PROJECT NOTE

Name of the Project:

Tukai Lift Irrigation Project, Karjat Tehsil of Ahmednagar District of Maharashtra State.

User Agency:

District Water Conservation Officer,
Soil & Water Conservation Division,
Government of Maharashtra,
Ahmednagar.

The Scheme:

The project is approved by the Government of Maharashtra State under Lift Irrigation Scheme for providing irrigation & drinking water to Drought Prone Areas in Karjat Tehsil of Ahmednagar District of the State.

Background:

Amongst the Drought Prone Areas of Maharashtra State, Ahmednagar District is referred as chronic Drought Prone District. The district has suffered from prolonged drought from 2016 onwards, which influenced the socio-economic situation of the district very badly. To ameliorate the chronic situation in the district, the State Government approved the Lift Irrigation Scheme for the Karjat Tehsil of Ahmednagar District amounting to Rs. 61,03,24,265/-; vide Government Resolution No. Sub-Irrigation Scheme.2018/ Case No. 313/Water-1 dated 03/01/2019. Copy appended hereto as Appendix-I.

Aims & Objectives of the Project:

The project is aimed at lifting 115 Million Cubic Feet water from Kukadi Left Canal and storing in 24 Percolation Reservoirs and 3 small Reservoirs in Karjat Tehsil from where the water will be made available for irrigating 599 Ha. of agricultural land and drinking will be provided to local population during scarcities.

The Project:

The project involves lifting of 115 Million Cubic Feet water from Kukadi Left Canal through pumps up to Delivery Chamber situated at Village Walvad of Karjat Tehsil and releasing it by gravity to 24 percolation Reservoirs and 3 small Reservoirs situated in Drought Prone Areas of Karjat Tehsil. The project also involves laying of 340m. underground insulated 33 KV Single Circuit HT electric transmission cable parallel to HDEP/PVC water pipe line having diameter 740/355/315/200/160 mm. in a part of project. Plan of Rising Main and further distribution lines is appended hereto as Appendix-II.

Why Forest Area?

The land involved in the project alignment includes private ownership and Reserved Forests land falling within limits of GIB Wildlife Sanctuary and its ESZ as stated hereinafter. Area Statement is furnished herein below.

The project is site- specific. The target area, topographical features of area and technological considerations play crucial role in deciding alignment of project.

The Delivery Chamber is situated at a point of higher elevation, from where the distribution of water to receiving ends, through gravity, is possible. All alternatives have been examined technically & financially. The level data examined for selection of route suggests that the proposed alignment has a gentle slope, least obstructions for lifting and distribution of water. The Rising Main i.e. the pipeline connecting to Delivery Chamber & Pumping Station and target area unavoidably passes through the Reserved Forests falling within the limits of GIB Wildlife Sanctuary & its ESZ and non-forest areas of ESZ. The proposed route is the shortest as compared to other available alternative.

Two alternatives have been examined technically. There is no suitable non-forest land obtainable for the project. There is no any other desirable alternative to the proposed alignment as well. Wherever possible, the alignment is proposed through private non-forest land.

The proposed alignment has also been examined pursuant to proviso to Wildlife (Protection) Act, 1972, under Section 29 and Section 35 (6). There will be no physical disturbance to the wildlife habitat and animals, particularly, the Great Indian Bustard during execution and operation of the project.

As the project is site- specific, there is no option but to propose the alignment through Forest Land. The proposed route/ alignment is the shortest one, involves minimum Forest Land and is financially viable option too.

Statement of Forest/ Non-Forest Area:

Abstract:

- Total Length (Including Rising Main & Distribution Network): 100987 m.
- Length through Forest Land: 7711.6 m.
- Length through Non Forest Area: 93275.4 m.
- Forest Land required for project: 0.97 Ha.

A. LAND WITHIN GIB WILDLIFE SANCTUARY:

Name of village	Item of work/ Purpose	Forest Land				Legal Status	Non- Forest Land				Total Area (In Ha.)
		Suy. No./Gut No.	Length x Width	Area Sq. m.	Area Ha.		Gut No.	Length x Width	Area Sq. m.	Area Ha.	
Malewadi	Laying underground water pipeline & 33KV SC HT underground Electric Cable	40 40	340 X 1.4 0 340 x 0.60	476.00 204.00	0.0476 0.0204	RF RF	--	--	--	--	0.047 0.020
Walvad	Laying underground water pipeline	206	838 x 1.50 + 104 x 1.50	1413.00	0.1413	RF	--	--	--	--	0.141
Khandale	Laying underground water pipeline	16	223 x 1.00	223.00	0.0223	Govt. Land	--	--	--	--	0.022
Chande Bk.	Laying underground water pipeline	125	1081.38 x 1.00	1081.38	0.1081	RF	--	--	--	--	0.108
Supe	Laying underground water pipeline	44, 54	300.00 x 1.00	300.00	0.0300	RF	--	--	--	--	0.030
Bitakewadi	Laying underground water pipeline	151	280 x 1.00	280.00	0.0280	RF	--	--	--	--	0.028
Takli Khandeshwari	Laying underground water pipeline	74	190 x 1.00	190.00	0.0190	RF	--	--	--	--	0.019
Koundhane	Laying underground water pipeline	263	635.22 x 1.00	635.22	0.0635	RF	--	--	--	--	0.063
TOTAL			**Length= 4211.6**	**4866.6**	**0.4802**		**TOTAL**		**--**	**--**	**0.4802**

B. LAND WITHIN ESZ OF GIB WLS:

Name of village	Item of work/ Purpose	Forest Land				Legal Status	Non- Forest Land				Total Area (In Ha.)
		Gut No.	Length x Width	Area Sq. m.	Area Ha.		Gut No.	Length x Width	Area Sq. m.	Area Ha.	
Supe	Laying underground water pipeline						16 17 20 21 67 69 280 281 282	312.4 x 1.0 200.1 x 1.0 133.9 x 1.0 118.6 x 1.0 236.9 x 1.0 217.1 x 1.0 127.5 x 1.0 63.9 x 1.00 86.7 x 1.00	312.4 200.1 133.9 118.6 236.9 217.1 127.5 63.9 86.7	0.031 0.020 0.013 0.011 0.023 0.021 0.012 0.006 0.008	0.031 0.020 0.013 0.011 0.023 0.021 0.012 0.006 0.08
Walvad	Laying underground water pipeline	--	--	--	--		229/1 231 247 210 202 178 179 190 93	2043.7 x 1 494.9 x 1.0 15.0 x 1.00 119.6 x 1.0 120.7 x 1.0 30.2 x 1.00 70.0 x 1.00 459.1 x 1.0 90.2 x 1.0	2043.7 494.9 15.00 119.6 120.7 30.2 70.00 459.1 90.2	0.204 0.049 0.001 0.011 0.012 0.003 0.007 0.045 0.009	0.204 0.049 0.001 0.011 0.012 0.003 0.007 0.045 0.009

Khurangewadi	Laying underground water pipeline	--	--	--	--	--	70 96 105 106 204 205 206 222	126.6 x 1.0 35.5 x 1.00 116.5 x 1.0 167.8 x 1.0 50.9 x 1.00 135.6 x 1.0 70.2 x 1.00 321.2 x 1.0	126.6 35.5 116.5 167.8 50.9 135.6 70.2 321.2	0.012 0.003 0.011 0.016 0.005 0.013 0.007 0.032	0.012 0.003 0.011 0.016 0.005 0.013 0.007 0.032
Chincholi Kaldat	Laying underground water pipeline	395	946.1 x 1.40	1324.54	0.132	RF	--	--	--	--	0.094
Malewadi	Laying underground water pipeline	--	--	--	--		12 13 14 19 21 36	43.8 x 1.00 73.1 x 1.00 77.5 x 1.00 150.3 x 1.0 405 x 1.00 288.3 x 1.0	43.8 73.1 77.5 150.3 405.0 288.3	0.004 0.007 0.007 0.015 0.040 0.028	0.004 0.007 0.007 0.015 0.040 0.028
Bitakewadi	Laying underground water pipeline	--	--	--	--		75 79 80 93 147 148 153 157 380	134.5 x 1.0 398.9 x 1.0 311.7 x 1.0 33.1 x 1.00 276.5 x 1.0 251.5 x 1.0 85.9 x 1.00 325.6 x 1.0 293.2 x 1.0	134.5 398.9 311.7 33.1 276.5 251.5 85.9 325.6 293.2	0.013 0.039 0.031 0.003 0.027 0.025 0.008 0.032 0.029	0.013 0.039 0.031 0.003 0.027 0.025 0.008 0.032 0.029
Koundhane	Laying underground water pipeline	--	--	--	--		179 181 182 183 184 274 275	173.6 x 1.0 224.4 x 1.0 87.7 x 1.00 92.5 x 1.00 381.0 x 1.0 101.7 x 1.0 33.0 x 1.00	173.6 224.4 87.7 92.5 381.0 101.7 33.0	0.017 0.022 0.008 0.009 0.038 0.010 0.003	0.017 0.022 0.008 0.009 0.038 0.010 0.003
Chande KH.	Laying underground water pipeline	--	--	--	--		95 96 97 125 129 130 131 134 136	52.5 x 1.00 324 x 1.0 211.8 x 1.0 64.9 x 1.00 265.3 x 1.0 96.1 x 1.00 53.1 x 1.00 80.7 x 1.00 241 x 1.0	52.5 324 211.8 64.9 265.3 96.1 53.1 80.7 241	0.005 0.032 0.021 0.006 0.026 0.009 0.005 0.008 0.024	0.005 0.032 0.021 0.006 0.026 0.009 0.005 0.008 0.024
Chande Bk.	Laying underground water pipeline	--	--	--	--	--	7 8 9 10 11 12 13 17 18 23 24 25 116 117 121 122 123 124 127 128 132	11.4 x 1.00 19.6 x 1.00 32.3 x 1.00 27.5 x 1.00 39.4 x 1.00 41.1 x 1.00 25.0 x 1.00 18.5 x 1.00 18.1 x 1.00 21.4 x 1.00 20.6 x 1.00 31.4 x 1.00 182.1 x 1.0 72.8 x 1.00 223.2 x 1.0 280.7 x 1.0 83.3 x 1.00 120.4 x 1.0 65.7 x 1.00 73.2 x 1.00 142.3 x 1.0	11.4 19.6 32.3 27.5 39.4 41.1 25.0 18.5 18.1 21.4 20.6 31.4 182.1 72.8 223.2 280.7 83.3 120.4 65.7 73.2 142.3	0.001 0.001 0.003 0.002 0.003 0.004 0.002 0.001 0.001 0.002 0.002 0.003 0.018 0.007 0.022 0.028 0.008 0.012 0.006 0.007 0.014	0.001 0.001 0.003 0.002 0.003 0/004 0.002 0.001 0.001 0.002 0.002 0.003 0.018 0.007 0.022 0.028 0.008 0.012 0.006 0.007 0.014
Rehkurui	Laying underground water pipeline	--	--	--	--		59 124 + 125 147 148 149	233.8 x 1.0 325.2 x 1.0 257.1 x 1.0 262.1 x 1.0 221.5 x 1.0	233.8 325.2 257.1 262.1 221.5	0.023 0.032 0.025 0.026 0.022	0.023 0.032 0.025 0.026 0.022
Khandale	Laying underground water pipeline	--	--	--	--		10 14 15	76.9 x 1.00 113.9 x 1.0 490.5 x 1.0	76.9 113.9 490.5	0.007 0.011 0.049	0.007 0.011 0.049
Takli Khandeshwari	Laying underground water pipeline	--	--	--	--		72 73	221.0 x 1.0 195.4 x 1.0	221.0 195.4	0.022 0.019	0.022 0.019
Diksal	Laying underground water pipeline	--	--	--	--		39 75 79	127.7 x 1.0 137.4 x 1.0 381.9 x 1.0	127.7 137.4 381.9	0.012 0.013 0.038	0.012 0.013 0.038
TOTAL			**Length= 946.1**	**1324.54**	**0.1324**		**TOTAL**	**Length= 16191.4**	**16191.4**	**1.6191**	**1.874**

C. LAND OUTSIDE WLS & ESZ:

Name of village	Item of work/ Purpose	Forest Land				Legal Status	Non- Forest Land				Total Area (In Ha.)
		Gut No.	Length x Width	Area			Gut No.	Length x Width	Area		
				Sq. m.	Ha.				Sq. m.	Ha.	
Malewadi	Laying underground water pipeline	--	--	--	--	--	36, 21,18,19,17,15,12,59,58	1818.871 x 1.00	1818.871	0.181	0.181
Shinde	Laying underground water pipeline	--	--	--	--	--	336,327,321,320,317,307,318, 309,310,311,312,305,304,301,300 , 298,261,262	2506.813 x 1.00	2506.813	0.250	0.250
Supe	Laying underground water pipeline	56	480.00 x 1.40	672.00	0.067	RF	69,67,68,66,16,17,18,20,22,32,16 5, 287,286, 285,284,283,282,281,280, 267,266,268, 263, 258,257,254,253, 236,235,234,82, 81,80, 79, 85,86,87,88, 89,90,91	5823.643 x 1.00	5823.643	0.582	0.649
Walvad	Laying underground water pipeline	230	60.00 x 1.40	84.00	0.008	RF	231, 232,237,229/1, 234,235,236,238/2,223/1, 242,243,269,265,264, 287,286,35,36,38,39 40 64,65,75,87,73, 97,91,92,93, 96,95,100,101,7 246,291,217,210,207,161,177, 176,175,164,166,167, 178,179,194,193,192, 181,180,183,184	15337.139 x 1.00	15337.139	0.153	0.161
Bitakewadi	Laying underground water pipeline	--	--	--	--	--	148,147,151,153,157,93,92,91,79, 80, 75,71,72, 73,379,380,378, 377,352,376,350,349	1998.104 x 1.00	1998.104	0.199	.199
Khurangewadi	Laying underground water pipeline	70	1820 x 1.40	2548.00	0.254	RF	96,95,99/1,111,110,105,106,108, 68,69,71,72,73, 94,121,118, 67,236,235,234,233,232,230,229, 1, 225,224,223,222, 177,178, 216,215, 207,206,205, 204,203, 202,58,57,56, 55,54,53,42, 3,4, 5,6,9,41,38,36	6749.554 x 1.00	6749.554	0.674	0.928
Koundhane	Laying underground water pipeline	--	--	--	--	--	251,252,243,242,239,238,231,232 , 233,222, 221,220,199, 198, 275,274, 294,178,179,181,182, 183,185,194, 192,189,190,191, 96, 79, 80,83,82, 86,89,91,66	4251.765 x 1.00	4251.765	0.425	0.425
Mulewadi	Laying underground water pipeline	--	--	--	--	--	286,285,282,281,231,230,220,218 , 219,206, 205,204,203, 202,21,200, 191,192,194	2464.253 x 1.00	2464.253	0.246	0.246
Chande Bk.	Laying underground water pipeline	--	--	--	--	--	124,123,122,121,118,117,116,126 , 127,128,129,132,133,23,18,17,14, 13, 12,11,10,9,8, 6,7,280,279, 278,277	1466.543 x 1.00	1466.54	0.146	0.146
Chande Kh.	Laying underground water pipeline	--	--	--	--	--	117,95,46,45,96,97,98,99,111,112 , 228,217,223, 222,218,216, 208, 209, 210,199,118,123,124, 125, 126, 129, 130,131,132,134,135, 136,137,138, 141,142,144,145, 148,150,151	7162.428 x 1.00	7162.42	0.716	0.716
Gaurav Pimpri	Laying underground water pipeline	--	--	--	--	--	22,35,36,674,673,672,670,669,66 8, 667,611,606,610,599,598, 597,596,594,593	3514.16 x 1.00	3514.16	0.351	0.351
Diksal	Laying underground water pipeline	--	--	--	--	--	101,102,118,119,120,121,65,66,6 7, 68,69,79,76,75,52,44,45,46,5,286	3898.293 x 1.00	3898.29	0.389	0.389
Takli Khandeshwari	Laying underground water pipeline	--	--	--	--	--	157,156,154,72,73	1682.677 x 1.00	1682.677	0.168	0.168
Chincholi Kaldat	Laying underground water pipeline	393 394	193.9 x 1.40	271.46	0.027	RF	387,385,384,383,382,380,379,377 , 337,338,339, 340,341, 342,343,344, 347,348, 353,518, 519, 520,502,517, 503,501, 497,	3568.837 x 1.00	3568.837	0.356	0.356

							495,489,484,488,487, 486, 292,293,294,299,30,303,225				
Bhairoba wadi	Laying underground water pipeline	--	--	--	--	--	291,292,293,294,299,300,302,303 , 304,315,314,313,312,311,310,308 , 12,13,14,15,25,26,27,55,56,57,58, 59	4290.205 x 1.00	4290.205	0.429	0.429
Rehkurui	Laying underground water pipeline	--	--	--	--	--	99,100/2,116/1,115,122,123,124,1 25,146,147,144,143/1,84,57,56,55 ,35	4131.289 x 1.00	4131.289	0.413	0.413
Khandal e	Laying underground water pipeline	--	--	--	--	--	15,14,13,10,9,8,94,36,93,92,91,89 , 88,87,86,114,90,74,76,82,81,80,7 9, 78	3827.398 x 1.00	3827.398	0.382	0.382
Goykarw -adi	Laying underground water pipeline						189,187,186,185,183,182,181,180 , 192,178,177,176,175,174,213,212 , 211, 208,207, 204,203,205, 200, 197, 198	2591.629 x 1.00	2591.629	0.259	0.259
TOTAL			**Length= 2553.9**	**3575.4 6.**	**0.357**	**--**	**TOTAL**	**Length= 77084**	**77084.0**	**7.70**	**8.057**

Administrative Approval:

Government of Maharashtra has accorded Administrative Approval to this Project; vide Sub- irrigation Project-2018/case No. 313/water-1, dated 3.01.2019.

Cost of the Project:

The total cost of construction of the proposed approach road, including material & labour, is about Rs. 1, 27, 82,486/- An estimate of work, duly certified by the Competent Authority, is submitted along with the proposal for diversion of Forest Land.

Employment Likely To Be Generated:

The project likely to generate temporary employment to skilled/ unskilled persons to the extent of 32000 Mandays during execution stage and 2300 during operational stage.

(i) Employment opportunities likely to be created during project execution period of 24 months:

Sr. No.	Type of Employment	Man Days
1	Skilled employment	2200
2	Semi- Skilled employment	4300
3	Un- Skilled employment	25500
Total		32000

(ii) Employment opportunities during operation and maintenance period of project, approximately for next 20 years:

Sr. No.	Type of Employment	Man Days
1	Skilled employment	400
2	Semi- Skilled employment	400
3	Un- Skilled employment	1500
Total		2300

Bio-diversity Impact Assessment:

Since the proposal involves less than 50 Ha. of Forest Land, there is no need to carry out Bio-diversity Impact Assessment exercise.

Cost Benefit Analysis:

Since the proposal involves plain Forest Land to the extent less than 20 Ha., the Cost-Benefit Analysis is not required in this diversion proposal.

Execution of Project:

The project will be executed by the Soil & Water Conservation Division, Ahmednagar as per departmental norms, under the supervision of Competent Authority.

Other Issues:

i) The project involves diversion of Forest Land to the extent less than 1.00 Ha.

ii) No felling of tree is required for purpose of laying underground water pipeline and 33 KV SC HT Cable.

iii) The project does not fall within the limit of submergence or catchment area of any project. Hence, no population, including Scheduled Caste/Tribe, is affected or likely to be displaced by this project.

iv) The 33KV SC HT line is insulated and being laid underground as per norms/ standards and with all precautionary measures prescribed under the Safety and Electric Supply Regulations, 2010.

v) The project of laying of Water Pipeline and 33 KV SC HT Cable is underground work, which require diversion of Forest Land, hence, eligible for exemption in NPV to the extent of 50% of normal rates of NPV; vide Sr. No. 7 of Para 3.5 of Handbook of FCA, 1980 and FCR, 2003 (Guidelines & Clarifications).