PROCEEDINGS OF THE TREE EXPERT COMMITTEE MEETING HELD ON 14.10.2020 AT 2:00 PM AT BENGALURU.

PRESENT:

1.	**Shri I B Srivastava**, IFS (Rtd).	CHAIRMAN
2.	**Dr. Muthu Kumar Arunachalam** (Scientist-E. Plant Pathologist) IWST.	MEMBER
3.	**Dr. Nagarajaiah C** (Professor and Head, Dept. of Forestry and Environmental Science)	MEMBER
4.	**Dr. R Krishna Murthy** (Professor Dept. of Forestry and Environmental Science)	MEMBER
5.	**Shri. V.Govindaraju** (Assistant Conservator of Forests, (BBMP)	MEMBER - SECRETARY

Shri V. Govindaraju, Member Secretary, Tree Expert Committee and Assistant Conservator of Forests, BBMP, Bengaluru welcomed the Chairman, and Members of the Committee present in the meeting.

Pursuant to the orders dt 20.08.2020 of Hon'ble High Court of Karnataka to reconstitute the Tree Expert Committee, the Government of Karnataka has re-constituted the Committee of Experts by incorporating the following members:

(1) Professor and Head, Department of Forestry and Environmental Science and

(2) Professor, Department of Forestry and Environmental Science, University of Agricultural Sciences, GKVK, Bengaluru. The same was submitted and placed on record by the Hon'ble High Court of Karnataka.

Bearing in mind the directions issued by the Hon'ble High Court and taking into account all the paper and documents with respect to the pending applications pertaining to BMRCL, the re-constituted Committee examined the pending

applications of BMRCL and carried out field visits for on site assessment and to find alternative ways to save the trees which were identified for felling, in different project sites/locations on the dates mentioned against each location: -

Sl.No	Metro Stations/Depot. Location	Date of Inspection
1	UM Kaval Depot.(Reach 4B)	10.09.2020
2	Bennaganahalli Lake Bund (Reach 1A)	15.09.2020
3	Kadugudi Metro Station (Reach 1B)	17.09.2020
4	Whitefield Metro Station (Reach 1B)	
5	Kadugudi Depot.	
6	Kothunur Depot Entry Line (Reach 6 Elevated)	19.09.2020
7	Reach 5 (Package-3)	
8	Govt. I.T.I Ground (Fabrication Yard)	
9	Dairy Circle Metro Station (RT 01 UG)	
10	Lakkasandra Metro Station (RT 01 UG)	
11	M G Road Metro Station (RT 02 UG)	23.09.2020

During the course of these visits, the concerned Chief Engineers / Deputy Chief Engineers of BMRCL have explained with reference to the alignment of Metro works along with the approved alignment, drawing plans etc., and the same has been examined by the Committee.

The Committee thoroughly assessed each existing tree in all the above locations for the possibility of Retention or Transplantation considering the following factors like change in project alignment / shifting of proposed structures, type of trees, health of the tree, age / maturity status of the tree *etc.* in reference to the 20 points Working Procedure and Methodology submitted to the Hon'ble High Court of Karnataka.

Intensive assessment was carried out by the Committee in order to retain the trees on site by understanding the overall project plan vis-à-vis the alignment of Metro line, stations, Depot *etc.* wherever possible, as Retention is the first priority and efficient way to save trees in any infrastructure development project area. Only when retention on site was not feasible, Committee examined as to whether the tree is sufficiently healthy to be translocated. Then if the above two options are not possible then as a last resort, the Tree Expert Committee has decided to recommend for felling of trees.

The Committee has also inspected the proposed sites by BMRCL for translocation of trees both of existing trees locations and at receptors sites (planned for translocation) which are near to the existing trees locations at some places. Details of soil test reports are produced as **Annexure**.

Thereafter meetings were held by the Committee for finalizing the field inspections reports pertaining to various Metro Stations, Viaducts and Depots in jurisdiction of Concerned Tree Officers and further the proceedings were drawn based on the field inspection reports indicating which are the trees to be saved by way of retention, which are the trees to be saved by way of translocation and finally trees to be felled.

All sincere efforts were made to save the trees by means of retention on site as first priority and then translocation as a next step. After due deliberation, the Tree Expert Committee has therefore taken decision and directed the concerned Tree Officers to issue / grant permissions for retention of trees on site, translocation of trees to suitable places and then felling of remaining trees as a last resort to BMRCL besides simultaneously informing them to carry out planting of tall healthy saplings in lieu of felling of trees at the ratio of 1:10 at suitable places. The details of trees permitted for retention, translocation and felling has been listed in the field inspection reports of Tree Expert Committee (Reports enclosed).

The Committee stressed that in respect of tree to be translocated, regular inspection of the process of translocation should be conducted and translocation should be done with close supervision of Forest Staff. Further regular post care management of the trees thus translocated must be undertaken by the Forest Staff of BBMP, Bangalore Urban Division and Project Authorities and it should be ensured that the greenery of Bengaluru city is enhanced through proper maintenance of saplings / trees under all circumstances.

Member Secretary and
Assistant Conservator of Forests, BBMP

DETAILS OF TREES IN UM KAVAL- FOREST AREA WHICH ARE TO BE FELLED FOR CONSTRUCTION OF APPROACH TO ANJANAPURA DEPOT & CONSTRUCTION OF DEPOT IN REACH 4B.

Sl.No	Tree No.	Name of tree/Species	Girth in mtr	Height in mtr(Approx)	Committee Reamrks
1	1	Hunase	1.85	5.00	To be Felled
2	2	Gulmohar	1.13	2.50	To be Felled
3	3	Gulmohar	0.33	1.00	To be Felled
4	4	Honge	0.34	2.00	To be Felled
5	5	Honge	0.37	2.00	To be Felled
6	6	Honge	0.37	1.50	To be Felled
7	7	Gulmohar	0.27	2.00	To be Retained
8	8	Gulmohar	0.44	2.00	To be Retained
9	9	Gulmohar	0.34	3.00	To be Retained
10	10	Gulmohar	0.53	3.00	To be Retained
11	11	Gulmohar	0.78	3.00	To be Felled
12	12	Gulmohar	0.73	3.00	To be Felled
13	13	Gulmohar	0.47	3.00	To be Felled
14	14	Gulmohar	0.24	2.00	To be Felled
15	15	Gulmohar	0.17	2.00	To be Felled
16	16	Gulmohar	0.19	2.00	To be Felled
17	17	Gulmohar	0.24	2.00	To be Felled
18	18	Gulmohar	0.24	2.00	To be Felled
19	19	Shivane	0.72	3.00	To be Translocated
20	20	Subabul	0.39	3.00	To be Felled
21	21	Thare	2.15	4.00	To be Felled
22	22	Gulmohar	0.71	2.00	To be Retained
23	23	Subabul	0.28	2.00	To be Retained
24	24	Subabul	0.27	2.00	To be Retained
25	25	Bage	0.47	2.00	To be Translocated
26	26	Beete	0.46	2.00	To be Translocated
27	27	Banni	0.55	2.50	To be Retained
28	28	Beete	0.53	2.00	To be Retained
29	29	Hebbevu	1.13	4.00	To be Felled
30	30	Hebbevu	3.00	2.50	To be Felled
31	31	Shivane	1.15	2.00	To be Felled
32	32	cheri	0.37	2.00	To be Retained
33	33	cheri	0.45	2.50	To be Retained

Sl.No	Tree No.	Name of tree/Species	Girth in mtr	Height in mtr(Approx)	Committee Reamrks
34	34	cheri	0.40	2.50	To be Retained
35	35	Subabul	0.38	2.00	To be Felled
36	36	Subabul	0.27	2.00	To be Felled
37	37	Honge	0.49	2.00	To be Felled
38	38	Honge	0.53	2.00	To be Felled
39	39	Honge	0.62	2.00	To be Felled
40	40	Honge	0.38	1.50	To be Felled
41	41	Jagalaganti	0.32	1.00	To be Felled
42	42	Subabul	0.24	2.00	To be Felled
43	43	Subabul	0.29	2.00	To be Felled
44	44	Tapala	0.59	2.00	To be Retained
45	45	Subabul	0.42	1.00	To be Retained
46	46	Gobbarada gida	0.22	1.00	To be Retained
47	47	Honge	0.81	2.00	To be Retained
48	48	Honge	0.50	1.00	To be Felled
49	49	Subabul	0.23	2.00	To be Felled
50	50	Jagalaganti	0.34	1.00	To be Translocated
51	51	tapasi	0.29	1.00	To be Felled
52	52	Tapala	1.52	3.00	To be Felled
53	53	Banni	0.69	3.00	To be Felled
54	54	Shivane	0.23	2.00	To be Translocated
55	55	Shivane	0.24	2.00	To be Translocated
56	56	Muttuga	0.60	1.50	To be Felled
57	57	Gobbarada gida	0.34	2.00	To be Felled
58	58	Gobbarada gida	0.30	2.00	To be Felled
59	59	Gobbarada gida	0.25	2.00	To be Felled
60	60	Gobbarada gida	0.31	21.00	To be Felled
61	61	Gobbarada gida	0.32	1.50	To be Felled
62	62	Gobbarada gida	0.20	2.00	To be Felled
63	63	Gobbarada gida	0.73	1.00	To be Felled
64	64	Gobbarada gida	0.26	2.00	To be Felled
65	65	Gobbarada gida	0.29	1.50	To be Felled
66	66	Subabul	0.32	2.00	To be Felled
67	67	Tapala	1.41	1.80	To be Felled
68	68	Peepal	0.30	3.00	To be Translocated

Sl.No	Tree No.	Name of tree/Species	Girth in mtr	Height in mtr(Approx)	Committee Reamrks
69	69	Gobbarada gida	0.22	2.00	To be Felled
70	70	Gobbarada gida	0.24	2.00	To be Felled
71	71	Subabul	0.45	2.00	To be Felled
72	72	Thare	1.71	4.00	To be Felled
73	73	Thare	0.77	3.00	To be Felled
74	74	Thare	0.82	3.00	To be Felled
75	75	Thare	1.52	5.00	To be Translocated
76	76	Honne	0.53	3.00	To be Translocated
77	77	Gobbarada gida	0.27	1.00	To be Felled
78	78	Achalu	0.53	2.00	To be Felled
79	79	Achalu	0.47	**1.50**	To be Translocated
80	80	tapala	0.46	1.50	To be Felled
81	81	seemethangadi	0.42	2.00	To be Felled
82	82	seemethangadi	0.49	2.00	To be Felled
83	83	seemethangadi	0.48	2.00	To be Felled
84	84	Shivane	0.34	1.50	To be Felled
85	85	Shivane	0.36	1.50	To be Felled
86	86	Shivane	0.39	2.00	To be Felled
87	87	seemethangadi	0.47	2.00	To be Felled
88	88	seemethangadi	0.52	1.00	To be Felled
89	89	hebbevu	0.48	2.00	To be Felled
90	90	barsera	0.66	5.00	To be Felled
91	91	Shivane	0.25	2.00	To be Translocated
92	92	hebbevu	0.29	2.00	To be Translocated
93	93	Shivane	0.30	2.00	To be Felled
94	94	barsera	1.20	1.00	To be Felled
95	95	Thare	1.30	5.00	To be Translocated
96	96	bidiru	25 culms number		To be Felled
97	97	kamara	0.23	2.00	To be Translocated
98	98	kaggali	0.35	2.50	To be Felled
99	99	bidiru	11culms number		To be Felled
100	100	tapala	1.60	2.50	To be Felled
101	101	bidiru	15 culms number		To be Felled
102	102	bilwara	0.69	3.00	To be Translocated
103	103	Shivane	0.34	1.00	To be Felled

Sl.No	Tree No.	Name of tree/Species	Girth in mtr	Height in mtr(Approx)	Committee Reamrks
104	104	nerale	0.22	4.00	To be Translocated
105	105	nerale	0.34	2.00	To be Translocated
106	106	Thare	1.20	4.00	To be Translocated
107	107	Subabul	0.48	1.00	To be Felled
108	108	bidiru	50culms number		To be Felled
109	109	tapasi	0.52	1.00	To be Felled
110	110	hebbevu	0.50	3.00	To be Translocated
111	111	tapala	2.11	2.00	To be Felled
112	112	seemethangadi	0.58	2.00	To be Felled
113	113	hebbevu	0.38	2.00	To be Translocated
114	114	thorematti	0.21	1.00	To be Translocated
115	115	Shivane	0.21	1.00	To be Translocated
116	116	hebbevu	0.30	3.00	To be Translocated
117	117	Sandal	0.25	2.00	To be Translocated
118	118	yalachi	0.35	0.50	To be Translocated
119	119	bage	0.97	3.50	To be Translocated
120	120	Jagalaganti	0.18	1.50	To be Translocated
121	121	Echalu	0.40	1.00	To be Translocated
122	122	Echalu	0.86	5.00	To be Translocated
123	123	Echalu	0.80	5.00	To be Translocated
124	124	Thare	1.09	5.00	To be Translocated
125	125	Tapala	2.05	5.00	To be Felled
126	126	Hebbevu	0.49	6.00	To be Translocated
127	127A	Busera	0.59	2.00	To be Felled
	127B	Busera	0.75	2.00	To be Felled
128	128	Kaggali	0.32	2.50	To be Felled
129	129	Kaggali	0.30	2.00	To be Felled
130	130	Kaggali	0.36	2.50	To be Translocated
131	131	Kaggali	0.32	2.50	To be Translocated
132	132	Kaggali	0.32	2.00	To be Translocated
133	S1	Sandal	0.18	2.00	To be Retained
134	S2a	Sandal	0.25	2.00	To be Retained
	S2b	Sandal	0.17	2.00	
135	S3	Sandal	0.16	2.00	To be Retained
136	S4	Sandal	0.15	2.00	To be Retained

Sl.No	Tree No.	Name of tree/Species	Girth in mtr	Height in mtr(Approx)	Committee Reamrks
137	S5	Sandal	0.17	2.00.	To be Retained
138	S6	Sandal	0.27	2.00	To be Retained
139	S7	Sandal	0.18	2.00	To be Retained
140	S9	Sandal	0.17	2.00	To be Retained

Note:

Total Number of enumerated trees: **140 No's**

Number of Trees recommended for retention: **24 No's**

Number of Trees recommended for translocation **35 No's**

Number of Trees recommended for felling: **81 No's**

U M Kaval State Forest, UM Kaval Village Sy. No.38 (Old No.12), Bengaluru South
Anjanapura Depot

Trees Recommended to Retain at Site

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
1	7	Gulmohar	0.27	2.00	*Delonix regia* is a species of flowering plant in the bean family Fabaceae, subfamily Caesalpinioideae native to Madagascar. In many tropical parts of the world it is grown as an ornamental tree and in English it is given the name royal poinciana, flamboyant, flame of the forest, or flame tree. Branches arising from midculm nodes upward, occasionally also at lower nodes, several to many at each node with primary branch dominant.	These trees are abutting to the boundary and will not hinder the BMRCL project activities.(These recommendations are in reference to the 20 point working procedure and methodology submitted by TEC to the Hon'ble High Court of Karnataka)
2	8	Gulmohar	0.44	2.00		
3	9	Gulmohar	0.34	3.00		
4	10	Gulmohar	0.53	3.00		
5	22	Gulmohar	0.71	2.00		
6	23	Subabul	0.28	2.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
7	24	Subabul	0.27	2.00		
8	27	Banni	0.55	2.50	*Prosopis cineraria* , also known as 'Ghaf, is a species of flowering tree in the pea family, Fabaceae. It is native to arid portions of Western Asia and the Indian Subcontinent, including Afghanistan, Bahrain, Iran, India, Oman, Pakistan, Saudi Arabia, the United Arab Emirates and Yemen	
9	28	beete	0.53	2.00	*Albizia lebbeck* is a tree growing to a height of 18–30 m tall with a trunk 50 cm to 1 m in diameter. The leaves are bipinnate, 7.5–15 cm long, with one to four pairs of pinnae, each pinna with 6–18 leaflets.	
10	32	cheri	0.37	2.00	Muntingia is a genus of plants in the family Muntingiaceae, comprising only one species, Muntingia calabura, and was named in honour of Abraham Munting. It is native to the neotropics, from Mexico south to Bolivia, with edible fruit, and has been widely introduced in other tropical areas.This species colonizes disturbed habitats in tropical lowland areas, becoming part of the secondary vegetation, as well as gallery forests. It thrives in poor soil, able to tolerate acidic and alkaline conditions and drought, but doesn't grow in saline conditions	
11	33	cheri	0.45	2.50		
12	34	cheri	0.40	2.50		
13	44	Tapala	0.59	2.00	It also called reonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	-do-
14	45	Subabul	0.42	1.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
15	46	Gobbarada gida	0.22	1.00	Gliricidia sepium is a medium-sized tree that grows 10–12 m (33–39 ft) high. The bark is smooth, and its color can range from a whitish gray to deep red-brown. The flowers are located on the end of branches that have no leaves	

Trees Recommended to Retain at Site

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
16	47	Honge	0.81	2.00	Millettia pinnata is a species of tree in the pea family, Fabaceae, native to eastern and tropical Asia, Australia and Pacific islands. It is often known by the synonym Pongamia pinnata as it was moved to the genus Millettia only recently. Common names include Indian beech and Pongam oiltree	
17	S1	Sandal	0.18	2.00	Santalum album, or Indian sandalwood, is a small tropical tree, and the traditional source of sandalwood oil. It is considered sacred in some religions, and some cultures place great significance on its fragrant and medicinal qualities. . Indian sandalwood still commands high prices for its essential oil owing to its high alpha santalol content, but due to lack of sizable trees it is no longer used for fine woodworking as before.	-do-
18	S2a	Sandal	0.25	2.00		
	S2b	Sandal	0.17	2.00		
19	S3	Sandal	0.16	2.00		
20	S4	Sandal	0.15	2.00		
21	S5	Sandal	0.17	2.00.		
22	S6	Sandal	0.27	2.00		
23	S7	Sandal	0.18	2.00		
24	S9	Sandal	0.17	2.00		

U M Kaval State Forest, UM Kaval Village Sy. No.38 (Old No.12), Bengaluru South
Anjanapura Depot

Trees Recommended for Translocation

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
1	50	Jagalaganti	0.34	1.00	The bark of *D. candolleana* is smooth, dark, and blaze-reddish in color. Branchlets are terete and show adpressed hairs when young. Leaves are simple, alternate, distichous; petioles are 0.6-1.1 cm long and canaliculate. Leaves are hairy when young, and glabrous when mature. Lamina is about 6-18 x 3.5-7.5 cm in length, shape is oblong to elliptic-oblong.	* Each tree was examined and identified for translocation based on their ecological importance, health and relevant factors in reference to the parameters as mentioned in point no.s 14, 15 and 19 of methodology of TEC. Sandalwood trees were smaller in girth size with avability of suitable root ball size.As these trees are healthy and falling in midway of project area, translocation is the only method to save the trees. As Sandalwood needs host plant/tree for growth/survival ,the excavated tree/plant may be planted nearer to suitable host plant/tree. (These recommendations are in reference to the 20 point working procedure and methodology submitted by TEC to the Hon'ble High Court of Karnataka) * Regarding translocation of trees, the sites identified are in the premises of Devika Rani Estate and UM Kaval Forest .These sites have been inspected by TEC. Soil analysis reports were also produced for persual of TEC, translocation of trees can be done in these areas. The recommendations as suggested by GKVK and TEC during the course of translocation activity have to be followed by BMRCL
2	54	Shivane	0.23	2.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
3	55	Shivane	0.24	2.00		
4	79	Echalu	0.47	**1.50**	*Phoenix sylvestris* ranges from 4 to 15 m in height and 40 cm in diameter; not as large as the Canary Island Date Palm, but nearly so, and resembling it. The leaf crown grows to 10 m wide and 7.5 to 10 m tall containing up to 100 leaves. The inflorescence grows to 1 metre with white, unisexual flowers. The single-seeded fruit ripens to a purple-red colour.	
5	91	Shivane	0.25	2.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
6	92	Hebbevu	0.29	2.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	
7	95	Thare	1.30	5.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	
8	102	Bilwara	0.69	3.00	*Albizia odoratissima* , is a medium sized hardwood species from SE Asia that can also be known as Ceylon Rosewood, Black Siris, and Kali Siris. Trees grow to a maximum height of 80 ft. and a maximum diameter of 48 to 55 inches. Bhilwara is one of the top nitrogen fixing species. The heartwood in Bhilwara wood is golden to dark brown/black with some alternating color stripes. It is a durable and dense hardwood that is good for woodworking projects as it works and finished well.	
9	104	Nerale	0.22	4.00	*Syzygium cumini* , commonly known as Malabar plum, Java plum, black plum, or jambolan, is an evergreen tropical tree in the flowering plant family Myrtaceae, and favored for its fruit, timber, and ornamental value. The leaves which have an aroma similar to turpentine. The leaves are used as food for livestock, as they have good nutritional value.	
10	105	Nerale	0.34	2.00		

Trees Recommended for Translocation

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
11	106	Thare	1.20	4.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	
12	113	Hebbevu	0.38	2.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	
13	114	Thorematti	0.21	1.00	It is a tree growing to 30 m tall, with a trunk diameter of 1 m. The fruit is ovoid, 3 cm long, with five wings not extending beyond the fruit apex. The bark is fire-resistant. The heartwood varies from light brown with few markings to dark brown or brownish black and figured with darker streaks. The sapwood is reddish white and sharply differentiated. The heartwood is moderately durable and the sapwood is liable to powder-post beetle attack and there is a girth dependent increase in the frequency and amount of water storage.	-do-
14	115	Shivane	0.21	1.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
15	116	hebbevu	0.30	3.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	

Trees Recommended for Translocation

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
16	117	Sandal	0.25	2.00	Santalum album, or Indian sandalwood, is a small tropical tree, and the traditional source of sandalwood oil. It is considered sacred in some religions, and some cultures place great significance on its fragrant and medicinal qualities. . Indian sandalwood still commands high prices for its essential oil owing to its high alpha santalol content, but due to lack of sizable trees it is no longer used for fine woodworking as before.	
17	118	Yalachi	0.35	0.50	*Ziziphus mauritian* a is a medium-sized tree that grows vigorously and has a rapidly developing taproot, a necessary adaptation to drought conditions. The species varies widely in height, from a bushy shrub 1.5 to 2 m tall, to a tree 10 to 12 m tall with a trunk diameter of about 30 cm. Z. mauritiana may be erect or wide-spreading, with gracefully drooping thorny branches, zigzag branchlets, thornless or set with short, sharp straight or hooked spines	
18	119	Bage	0.97	3.50	*Albizia lebbeck* is a tree growing to a height of 18–30 m tall with a trunk 50 cm to 1 m in diameter. The leaves are bipinnate, 7.5–15 cm long, with one to four pairs of pinnae, each pinna with 6–18 leaflets.	
19	121	Echalu	0.40	1.00	*Phoenix sylvestri* s ranges from 4 to 15 m in height and 40 cm in diameter; not as large as the Canary Island Date Palm, but nearly so, and resembling it. The leaf crown grows to 10 m wide and 7.5 to 10 m tall containing up to 100 leaves. The inflorescence grows to 1 metre with white, unisexual flowers. The single-seeded fruit ripens to a purple-red colour.	
20	122	Echalu	0.86	5.00		
21	123	Echalu	0.80	5.00		

Trees Recommended for Translocation

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
22	124	Thare	1.09	5.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	
23	126	Hebbevu	0.49	6.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	
24	19	Shivane	0.72	3.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	- do -
25	25	Bage	0.47	2.00	*Albizia lebbeck* is a tree growing to a height of 18–30 m tall with a trunk 50 cm to 1 m in diameter. The leaves are bipinnate, 7.5–15 cm long, with one to four pairs of pinnae, each pinna with 6–18 leaflets.	
26	26	Beete	0.46	2.00	*Albizia lebbeck* is a tree growing to a height of 18–30 m tall with a trunk 50 cm to 1 m in diameter. The leaves are bipinnate, 7.5–15 cm long, with one to four pairs of pinnae, each pinna with 6–18 leaflets.	
27	68	Peepal	0.30	3.00	*Ficus religiosa* or sacred fig is a species of fig native to the Indian subcontinent and Indochina that belongs to Moraceae, the fig or mulberry family. It is also known as the bodhi tree, pippala tree, peepul tree, peepal tree or ashwattha tree	
28	75	Thare	1.52	5.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	

Trees Recommended for Translocation

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
29	76	Honne	0.53	3.00	*Pterocarpus marsupium* , also known as Malabar kino, Indian kino tree, or vijayasar, is a medium to large, deciduous tree that can grow up to 30 m tall. It is native to India, Nepal, and Sri Lanka	
30	97	Kamara	0.23	2.00	*Hardwickia binata* is a monotypic genus of flowering plant in the subfamily Detarioideae of the legumes. The only species is the Anjan, Hardwickia binata Roxb., an Indian tree that grows some 25 to 30 m high. This plant genus was named after Thomas Hardwicke by William Roxburgh	
31	110	Hebbevu	0.50	3.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	
32	120	Jagalaganti	0.18	1.50	The bark of D. candolleana is smooth, dark, and blaze-reddish in color. Branchlets are terete and show adpressed hairs when young. Leaves are simple, alternate, distichous; petioles are 0.6-1.1 cm long and canaliculate. Leaves are hairy when young, and glabrous when mature. Lamina is about 6-18 x 3.5-7.5 cm in length, shape is oblong to elliptic-oblong.	-do-
33	130	Kaggali	0.36	2.50		
34	131	Kaggali	0.32	2.50	*Senegalia catechu* is a deciduous, thorny tree which grows up to 15 m in height. The plant is called khair in Hindi, and kachu in Malay, hence the name was Latinized to "catechu" in Linnaean taxonomy, as the type-species from which the extracts cutch and catechu are derived	
35	132	Kaggali	0.32	2.00		

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Trees Recommended for Felling

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
1	1	Hunase	1.85	5.00	The *Tamarindus indica* is a long-lived, medium-growth tree, which attains a maximum crown height of 12 to 18 metres (40 to 60 feet). The crown has an irregular, vase-shaped outline of dense foliage. The tree grows well in full sun. It prefers clay, loam, sandy, and acidic soil types, with a high resistance to drought and aerosol salt. The branches droop from a single, central trunk as the tree matures. Tamarind timber consists of hard, dark red heartwood and softer, yellowish sapwood. The fruit has a fleshy, juicy, acidic pulp. It is mature when the flesh is coloured brown or reddish brown. The fruit is best described as sweet and sour in taste, and is high in tartaric acid, sugar, B vitamins, and, unusually for a fruit, calcium. A slow growing species,	The trees identified for felling fall in the middle of the project area, therefore cannot be retained.Besides retension, translocation is also ruled out as the trees can be categorized under one or the other parameters like silviculturally matured, diseased or damaged, without availability of suitable root ball size, introduced or softwood species with least ecological importance.(These recommendations are in reference to the 20 point working procedure and methodology submitted by TEC to the Hon'ble High Court of Karnataka)
2	2	Gulmohar	1.13	2.50	*Delonix regia* is a species of flowering plant in the bean family Fabaceae, subfamily Caesalpinioideae native to Madagascar. In many tropical parts of the world it is grown as an ornamental tree and in English it is given the name royal poinciana, flamboyant, flame of the forest, or flame tree. Branches arising from midculm nodes upward, occasionally also at lower nodes, several to many at each node with primary branch dominant.	
3	3	Gulmohar	0.33	1.00		
4	4	Honge	0.34	2.00	*Pongamia pinnata* , also known as Karanja or Indian beech, has been useful in traditional medicine for centuries. The root, stem, leaf, fruit, seed, oil, bark, and flower are used to treat many ailments, ranging from mild colds to tumors. The tree grows in tropical and sub-tropical regions all over the world. This angiosperm grows to be anywhere between 30 and 75 feet tall but the trunk is typically short. The leaves are evergreen and occur in fives, sevens, or nines. Pongam flowers range from white to pink to purple and seeds range from 10 to 15 cm long	
5	5	Honge	0.37	2.00		
6	6	Honge	0.37	1.50		
7	11	Gulmohar	0.78	3.00	*Delonix regia* is a species of flowering plant in the bean family Fabaceae, subfamily Caesalpinioideae native to Madagascar. In many tropical parts of the world it is grown as an ornamental tree and in English it is given the name royal poinciana, flamboyant, flame of the forest, or flame tree. Branches arising from midculm nodes upward, occasionally also at lower nodes, several to many at each node with primary branch dominant.	
8	12	Gulmohar	0.73	3.00		
9	13	Gulmohar	0.47	3.00		
10	14	Gulmohar	0.24	2.00		
11	15	Gulmohar	0.17	2.00		
12	16	Gulmohar	0.19	2.00		
13	17	Gulmohar	0.24	2.00		
14	18	Gulmohar	0.24	2.00		
15	20	Subabul	0.39	3.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
16	21	Thare	2.15	4.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	

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Trees Recommended for Felling

Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
17	29	Hebbevu	1.13	4.00	Melia dubia is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many- flowered branched panicles shorter than the leaves	
18	30	Hebbevu	3.00	2.50		
19	31	Shivane	1.15	2.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
20	35	Subabul	0.38	2.00	*Leucaenal eucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
21	36	Subabul	0.27	2.00		
22	37	Honge	0.49	2.00	*Pongamia pinnata* , also known as Karanja or Indian beech, has been useful in traditional medicine for centuries. The root, stem, leaf, fruit, seed, oil, bark, and flower are used to treat many ailments, ranging from mild colds to tumors. The tree grows in tropical and sub-tropical regions all over the world. This angiosperm grows to be anywhere between 30 and 75 feet tall but the trunk is typically short. The leaves are evergreen and occur in fives, sevens, or nines. Pongam flowers range from white to pink to purple and seeds range from 10 to 15 cm long	-do-
23	38	Honge	0.53	2.00		
24	39	Honge	0.62	2.00		
25	40	Honge	0.38	1.50		
26	41	Jagalaganti	0.32	1.00	The bark of D. candolleana is smooth, dark, and blaze-reddish in color. Branchlets are terete and show adpressed hairs when young. Leaves are simple, alternate, distichous; petioles are 0.6-1.1 cm long and canaliculate. Leaves are hairy when young, and glabrous when mature. Lamina is about 6-18 x 3.5-7.5 cm in length, shape is oblong to elliptic-oblong.	
27	42	Subabul	0.24	2.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
28	43	Subabul	0.29	2.00		

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Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
29	48	Honge	0.50	1.00	*Pongamia pinnata* , also known as Karanja or Indian beech, has been useful in traditional medicine for centuries. The root, stem, leaf, fruit, seed, oil, bark, and flower are used to treat many ailments, ranging from mild colds to tumors. The tree grows in tropical and sub-tropical regions all over the world. This angiosperm grows to be anywhere between 30 and 75 feet tall but the trunk is typically short. The leaves are evergreen and occur in fives, sevens, or nines. Pongam flowers range from white to pink to purple and seeds range from 10 to 15 cm long	— do —
30	49	Subabul	0.23	2.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
31	51	Tapasi	0.29	1.00	*Sterculia urens* is a species of plant in the family Malvaceae. It is native to India and has been introduced into Burma. A small to medium-sized tree with a pale-coloured trunk.	
32	52	Tapala	1.52	3.00	It also called reonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	
33	53	Banni	0.69	3.00	*P. cineraria* is a small tree, ranging in height from 3–5 m (9.8–16.4 ft). Leaves are bipinnate, with seven to fourteen leaflets on each of one to three pinnae. Branches are thorned along the internodes.	
34	56	Muttuga	0.60	1.50	**Muttuga** Is a small-sized dry-season deciduous tree, growing to 15 m (49 ft) tall. It is a fast-growing tree: young trees have a growth rate of a few feet per year. The leaves are pinnate, with an 8–16 cm (3.1–6.3 in) petiole and three leaflets, each leaflet 10–20 cm (3.9–7.9 in) long	-do —
35	57	Gobbarada gida	0.34	2.00		
36	58	Gobbarada gida	0.30	2.00		
37	59	Gobbarada gida	0.25	2.00		
38	60	Gobbarada gida	0.31	21.00	*Gliricidia sepium* is a medium-sized tree that grows 10–12 m (33–39 ft) high. The bark is smooth, and its color can range from a whitish gray to deep red-brown. The flowers are located on the end of branches that have no leaves	
39	61	Gobbarada gida	0.32	1.50		
40	62	Gobbarada gida	0.20	2.00		
41	63	Gobbarada gida	0.73	1.00		
42	64	Gobbarada gida	0.26	2.00		
43	65	Gobbarada gida	0.29	1.50		
44	66	Subabul	0.32	2.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	

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Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
45	67	Tapala	1.41	1.80	It also called reonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	
46	69	Gobbarada gida	0.22	2.00	*Gliricidia sepium* is a medium-sized tree that grows 10–12 m (33–39 ft) high. The bark is smooth, and its color can range from a whitish gray to deep red-brown. The flowers are located on the end of branches that have no leaves	
47	70	Gobbarada gida	0.24	2.00		
48	71	Subabul	0.45	2.00	*Leucaena leucocephala* is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	
49	72	Thare	1.71	4.00	It is considered a good fodder for cattle. Terminalia bellirica seeds have an oil content of 40%, whose fatty-acid methyl ester meets all of the major biodiesel requirements in the US in traditional Indian Ayurvedic medicine. Its fruit is used in the popular Indian herbal rasayana treatment triphala. In Sanskrit it is called bibhītaka.	
50	73	Thare	0.77	3.00		
51	74	Thare	0.82	3.00		
52	77	Gobbarada gida	0.27	1.00	Gliricidia sepium is a medium-sized tree that grows 10–12 m (33–39 ft) high. The bark is smooth, and its color can range from a whitish gray to deep red-brown. The flowers are located on the end of branches that have no leaves	-do-
53	78	Echalu	0.53	2.00	*Phoenix sylvestris* ranges from 4 to 15 m in height and 40 cm in diameter; not as large as the Canary Island Date Palm, but nearly so, and resembling it. The leaf crown grows to 10 m wide and 7.5 to 10 m tall containing up to 100 leaves. The inflorescence grows to 1 metre with white, unisexual flowers. The single-seeded fruit ripens to a purple-red colour.	
54	80	Tapala	0.46	1.50	It also called reonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	
55	81	Semethangadi	0.42	2.00	seemethangadi, also known as Siamese cassia, kassod tree, cassod tree and cassia tree, is a legume in the subfamily Caesalpinioideae. It is native to South and Southeast Asia, although its exact origin is unknown. It is a medium-size, evergreen tree growing up to 18 m with yellow flowers. It is a medium-size, evergreen tree growing up to 18 m (60 ft) with yellow flowers. It is often used as shade tree in cocoa,	
56	82	Semethangadi	0.49	2.00		
57	83	Semethangadi	0.48	2.00		
58	84	Shivane	0.34	1.50	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
59	85	Shivane	0.36	1.50		
60	86	Shivane	0.39	2.00		

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Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
61	87	Semethangadi	0.47	2.00	*Cassia siamia,* is a legume in the subfamily Caesalpinioideae. It is native to South and Southeast Asia, although its exact origin is unknown. It is a medium-size, evergreen tree growing up to 18 m with yellow flowers. It is a medium-size, evergreen tree growing up to 18 m (60 ft) with yellow flowers. It is often used as shade tree in cocoa,	-do-
62	88	Semethangadi	0.52	1.00		
63	89	Hebbevu	0.48	2.00	*Melia dubia* is also called as a Mahaneem or Forest neem. Which is fastest growing tree species, within 6-7 years the plantation is ready to harvest. Malabar Neem is a deciduous tree, up to 20 m high, bark 6-8 mm thick, dark brown, rough, warty, peeling in rectangular, long and broad peels. Flowers are greenish white, 8 mm long, fragrant, in stellately pubescent, many-flowered branched panicles shorter than the leaves	
64	90	Bursera	0.66	5.00	Bursera is a genus with about 100 described species of flowering shrubs and trees varying in size up to 25 m high. It is the type genus for Burseraceae. The trees are native to the Americas, from the southern United States south through to northern Argentina, in tropical and warm temperate forest habitats	-do-
65	93	Shivane	0.30	2.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
66	94	Barsera	1.20	1.00	Bursera simaruba is a small to medium-sized tree growing to 30 meters tall, with a diameter of one meter or less at 1.5 meters above ground. The bark is shiny dark red, and the leaves are spirally arranged and pinnate with 7-11 leaflets, each leaflet broad ovate, 4–10 cm long and 2–5 cm broad.	
67	96	Bidiru	25 culms number		Bamboo Open clumping, sympodial bamboo. Culm erect, sinuous or slightly zig-zag, 10-20 m tall, 4-10 cm in diameter, wall 7-15 mm thick, glossy green, yellow, or yellow with green stripes; internodes 20-45 cm long,	
68	98	kaggali	0.35	2.50	*Acacia catechu* is a deciduous, thorny tree which grows up to 15 m (50 ft) in height.[3] The plant is called khair [4] in Hindi, The tree's seeds are a good source of protein.[7] Kattha (catechu), an extract of its heartwood, is used as an ingredient to give red color and typical flavor to paan.	
69	99	Bidiru	11culms number		Bamboo Open clumping, sympodial bamboo. Culm erect, sinuous or slightly zig-zag, 10-20 m tall, 4-10 cm in diameter, wall 7-15 mm thick, glossy green, yellow, or yellow with green stripes; internodes 20-45 cm long,	
70	100	Tapala	1.60	2.50	It also called reonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	

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Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
71	101	Bidiru	15 culms number		Bamboo Open clumping, sympodial bamboo. Culm erect, sinuous or slightly zig-zag, 10-20 m tall, 4-10 cm in diameter, wall 7-15 mm thick, glossy green, yellow, or yellow with green stripes; internodes 20-45 cm long,	
72	103	Shivane	0.34	1.00	Shivane is a fast-growing tree, which grows on different localities and prefers moist fertile valleys with 750–4500 mm rainfall. It does not thrive on ill-drained soils and remains stunted on dry, sandy or poor soils. The tree attains moderate to large heights of up to 30 m, with a girth of 1.2 to 4 m.	
73	107	Subabul	0.48	1.00	*Leucaena leucocephal* a is a small fast-growing mimosoid tree native to southern Mexico and northern Central America (Belize and Guatemala) and is now naturalized throughout the tropics. it was promoted as a "miracle tree" for its multiple uses It has also been described as a "conflict tree" because it is used for forage production but spreads like a weed in some places.	— do —
74	108	Bidiru	50culms number		Bamboo Open clumping, sympodial bamboo. Culm erect, sinuous or slightly zig-zag, 10-20 m tall, 4-10 cm in diameter, wall 7-15 mm thick, glossy green, yellow, or yellow with green stripes; internodes 20-45 cm long,	
75	109	Tapasi	0.52	1.00	The gum karaya is a medium-sized deciduous tree with horizontally-spreading branches, growing to a maximum height of about 15 m (49 ft). The bark is smooth, fibrous and thick, greenish-grey, with the surface layer peeling off in large flakes. The twigs are hairy at first. The leaves are alternate, simple, hairy beneath and have three to five palmate lobes.	

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Sl.No	Tree No.	Name of Trees/Species	Girth in mtr	Height in mtr(Approx)	Species Characteristics	Committee Remarks
76	111	Tapala	2.11	2.00	Peonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	— do —
77	112	Seemethangadi	0.58	2.00	seemethangadi, also known as Siamese cassia, kassod tree, cassod tree and cassia tree, is a legume in the subfamily Caesalpinioideae. It is native to South and Southeast Asia, although its exact origin is unknown. It is a medium-size, evergreen tree growing up to 18 m with yellow flowers. It is a medium-size, evergreen tree growing up to 18 m (60 ft) with yellow flowers. It is often used as shade tree in cocoa,	
78	125	Tapala	2.05	5.00	Peonja, is a moderate sized tree native to South and Southeast Asia. It is sometimes mistaken for Prosopis cineraria with spreading crown and somewhat malformed and crooked trunk. It attains a height of about 20 to 30 ft and a girth of 2 to 3 ft	
79	127A	Busera	0.59	2.00	*Burserami crophylla* reaches up to 10 m (33 ft) in height and its bark is light gray to white, with younger branches having a reddish color. The golden shower tree is a medium-sized tree, growing to 10–20 m (33–66 ft) tall with fast growth.	
	127B	Busera	0.75	2.00		
80	128	Kaggali	0.32	2.50	*Acacia catechu* is a deciduous, thorny tree which grows up to 15 m in height. The plant is called khair in Hindi, and kachu in Malay, hence the name was Latinized to "catechu" in Linnaean taxonomy, as the type-species from which the extracts cutch and catechu are derived	
81	129	Kaggali	0.30	2.00		

Prof. C.Nagarajaiah
(Member, TEC)

Dr.Muthu Kumar Arunachalam
(Member, TEC)

Prof. R. Krishna Murthy
(Member, TEC)

Shri. V. Govindaraju
(Member Secretary and ACF, BBMP)

Shri I.B. Srivastava, IFS (Rtd).
Chairman, TEC

BRUHAT BANGALORE MAHANAGARA PALIKE

No: ACF//PR. 16 /2020-21
Encls: 74 pages.

Office of the
Assistant Conservator of Forests
Bruhat Bangalore Mahanagara Palike
N.R.Squre Annex Biliding-3
Bengaluru, dated: 15.10.2020

To,

The Deputy Conservator of Forests
Bangalore Urban Division,
Bengaluru.

Sir,

Sub: Proceedings of the Tree Expert Committee meeting held on 14.10.2020 Reg.

Please find enclosed herewith the copy of the proceedings along with Field Inspection reports of the Tree Expert Committee meeting held on 14.10.2020, with a request to take necessary action pertaining to your jurisdiction as per the direction by the Tree Expert Committee in the proceedings.

Also, in this regard, action may be taken to upload the documents in the website of BBMP as per the directions of the Hon'ble High Court of Karnataka vide its order dated 04.03.2020.

Deputy Conservator of Forests ★ Office of the ★ Bhore Urban Dvn.
Date:.....
BANGALORE

Yours faithfully

Member Secretary and
Assistant Conservator of Forests
BBMP

Copy to:

1. The Chairman, Tree Expert Committee.
2. Respected members of Tree Expert Committee.

UNIVERSITY OF AGRICULTURAL SCIENCES GKVK, BANGALORE
DEPARTMENT OF SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

SS&AC/ /2020-21 20-08-2020

To,

SHRI ZAKIR HUSSAIN
ADDL.CHIEF ENGINEER(R4-B)
BANGALORE METRO RAIL CORPORATION LTD.,
REGD. OFFICE: BMTC COMPLEX, 3RD FLOOR, K.H. ROAD
SHANTINAGAR, BANGALORE- 560 027

Sir,
Sub:Analytical result of three soil samples ….. ……reg
Ref: DR/ STA/TT -103/ 2020-21 dt:-18-08-2020

Please find here with the analytical results of three soil samples provided by you (**BMRCL/P-2/R4B/2020-21/63)** for analysis in the Dept. of Soil Science and Agricultural Chemistry, College of Agriculture, GKVK, Bangalore-65

Soil samples

Parameters	9 Present location U.m kawal (near tree no. 75)	10 Proposed location Devika rani estate (right side of udarahalli road)	11 Proposed location U m kaval forest area
pH (1:2.5)	8.00	7.4	7.10
Electrical conductivity (dS/m)(1: 2.5)	0.18	0.06	0.14
Organic carbon (%)	0.38	0.39	0.18
Nitrogen(kg ha^{-1})	313.6	238.3	301.1
Phosphorus (kg ha^{-1})	7.91	9.89	4.95
Potassium(kg ha^{-1})	31.5	97.5	91.5
Calcium (meq/100 g)	13.9	7.00	7.30
Magnesium (meq/100 g)	3.80	2.50	1.00
Sulphur (ppm)	8.15	6.71	5.20
Iron (ppm)	3.00	4.11	2.88
Manganese (ppm)	1.65	3.17	3.00
Zinc (ppm)	0.38	0.57	0.38
Copper (ppm)	0.12	0.40	0.24
Boron (ppm)	0.23	0.23	0.12

Inference: The three soil samples provided for analysis varies from neutral to alkaline in nature, low in salt content and organic carbon content and contain medium to high nitrogen 280-360kg/ha) and low quantities of P,Kand all other parameters as per standards). Therefore with proper nutrient application and use of amendments soil is suitable for tree shifting .

The result should not be utilized for legal / commercial purposes without priorconsent of the Director of Research.

NO.DR/STA/TT. 103/2020-21 dtd. 20/8/2020

Yours faithfully

Forwarded to
Director of Research

COUNTERSIGNED

Director of Research
University Of Agricultural Sciences
G.K.V.K Bengaluru-560 065

Professor and Head
Dept. of Soil Science & Agril. Chemistry
College of Agriculture, U.A.S., G.K.V.K.
Bangalore - 560 065

UNIVERSITY OF AGRICULTURAL SCIENCES, BANGLORE
DEPARTMENT OF SOIL SCIENCE AND AGRICULTURAL CHEMISTRY
COLLEGE OF AGRICULTURE, GKVK CAMPUS

Soil and Irrigation Water Parameters Interpretation

Limits of Nutrients in Soil /ಮಣ್ಣನಲ್ಲಿನ ಪೋಷಕಾಂಶಗಳ ಮಿತಿಗಳು

Parameters				
pH	ರಸಸಾರ	<6.5 ಹುಳಿ	6.5-8.5 ತಟಸ್ಥ	>8.5 ಕ್ಷಾರ
EC (dS/m)	ವಿದ್ಯುತ್ ವಾಹಕತ್ವ,ಡೆಸಿ,ಸೈಮನ/ಮೀ	<0.8 ಸಹಜ ಸ್ಥಿತಿ	0.8-1.6	>1.6-2.5 ಹಾನಿಕಾರಕ

Parameters		Low/ಕಡಿಮೆ	Medium/ಮಧ್ಯಮ	High/ಹೆಚ್ಚು
OC(Organic Carbon%)	ಸಾವಯನ ಇಂಗಾಲ (%)	<0.50	0.5 - 0.75	>0.75
Nitrogen (Kg ha^{-1})	ಸಾರಜನಕ (N) ಕೆ.ಜಿ./ಹೆ.	<280	280-560	>560
Phosphorus (Kg ha^{-1})	ರಂಜಕ (P2O5) ಕೆ.ಜಿ./ಹೆ.	<22.9	22.9-56.33	>56.33
Potassium (Kg ha^{-1})	ಪೊಟ್ಯಾಶ್ (K2O) ಕೆ.ಜಿ./ಹೆ.	<141	141-336	>336
Sulphur (ppm)/mg kg^{-1}	ಗಂಧಕ(S) ಪಿ.ಪಿ.ಎಂ	<10	10-20	>20
Iron (ppm)/mg kg^{-1}	ಕಬ್ಬಿಣ (Fe) ಪಿ.ಪಿ.ಎಂ	<2.50	2.50-4.50	>4.50
Manganese (ppm)/mg kg^{-1}	ಮ್ಯಾಂಗನೀಸ್(Mn) ಪಿ.ಪಿ.ಎಂ	<1.00	1.00-2.00	>2.00
Copper (ppm)/mg kg^{-1}	ತಾಮ್ರ(Cu) ಪಿ.ಪಿ.ಎಂ	<0.10	0.10-0.20	>0.20
Zinc (ppm)/mg kg^{-1}	ಸತು (Zn) ಪಿ.ಪಿ.ಎಂ	<0.60	0.60-1.00	>1.00
Boron (ppm)/mg kg^{-1}	ಬೋರಾನ್ (B) ಪಿ.ಪಿ.ಎಂ	<0.25	0.25-0.50	>0.50

Irrigation Water Quality Parameters/ ನೀರಾವರಿ ನೀರಿನ ಗುಣಮಟ್ಟ ನಿಯತಾಂಕ

Parameter	Low/ಕಡಿಮೆ	Medium/ಮಧ್ಯಮ	High/ಹೆಚ್ಚು
pH ರಸಸಾರ	<6.5	6.5-7.5	>7.5

Salinity Classes

Parameter	Low/ಕಡಿಮೆ (C_1)	Medium/ಮಧ್ಯಮ (C_2)	High/ಹೆಚ್ಚು (C_3)	Very High/ಅತಿ ಹೆಚ್ಚು (C_4)
EC(dS/M) ವಿದ್ಯುತ್ ವಾಹಕತ್ವ	<0.25	0.25-0.75	0.75-2.25	>2.25
Chlorides(Cl)(ppm)/ಕ್ಲೋರೈಡ್	<2-5	5-12	12-20	>20

Sodicity Classes

Parameter	Low/ ಕಡಿಮೆ (S_1)	Medium/ಮಧ್ಯಮ (S_2)	High/ಹೆಚ್ಚು (S_3)	Very High/ ಅತಿ ಹೆಚ್ಚು (S_4)
SAR(Sodium adsorption ratio) ಸೋಡಿಯಂ ಹೊರಹೀರುವಿಕೆ ಅನುಪಾತ	<10	10-18	18-26	>26

Bicarbonate (HCO3) Classes

Parameter	Low (RSC_1) / ಕಡಿಮೆ	Medium (RSC_2) /ಮಧ್ಯಮ	High (RSC_3) /ಹೆಚ್ಚು
RSC(Residual Sodium carbonate) ಉಳಿಕೆಯ ಸೋಡಿಯಂ ಕಾರ್ಬೋನೇಟ್	<1.25	1.25-2.50	>2.50

Professor and Head
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