

## PART-II

(To be filled by the concerned Deputy Conservator of Forests)  
State serial no. of proposal: **FP/MN/ROAD/15031/2015**  
(Construction of Imphal-Kangchup-Tamenglong Road)

7. Location of project/Scheme:

- I. State/Union Territory : **Manipur State**  
II. District : **Tamenglong**  
III. Forest Division : **Western Forest Division(WFD), Tamenglong**  
IV. Area of forest land proposed for Diversion (in hectare): **80.87 ha (79.676 km length x 10.15 m width)**

Sl. No.	Forest Class	Area in ha
1.	Degraded Forest	9.31
2.	Open Forest	44.07
3.	Moderately Dense Forest	26.12
4.	Very Dense Forest	1.37
	<b>Total</b>	<b>80.87</b>

V. Legal Status of Forest:

Sl. No.	Status of Forests	Area in ha.
1.	Kangchup – Leimakhong - Irang PF	45.76
2.	Tairenpokpi – Tamenglong PF	4.06
3.	Unclass Forest (UF)	31.05
	<b>Total</b>	<b>80.87</b>

VI. Density of vegetation:

- a. Degraded forest : 10%  
b. Open Forest : 30%  
c. Moderately Dense Forest : 50%  
d. Very Dense Forest : 80%

VII. Species wise (scientific name) and diameter class-wise enumeration of trees (to be enclosed. In case of irrigation/ hydel projects enumeration at FRL-1, FRL-2 meter and FRL-4 meter also to be enclosed). : **Enclosed as annexure -I**

VIII. Brief note on vulnerability of the forest area to erosion: **Vulnerability to soil erosion is negligible**

IX. Approximate distance of proposed site for diversion from boundary of forest: **The proposed Imphal-Kangchup-Tamenglong road passes through a portion of Kangchup RF, Kangchup-Laimakhong-Irang and Tairenpokpi-Tamenglong PF.**

X. Whether forms part of a National Park ,Wildlife sanctuary, biosphere reserve, tiger reserve, Elephant corridor etc. (if so, the details of the area and comments of the Chief Wildlife Warden to be annexed) : **It does not touch National Park, Wildlife sanctuary, Biosphere reserve, Tiger reserve, Elephant corridor etc.. The proposed Buning Wildlife Sanctuary 12km in aerial distance is the nearest from the proposed Imphal- Kangchup – Tml Road (GPS Point 69).**




- XI. Whether any rare /endangered /unique species of flora and fauna found in the area (If so details thereof) : No, however animals like hog deer, sambar, wild dog, jungle cat, small Indian mongoose, squirrel, Indian porcupine, wild pig, python snake etc and birds like khali pheasant, Jungle fowl etc. are also found in the area.
- XII. Whether any protected archaeological /heritage site/ defence establishment or any other important monument is located in the area. If so, the detail thereof with NOC from competent authority, if required : No
8. Whether the requirement of forest land as proposed by the user agency in col.no.2 of Part –I is unavoidable and barest minimum for the project. If no, recommended area item-wise with details of alternatives examined : Yes, it is unavoidable and barest minimum.
9. Whether any work in violation of the Act has been carried out (Yes/No).If Yes detail of the same including period of work done, action taken on erring officials. Whether work in violation is still in progress : No
10. Detail of Compensatory Afforestation Scheme:-
- Details of non forest area/degraded forest area identified for compensatory afforestation, its distance from adjoining forest, number of patches, and size of each patch. (Detailed Enclosed as annexure II)
  - Map showing non forest /degraded forest area identified for compensatory afforestation and adjoining forest boundaries. (Please refer survey of India Topo map for attached Annexure-III. (Enclosed as annexure-III)
  - Detailed Compensatory Afforestation scheme including species to be planted by implementing agency, time schedule, cost structure etc. (Enclosed as annexure-IV)
  - Total financial outlay for Compensatory Afforestation scheme: - Rs. 176.733 lakhs
  - Certificates from competent authority regarding suitability of area identified for Compensatory Afforestation and from management point of view. (To be signed by the concerned Deputy Conservator of forests.): - (Enclosed as annexure –V)
- 11 Site inspection report of the DCF (to be enclosed) especially highlighting facts asked in col. 7 (xi, xii), 2 and 3 above. (Enclosed as annexure –VI)
- 12 Division/District profile:-
- Geographical area of the district/Division:

Particulars	Area (Sq Km)
Geographical area of the Western Forest Division, Tamenglong	3282.02
Forest cover of the Western Forest Division, Tamenglong	3046.56

II. Total forest area diverted since 1980 with number of cases :-

Sl.	Project	Area (ha)
1.	132 KV SC Transmission Line Stage-II cleared	243.00
2.	400 KV DC Transmission Line Stage-II cleared	135.82
3.	Loktak downstream Hydro-Electric Project Stage-II cleared	211.50
	<b>Sub-Total(Stage-II cleared)</b>	<b>590.32</b>
1.	Jubilant Oil & Gas at Nungkao Stage -1 Cleared	4.80
2.	Jiribam-Tupul-Imphal Railway line Stage-1 Cleared	1005.055
3.	Tamenglong-Longdi Pabaram Road Stage -1 Cleared	68.58
4.	Widening of Tupul-Bishnupur Road Stage-1 Cleared	9.00
	<b>Sub-Total (Stage – 1 Cleared)</b>	<b>1087.435</b>
	<b>GRAND – TOTAL</b>	<b>1677.755</b>





III. Total Compensatory Afforestation stipulated in the District/Division since 1980 on:-

a. Forest land including penal Compensatory Afforestation :-

Division/ District	Forest Area Diverted(ha)	CA (ha)	Penal CA (ha)	Total (ha)
Western Forest Division, Tamenglong	i) 132 KV SC Transmission Line (243.00 ha)	357.000 (No double CA)	-	<b>3059.90</b>
	ii) 400 KV DC Transmission Line (135.82 ha)	135.820	-	
	iii) Loktak downstream Hydro-Electric Project(211.50 ha)	211.500	-	
	iv) Jiribam-Tupul-Imphal Railway line (1005.055 ha)	1005.055	337.15	
	v) Widening of Tupul-Bishnupur Road (9.000 ha)	9.000	-	
<b>TOTAL</b>				<b>3059.90</b>

b. Non-forest land :-Nil

IV. Progress of Compensatory Afforestation as on (date) 18/03/2016 on

a. Forest land :- **3059.90** (including penal CA for Jiribam-Tupul-Imphal Railway line)

b. Non-forest land:- :- Nil

13. Specific recommendations of the DCF for acceptance or otherwise of the proposal with reasons.

Construction of Imphal-Kangchup-Tamenglong road will give immense benefit to the people of the State particularly the tribal villages of Tamenglong Dist. in communication, easy transportation of products and goods thereby bringing down the cost of essential commodities, improving living condition and providing more employment opportunities to the poor and needy people of the area. The proposed road will connect many villages and also provide shortest distance between Imphal - Tamenglong Dist. with gentle gradient. Hence, the project proposal is hereby recommended for kind acceptance.

Date: 18//03/2016

Place: Tamenglong

(Huri Golmei)

Divisional Forest Officer  
Western Forest Division, Tamenglong



### GIRTH CLASS-WISE ENUMERATION OF TREES

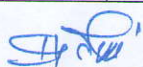
Trees to be damaged by the proposed diversion of 80.87 ha of forest land within the jurisdiction of WFD, Tamenglong for construction of Imphal-Kangchup-Tamenglong Road in favour of PWD, Manipur and enumeration of 0.72% over 80.87 ha (79.676 km X 10.15 m) at 19 stratified sample plots of size (10.15 m x 30 m) were carried out in open, moderate and dense forest to represent equal distribution of trees/bamboos of the proposed affected area. Certain sections of the proposed road involve widening of the existing state road and hence, few trees are liable to be damaged.

The Geo-coordinates of the 19 sample plots are:

Sample Plot No.	Latitude (dd)	Latitude (mm)	Latitude (ss)	Longitude (dd)	Longitude (mm)	Longitude (ss)	Name of Village
1	24	54	38.9	93	41	51.7	Ijeirong
2	24	54	36.9	93	41	51.4	Ijeirong
3	24	54	55.86	93	40	35.22	Oktan
4	24	56	04	93	39	25.2	Bakwa
5	24	52	1.56	93	39	14.04	Nagaching
6	24	54	15.0	93	35	00.8	Lukhambi
7	24	54	11.5	93	35	02.6	Lukhambi
8	24	54	26.0	93	34	51.1	Wairangba
9	24	54	32.2	93	34	44.2	Wairangba
10	24	54	43.5	93	33	49.3	Wairangba
11	24	54	50.1	93	33	24.4	Wairangba
12	24	56	21.3	93	35	03.7	Wairangba
13	24	55	00.8	93	33	12.8	Wairangba
14	24	55	14.0	93	32	46.7	Khebuching
15	24	56	21.3	93	32	08.4	Bhalok
16	24	58	48.66	93	31	41.4	Bhalok
17	24	59	3.96	93	32	23.22	Bhalok
18	24	56	21.06	93	32	8.46	Bhalok
19	24	58	17.64	93	33	21.42	Bhalok

Girth class-wise abstract for different tree Species found in 19(nineteen) sample plots of size (10.15 m X 30m x 19 = 5785.5 sqm) are:

Sl. No.	Name of species	<30	31-60	61-90	91-120	121-150	>150	Total
1	Gmelina arborea	-	-	2	1	7	-	10
2	Artocarpus chaplasi	-	3	1	1	1	-	6
3	Mesua ferra	-	1	3	-	-	-	4
4	Schima wallichii	4	6	5	1	-	-	16
5	Duabanga sonneratiodes	2	10	8	1	-	-	21
7	Litsea polyantha	-	4	4	1	-	-	9
8	Misc. Spp.	2	21	7	2	3	-	35
9	Tectona grandis	-	3	1	3	-	-	7
	<b>Sub-Total</b>	<b>8</b>	<b>48</b>	<b>31</b>	<b>10</b>	<b>11</b>	<b>-</b>	<b>108</b>
1	Bambusa gigantia/nutan	52	-	-	-	-	-	52
2	Melocana spp.	190	-	-	-	-	-	190
	<b>Sub-Total</b>	<b>242</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>242</b>

  
 Divisional Forest Officer  
 Western Forest Division, Tamenglong  
 Govt. of Manipur

Taking into account the above Girth Class-wise of different tree species and from 19(nineteen) stratified sample plots; the estimated total standing trees along the proposed alignment ( $80.87 \times 10000 = 808700$  sqm) which fall within the jurisdiction of Western Forest Division, Tamenglong is shown below:-

Sl. No.	Name of species	<30	31-60	61-90	91-120	121-150	>150	Total
1	No of trees in each Girth class.	8	48	31	10	11		108.00
2	Density of trees in each Girth Class per ha.	13.83	82.97	55.58	17.28	19.01	0	186.67
3	Estimated standing trees over 79.676 Km for a width of 10.15 m(80.87 ha) m	1118.43	6709.78	4494.75	1397.43	1537.34	0	15096.00
	Say	1118	6710	4495	1397	1537		15096

(Huri Golmei)

Divisional Forest Officer  
Western Forest Division, Tamenglong



**Physical and Financial Targets for Compensatory Afforestation (CA) for Diversion of Forest land for construction of Imphal-Kangchup-Tamenglong Road under Western Forest Division, Tamenglong, Manipur**

Location : Langkhong, Bhalok, Sonpram and Lamlabang, under WFD.

Range : Tamenglong & Noney

Division : Western Forest Division, Tamenglong

Physical Target Area = (80.87 x 2) = 161.74 ha.

Financial (Rs in Lakhs) = 176.733 lakhs

No. of plants = 323480 nos. (2000 x 161.74)

Spacing = 2.5 m x 2 m (2000 Plants / ha.)

Sl. No.	Item of Work	Unit cost per ha in Rs.	Physical & Financial Targets																						
			2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25		2025-26		TOTAL		
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	14	15	
	a) Advance Work	19,500	161.74	31.539																				161.74	31.539
	b) Creation	15,760			161.74	25.490																			
	c) 1 <sup>st</sup> Yr. Maint.	7,860					161.74	12.713																161.74	25.490
	d) 2 <sup>nd</sup> Yr. Maint.	5,300							161.74	8.572														161.74	12.713
	e) 3 <sup>rd</sup> Yr Maint.	5,300									161.74	8.572												161.74	8.572
1	f) 4th Yr Maint.	5,300											161.74	8.572										161.74	8.572
	g) 5th Yr Maint.	5,300													161.74	8.572								161.74	8.572
	h) 6th Yr Maint.	5,300															161.74	8.572						161.74	8.572
	i) 7th Yr Maint.	5,300																	161.74	8.572				161.74	8.572
	j) 8th Yr Maint.	5,300																		161.74	8.572			161.74	8.572
	Sub-Total			31.539		25.490		12.713		8.572		8.572		8.572		8.572		8.572		8.572		8.572		161.74	8.572
2	Micro planning	5%		1.577																					1.577
3	Soil & Moisture	10%		3.154		2.549		1.271		0.857		0.857		0.857		0.857		0.857		0.857		0.857			12.973
3	Awareness Raising	5%		1.577		1.275		0.636		0.429		0.429		0.429		0.429		0.429		0.429		0.429			6.491
4	Fencing	10%		3.154		2.549		1.271		0.857		0.857		0.857		0.857		0.857		0.857		0.857			12.973
5	Overheads	10%		3.154		2.549		1.271		0.857		0.857		0.857		0.857		0.857		0.857		0.857			12.973
	Sub-Total	40%		12.616		8.922		4.449		3.000		3.000		3.000		3.000		3.000		3.000		3.000			46.987
	Grand Total			44.155		34.412		17.162		11.572		11.572		11.572		11.572		11.572		11.572		11.572			176.733



(Huri Golmei)

Divisional Forest Officer

Western Forest Division: Tamenglong



## NET PRESENT VALUE (NPV)

1.	Name of the project	<i>Construction of Imphal-Kangchup-Tamenglong Road Section</i>	
2.	User Agency	<i>PWD, Manipur</i>	
3.	Minimum area of forest land required for diversion in Western Forest Division, Tamenglong	<i>80.87 Ha</i>	
4.	Crown density of the area proposed for diversion	<i>Degraded forest : 10%</i> <i>Open Forest : 30%</i> <i>Moderately Dense Forest : 50%</i> <i>Very Dense Forest : 80%</i>	
5.	Vegetation Covered	<i>Very Dense, Moderately Dense and Open/Degraded Forest</i>	
6.	Forest Type as per Supreme Court's order date 28/3/2008 in WP (C) No. 202/1995	<i>Eco-Class 1</i>	
7.	NET PRESENT VALUE as per Supreme Court's Order dated 28/3/2008 in WP (C) No. 202/1995	<i>a) Western Forest Division, Tamenglong</i> <i>Very Dense = 1.37 Ha @ Rs.10.43 lakhs = 14.2891 lakhs</i> <i>Moderately Dense Forest = 26.12 Ha @ Rs. 9.39 lakhs = 245.2668 lakhs</i> <i>Open/Degraded Forest = 53.38 Ha @ Rs. 7.30 lakhs = 389.6740 lakhs</i>	
	<b>TOTAL</b>	<b>= 80.87 Ha</b>	<b>= 649.2299 lakhs</b>

  
(Huri Golmei)

Divisional Forest Officer

Western Forest Division, Tamenglong

**SITE INSPECTION REPORT OF DIVISIONAL FOREST OFFICER**  
**WESTERN FOREST DIVISION, TAMENGLONG**

Site Inspection Report of the Divisional Forest Officer, Western Forest Division, Tamenglong in connection with the proposal for diversion of forest land measuring 80.87 ha (79.676 km x 10.15 m) in favour of PWD, Govt. of Manipur for construction of Imphal-Kangchup-Tamenglong Road under Western Forest Division, Tamenglong.

1. The site inspection in respect of forest land for diversion was conducted by the undersigned and RFO Tamenglong along with the representative of user agency on **1<sup>st</sup> March 2016**.
2. Vulnerability of forest land proposed is negligible in term of soil erosion as the terrain is gentle slope, existing road and tracks and compact in nature.
3. No rare/endangered/unique species of flora and fauna are found in the area except animals like Indian porcupine, deer, wild boar, flying squirrel, Jungle cat, mongoose etc. Birds like khalij pheasant, Jungle fowl, green doves etc are also found in the area.
4. The proposed road section does not form part of any National Park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant corridor etc. and the nearest point is more than **12Km** from Buning Wildlife Sanctuary.
5. No protected archaeological/heritage site/defence establishment or any other important monument is located in the area.
6. The required Forest land as proposed by user agency is unavoidable and barest minimum for the project.
7. No violation of Forest Conservation Act 1980 is observed from the User Agency.
8. Economic Class of proposed land :- **Eco-Class – I**
9. The Proposed road passes though part of Kangchup-Leimakhong-Irang PF, Tairenpokpi-Tamenglong PF.
10. Forest type of the proposed area falls under Sub-Tropical Semi-Evergreen Forests and Moist Mixed Deciduous Forest.
11. Main vegetation found in the area are Gmelina arborea, Mesua ferra, Schima wallichii, Duabanga sonneratiodes, Litsea polyanthia, Tectona grandis, Alnus nepalensis, Michelia champaca, Artocarpus chaplaca etc.
12. Its vegetation has a crown density of about
  - a. Degraded forest : 10%
  - b. Open Forest : 30%
  - c. Moderately Dense Forest : 50%
  - d. Very Dense Forest : 80%
13. Proposed land co-ordinates are:

IKT Road GPS starting Point within the jurisdiction of WFD, Tamenglong	IKT Road GPS ending Point within the jurisdiction of WFD, Tamenglong
24° 51' 50.758"N	24° 59' 22.534"N
93° 45' 50.878"E	93° 30' 04.316"E

  
(Huri Golmei)

Divisional Forest Officer  
Western Forest Division, Tamenglong





**Inspection of CA site by CF, Western Circle along with DFO, WFD, Tml at Langkhong bearing GPS coprdinate  $24^{\circ}52.369'N$   $93^{\circ}34.651'E$  (Eleva-2135 )**