (ASPSS30B)								
	U/S cutoff wall	1 X 1	7.00	0.45	0.90	2.84			
	Body wall	1 X 1	7.00	1.45	0.30	3.05			
	Apron	1 X 1	7.00	2.00	0.35	4.90			
	D/S cutoff wall	1 X 1	7.00	0.45	1.20	3.78			
	U/S side walls	1 X 2	2.50	0.45	0.30	0.68			
	D/S side walls	1 X 2	2.50	0.45	0.30	0.68			
	Key walls	1 X 2	1.00	1.45	0.30	0.87			
	Clearing of the site	1 X 2	4.00	6.00	0.90	43.20			
	Qty of earthwork					59.98	127.4	Cum	7641.00
2	Providing Concrete for plain cement concrete M 10 grade (1:5:10) using 40, 20 & 10mm metal mechanically mixed in substructure complete as per drawings and technical specification clauses 802, 804, 805, 806, 807, 1202 and 1205 MORD and 1500, 1700 & 2200 MORTH including cost and conveyance of all materials and labour charges etc., complete								
	U/S cutoff wall	1 X 1	7.00	0.45	0.90	2.84			
	Body wall	1 X 1	7.00	1.45	0.30	3.05			
	Apron	1 X 1	7.00	2.00	0.35	4.90			
	D/S cutoff wall	1 X 1	7.00	0.45	1.20	3.78			
	U/S side walls	1 X 2	2.50	0.45	0.30	0.68			
	D/S side walls	1 X 2	2.45	0.45	0.30	0.66			
	Key walls	1 X 2	1.00	1.45	0.30	0.87			
	Net Qty					16.77	2854.71	Cum	47863.00
3	Providing concrete for plain concrete in open foundations complete as per drawings and technical specifications clauses 802, 803, 1202 & (PCC Grade M15 Design Mix 1:3:6)								
	Body wall	1 X 1	7.00	1.00	2.00	14.00			
	U/S side walls	1 X 2	2.50	0.45	2.60	5.85			
	D/S side walls	1 X 2	2.45	0.45	1.60	3.53			
	Key walls	1 X 2	1.00	1.45	2.60	7.54			
	Water cushion wall	1 X 1	7.00	0.45	0.30	0.95			
	Net Qty					31.86	3691.41	Cum	117619.00

Sl. No.	Description of Item	No.	Measurments			Qty	Rate	Per	Amount
			L	B	D				
1	2	3	4	5	6	7	8	9	10
4	V.R.C.C. Corresponding to M20 grade as per IS 456 equivalent to (1:2:4) prop., nominal mix using 20mm gauge metal (SS5) hard granite machine crushed metal including cost and conveyance of all materials to site and cost of seigniorage charges on all materials including centering, shuttering, machine mixing, laying concrete, vibrating, lift charges, curing etc., complete for finished item of work.								
	Wearing coat on Apron	1 X 1	7.00	2.00	0.10	1.40			
	Top of body wall	1 X 1	7.00	0.45	0.10	0.32			
	Top of Cushion wall	1 X 1	7.00	0.45	0.10	0.32			
	Net Qty					2.03	5136.73	Cum	10428.00
5	Formation of Bund on Both sides of the Check Dam								
		1 X 2	15.00	3+5.50 /2	2.00	255.00	127.4	Cum	32487
	TOTAL								216038.00

15% escalation charges added for 2017-18

248443.70

15% escalation charges added for 2018-19

285710.26

15% escalation charges added for 2019-20

328566.79

or Say

329000

Deputy Director
Kawal Tiger Reserve
Nirmal

ESTIMATE FOR ROCK FILL DAM

As per SSR 2016-17

Sl. No.	Description of Item	No.	Measurments			Qty	Rate	Per	Amount
			L	B	D				
1	2	3	4	5	6	7	8	9	10
1	Earthwork work excavation for foundations and depositing on bank for all lifts and with an initial lead of 10m including all operational, labour charges suchas shoring sheeting, planking, strutting, etc., Complete for finished item of work including se								
	Body wall	1 X 1	5.00	2.10	0.30	3.15			
	Apron	1 X 1	5.00	0.90	0.30	1.35			
	Retaining Wall	1 X 1	5.00	0.60	0.60	1.80			
	Core wall	1 X 2	0.60	0.60	0.30	0.22			
	Side Walls U/S	1 X 2	1.00	0.30	0.30	0.18			
	Side Walls D/S	1 X 2	1.50	0.30	0.30	0.27			
	Side cuttings	1 X 2	2.00	3.00	0.90	10.80			
	Qty of earthwork					17.77	127.4	Cum	2263.00
2	Rough stone for dry packing using 225mm rough stonesof OTG/HRB variety for revetment, including cost of all materials, splitting, filling of spalls and labour charges, but excluding conveyance of all materials etc., complete								
	Body wall	1 X 1	5.00	2.10	0.30	3.15			
	Body wall above GL	1 X 1	5.00	1.30	0.60	3.90			
	Apron	1 X 1	5.00	0.90	0.30	1.35			
	Retaining Wall	1 X 1	5.00	0.60	0.75	2.25			
	Side Walls U/S	1 X 2	0.90	0.30	0.90	0.49			
	Side Walls D/S	1 X 2	1.50	0.30	0.90	0.81			
	Core wall	1 X 2	0.60	0.60	0.90	0.65			
	Net Qty					12.59	633.20	Cum	7975.00
	Net Qty					30.36			
	TOTAL								10238.00

15% escalation charges added for 2017-18

11773.70

15% escalation charges added for 2018-19

13539.76

15% escalation charges added for 2019-20

15570.72

or Say

15570


 Deputy Director
 Kawal Tiger Reserve
 Nirmal

ESTIMATE FOR MINI PERCOLATION TANK

As per SSR 2016-17

Sl. No.	Description of Item	No.	Measurments			Qty	Rate	Per	Amount
			L	B	D				
1	2	3	4	5	6	7	8	9	10
1	Earthwork work excavation for for key trench in hard and loamey soils	1x1	10	6.5	0.6	39.00	30.40	Cum	1185.6
2	Filling of key trench	1x1	10	6.5	0.6	39.00	30.40	Cum	1185.6
3	Stripping with 0.10 m depth under the Bund	1x1	50	12.20	0.20	122.00	51.84	Cum	6324.48
4	Filling the Stripping with 0.10 m depth under the Bund	1x1	50	12.20	0.20	122.00	51.84	Cum	6324.48
5	Earth work excavation and depositing on the bank with an initial lead upto 1 Km and lift of 3 mts with BC and OG soils for formation of bund	1x1	50	3+18.9 /2	2.49	1176.53	51.84	Cum	60991.056
6	Earthwork excavation for toe wall	1x1	50	0.45	0.45	10.13	30.40	Cum	307.80
7	Rough stone dry packing of toe wall	1x1	50	0.45	0.45	10.13	633.2	Cum	6411.15
8	Rough stone dry packing with 0.22 mts size rough stone excluding cost and conveyance of all materials including labour charges etc., complete for bund revitement	1x1	50	2.98	0.225	33.53	633.2	Cum	21228.03
9	By wash weir								
	Body Wall	1x1	5.00	2.10	0.30	3.15			
	Apron	1x1	5.00	0.90	0.30	1.35			
	Side Walls	1x2	4.00	0.225	0.30	0.54			
	Retaining Wall	1x1	5.00	0.50	0.50	1.25			
			Total			6.29	127.40	Cum	801.35
	Body Wall	1x1	5.00	2.10	0.30	3.15			
	Body Wall	1x1	5.00	2.1+0. 5/2	0.60	3.90			
	Apron	1x1	5.00	0.90	0.225	1.01			
	Side Walls	1x2	4.00	0.225	0.90	1.62			
	Retaining Wall	1x1	5.00	0.45	0.45	1.01			
			Total			10.70	633.2	Cum	6772.07
						Total			111531.62

15% escalation charges added for 2017-18

15% escalation charges added for 2018-19

15% escalation charges added for 2019-20

or Say

128261.36

147500.56

169625.65


170000

Deputy Director
Kawal Tiger Reserve
Nirmal

ABSTRACT ESTIMATE

Unit Cost for Construction of Boundary Pillars

As per SSR 2015-16							
Sl. No.	Item of the Work	Nos	Quantity of each pillar	Net Qty.	Rate	Per	Amount
1	2	3	4	5	6	7	8
1	Earth Work Excavation	1	0.648	0.648	1004.40	1 Cu.m.	651
2	Reinforced Cement Concrete (1:2:4)	1	0.825	0.825	5682.05	Cum	4688
3	Plastering with CM (1:6) & CM (1:3) 20 mm thick	1	3.143	3.143	2507.84	10 Sqm	788
4	White Washing with lime	1	3.143	3.143	255.68	10 Sqm	80
5	Steel for Reinforcement	1	12.459	12.459	34.163	1 Kg	426
6	Engraving of Pillar No. and Lat-Longs as per notified map and Painting to the boundary Pillars 2 coats with ready mixed Synthetic paints.	1		LS @ 350/- per pillar			350
				Total			6983
			15 % Escalation for 2016-17				8030
			15 % Escalation for 2017-18				9235
			15 % Escalation for 2018-19				10620



 Deputy Director
 Kawal Tiger Reserve
 Nirmal

Unit cost of 1st Year maintenance under BHA (LI) for the year 2020-21

Sl. No	FSR Item No.	Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
		1ST YEAR MAINTAINANCE					
	02.22.01	Replacement of casualties to a limit of 25% of the plants originally planted					
	02.19.10	100% of pitting cost	278	Nos	14.98	4164	
	02.19.17	Transportation (5 Km lead) 6x12	278	100	96.79	269	
	02.19.23	Internal transportation of plants upto the planting points on head loads (6x12)	278	100	95.31	265	
	02.20.04	Planting the plants 45x45x45 cm pits	278	100	363.37	1010	
2	02.22.02	a) 1 st Circular weeding to a radius of 0.50 m around the plant after 30 days of planting (i.e. July - Aug)	1111	100	103.79	1153	
3	02.22.03	b) 2 nd Circular weeding to a radius of 0.50 m around the plant 90 days after planting (i.e. Sept - Oct)	1111	100	103.79	1153	
		c) Deep soil working to a radius of 0.5 m and to a depth of 10 cm (to be done by pick-axe only) without damaging the plant (to be carried out during Nov - Dec)					
4	02.22.05	ii) For hard gravelly soil	1111	No	545.08	6056	
		Cutting of coppice growth flush to the ground to reduce the competition over the entire area duly retaining useful species after planting and placing the cut material in between the planting rows (to be undertaken during July - August)					
6	02.03.07	High rainfall zone > 800 mm (for Warangal, Khammam & Adilabad Circle)	1	Ha	1215.43	1215	
7	02.03.08	Pruning of lower branch initials of Timber and NTFP species by scicature upto 1/3 rd height <i>during October.</i>	1111	No	103.194	1146	
8	02.03.09	Enumeration of row-wise survival and average growth thrice in 1st Maintainance year - Number of plants planted and number surviving (to be undertaken during June, Oct. and Jan.) to be ascertained and entered in Plantation Journal. With so much inputs like nutrition, augmentation of moisture status by SCTs and other cultural operations; deploying indogenous forest species and planting of seedlings of minimum height of 0.75 - 1.0 m, it is prescribed that the minimum stocking of 90% with minimum average height of 1.75 - 2 m at the end of 1st year maintainance.		To be done by the staff (plantation-in-charge) with the help of Plantation Watcher			
9	02.03.10	Cost of Protection: One Watcher is allowed for 10-30 ha. plantation; One more Watcher for more than 30 ha; and if the area is less than 10 ha, prior approval of Conservator of Forests is required. Identity Photo of Watchers with address shall be pasted in respective Plantation Journal. Every month payment to be made after satisfaction by Plantation-in-charge that fence is in proper condition and entry of grazing animals is stopped and site is not affected with fire. The guiding principle for continuation of the services of a Plantation Watcher is at least 80% survival during 1st year maintainance period.	12	Month	750.00	9000	
		Total				25431	

15% escalation charges added for 2017-18
15% escalation charges added for 2018-19
15% escalation charges added for 2019-20
15% escalation charges added for 2020-21
or Say

29246
33632
38677
44479
44480


Deputy Director
Kawal Tiger Reserve
Nirmal

Unit cost of 2nd Year maintenance under BHA (LI) for the year 2021-22

As per FSR 2016-17

Sl. No	FSR Item No.	Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
		WEEDING & SOIL WORKING					
1	02.04.01	a) 1 st circular weeding to a radius of 0.50 m around the plant during July - Aug.	1111	Nos	103.79	1153	
2	02.04.02	b) 2 nd circular weeding to a radius of 0.50 m around the plant during Sept. - Oct.	1111	Nos	103.79	1153	
		c) Deep soil working to a radius of 0.5 m and to a depth of 10 cm (to be done by pick-axe only) without damaging the plant during Nov. - Dec.					
3	02.04.04	ii) For hard gravelly soil	1111	Nos	545.08	6056	
4	02.07.08	Cost of Protection: One Watcher is allowed for 10-30 ha. plantation; One more Watcher for more than 30 ha; and if the area is less than 10 ha, prior approval of Conservator of Forests is required. Identity Photo of Watchers with address shall be pasted in respective Plantation Journal. Every month payment will be made after satisfaction by Plantation-in-charge that fence is in proper condition and incidence of grazing and fire is not there. The guiding principle of charging the Plantation Watcher in 2nd year is at least 80% stocking during 2nd year of maintainance period.	12	Month	750.00	9000	
		Total				17362	

15% escalation charges added for 2017-18	19966
15% escalation charges added for 2018-19	22961
15% escalation charges added for 2019-20	26405
15% escalation charges added for 2020-21	30366
15% escalation charges added for 2021-22	34921
or Say	34920


Deputy Director
Kawal Tiger Reserve
Nirmal 

Unit cost of 3rd Year maintenance under BHA (LI) for the year 2022-23

As per FSR 2016-17

Sl. No		Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
		Third year maintenance					
1	Rates hike on 2016-17 FSR Rates 15%	Strip weeding in strips of 0.5 m. width on either side of the planting lines by cutting all growth in the lines flush to the ground and scrapping grasses etc., if two strip weedings are done the strips should be perpendicular to each other for 2mX2 m plantations of labour intensive plantations only.	1.00	Ha	1539.00	1539	
2		Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil atround the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (Applicable for 50% more harder than ordinary soils.)	1111	Nos	496.50	5516	
3		Creation of Fire lines 3 mts wide	100	Rmt	5.08	508	
4		Cost of Protection	12	Mont h	750.00	9000	
		Total				16563	

15% escalation charges added for 2017-18	19047
15% escalation charges added for 2018-19	21905
15% escalation charges added for 2019-20	25190
15% escalation charges added for 2020-21	28969
15% escalation charges added for 2021-22	33314
15% escalation charges added for 2022-23	38311
Or Say	38300


Deputy Director
Kawal Tiger Reserve
Nirmal 

Unit cost of 4th Year maintenance under BHA (LI) for the year 2023-24

As per FSR 2016-17

Sl. No		Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
3		Cost of Protection :	12.00	Month	750.00	9000	
		Total				15024	

15% escalation charges added for 2017-18	17278
15% escalation charges added for 2018-19	19869
15% escalation charges added for 2019-20	22850
15% escalation charges added for 2020-21	26277
15% escalation charges added for 2021-22	30219
15% escalation charges added for 2022-23	34751
15% escalation charges added for 2023-24	39964
Or Say	40000


 Deputy Director
 Kawal Tiger Reserve
 Nirmal 

Unit cost of 5th Year maintenance under BHA (LI) for the year 2024-25

As per FSR 2016-17

Sl. No		Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
3		Cost of Protection :	12.00	Month	750.00	9000	
		Total				15024	

15% escalation charges added for 2017-18	17278
15% escalation charges added for 2018-19	19869
15% escalation charges added for 2019-20	22850
15% escalation charges added for 2020-21	26277
15% escalation charges added for 2021-22	30219
15% escalation charges added for 2022-23	34751
15% escalation charges added for 2023-24	39964
15% escalation charges added for 2024-25	45959
Or Say	46000


Deputy Director
Kawal Tiger Reserve
Nirmal

Unit cost of 6th Year maintenance under BHA (LI) for the year 2025-26

As per FSR 2016-17

Sl. No		Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil atround the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
		Total				6024	

15% escalation charges added for 2017-18	6928
15% escalation charges added for 2018-19	7967
15% escalation charges added for 2019-20	9162
15% escalation charges added for 2020-21	10536
15% escalation charges added for 2021-22	12116
15% escalation charges added for 2022-23	13934
15% escalation charges added for 2023-24	16024
15% escalation charges added for 2024-25	18428
15% escalation charges added for 2025-26	21192
Or Say	21200


Deputy Director
Kawal Tiger Reserve
Nirmal 

Unit cost of 7th Year maintenance under BHA (LI) for the year 2026-27

As per FSR 2016-17

As per FSR 2016-17

Sl. No	Item of work	Quantity		Rate	Amount	Remarks		
1	2	3		4	5	6	7	
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).		1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide		100.00	Rmt	5.08	508	
		Total					6024	

15% escalation charges added for 2017-18

6928

15% escalation charges added for 2018-19

7967

15% escalation charges added for 2019-20

9162

15% escalation charges added for 2020-21

10536

15% escalation charges added for 2021-22

12116

15% escalation charges added for 2022-23

13934

15% escalation charges added for 2023-24

16024

15% escalation charges added for 2024-25

18428

15% escalation charges added for 2025-26

21192

15% escalation charges added for 2026-27

24370

Or Say

24400



Deputy Director

Kawal Tiger Reserve

Nirmal



Unit cost of 8th Year maintenance under BHA (LI) for the year 2027-28

As per FSR 2016-17

Sl. No	Item of work		Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
3		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
		Total				6024	

15% escalation charges added for 2017-18	6928
15% escalation charges added for 2018-19	7967
15% escalation charges added for 2019-20	9162
15% escalation charges added for 2020-21	10536
15% escalation charges added for 2021-22	12116
15% escalation charges added for 2022-23	13934
15% escalation charges added for 2023-24	16024
15% escalation charges added for 2024-25	18428
15% escalation charges added for 2025-26	21192
15% escalation charges added for 2026-27	24370
15% escalation charges added for 2027-28	28026
Or Say	28000


Deputy Director
Kawal Tiger Reserve
Nirmal 

Unit cost of 9th Year maintenance under BHA (LI) for the year 2028-29

As per FSR 2016-17

As per FSR 2016-17							
Sl. No	Item of work		Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
		Total				6024	

15% escalation charges added for 2017-18	6928
15% escalation charges added for 2018-19	7967
15% escalation charges added for 2019-20	9162
15% escalation charges added for 2020-21	10536
15% escalation charges added for 2021-22	12116
15% escalation charges added for 2022-23	13934
15% escalation charges added for 2023-24	16024
15% escalation charges added for 2024-25	18428
15% escalation charges added for 2025-26	21192
15% escalation charges added for 2026-27	24370
15% escalation charges added for 2027-28	28026
15% escalation charges added for 2028-29	32230
Or Say	32200


 Deputy Director
 Kawal Tiger Reserve
 Nirmal

Unit cost of 10th Year maintenance under BHA (LI) for the year 2029-30


As per FSR 2016-17

Sl. No		Item of work	Quantity		Rate	Amount	Remarks
1	2	3	4		5	6	7
1	Rates hike on 2016-17 FSR Rates 15%	Circular Weeding cum deep soil working to a radius of 0.5 m. and to a depth of 15 cm around the plant to be done with pick axes for the plants planted in pits without disturbing the soil around the plant to 10cm wide but weeding that part of area by hand and formation of saucer in hard Gravelly soils. (50% more than ordinary soils.) (with the prior permission of the CF/CCF concerned).	1111	Nos	496.50	5516	
2		Creation of Fire lines 3 mts wide	100.00	Rmt	5.08	508	
		Total				6024	

15% escalation charges added for 2017-18

15% escalation charges added for 2017-18
 15% escalation charges added for 2018-19
 15% escalation charges added for 2019-20
 15% escalation charges added for 2020-21
 15% escalation charges added for 2021-22
 15% escalation charges added for 2022-23
 15% escalation charges added for 2023-24
 15% escalation charges added for 2024-25
 15% escalation charges added for 2025-26
 15% escalation charges added for 2026-27
 15% escalation charges added for 2027-28
 15% escalation charges added for 2028-29
 15% escalation charges added for 2029-30
Or Say

6928
 7967
 9162
 10536
 12116
 13934
 16024
 18428
 21192
 24370
 28026
 32230
 37064
 37000


 Deputy Director
 Kawal Tiger Reserve
 Nirmal 