K RIDE

Rail Infrastructure Development Company (Karnataka) Limited

(A joint Venture of Govt. of Karnataka and Ministry of Railways)

ರೈಲು ಮೂಲಸೌಲಭ್ಯ ಅಭಿವೃದ್ಧಿ ಕಂಪನಿ (ಕರ್ನಾಟಕ) ನಿಯಮಿತ

(ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಮತ್ತು ರೈಲ್ವೆ ಸಚಿವಾಲಯದ ಜಂಟಿ ಉದ್ಯಮ)

O/C

K RIDE/SEMU/GBA/Tree /2025/11 Date:10.10.2025

The Deputy Conservator of Forest & Tree Officer
Greater Bengaluru Authority,
Hudson Circle, N R Square,
Bengaluru.

Sir,

Sub: Submission of Quarterly progress report regarding Translocation plantation of Trees by K-RIDE, Bengaluru Sub-Urban Railway Project (BSRP)-reg

Ref:
1. Official Memorandum No. DCF/PR/1642/2022-23 Dated:27.12.2022
2. Official Memorandum No. DCF/PR/1952/2022-23 Dated:24.02.2023
3. Official Memorandum No. DCF/PR/2042/2022-23 Dated:17.03.2023
4. Official Memorandum No. DCF/PR/356/2024-25 Dated:29.05.2024
5. Official Memorandum No. DCF/PR/1903/2024-25 Date:21.01.2025

ಸಂಖ್ಯೆ 193 ದಿನಾಂಕ 10/10/25

With reference to the above mentioned Official Memorandums vide reference cited 1st to 3rd, K-RIDE has to submit the quarterly reports regarding the condition of the translocated trees for a period of three years. Accordingly, Quarterly progress report for the year 2025 – 2026 from January to September 2025. The report includes current status of the translocated trees with relevant photos.

With reference to above 4th & 5th cited, we wish to bring to your kind notice the translocation of trees has been carried out in the month of September 2025, the below table provide a brief information on the same, the detailed report on the progress of translocation for the balance trees will be provided in the subsequent reports to your office.

Sl. No.	Corridor	OM No.	Trees to be translocated as per OM	Translocated as on 30.09.2025
1	2	DCF/PR/356/2024-25 Dated:29.05.2024	89	35
2	4	DCF/PR/1903/2024-25 Date:21.01.2025	289	20

We also request you to upload the quarterly progress report Statement on your website showing the details of Compensatory Afforestation done by BBMP (Now GBA) & submitted Translocation of trees details by K-RIDE, BRSP, Corridor-02 and 04 under GBA jurisdiction, as per the directions of Hon'ble High Court of Karnataka.

The letter is submitted for your necessary action.

Encl: Quarterly Report on Tree translocation

Yours Sincerely,

General Manager,
SEMU

CC:
1. MD/K-RIDE – For kind information
2. Dir. P&P – For kind information
3. GM, Corridor-2&4 For kind information

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Rail Infrastructure Development Company (Karnataka) Limited

A JV of Govt. of Karnataka & Ministry of Railways

Bengaluru Suburban Railway Project (BSRP)

Corridor 2

Tree Translocation Quarterly Report – Year 2025 -2026

January to March (1st Qtr)

Executive Summary

K – RIDE, Executive agency of BSRP project compromising of the four corridors with the Joint Venture of GOK and GOI through MOR. L & T awarded corridor 2 including at-grade and elevated construction work excluding Station works. According to the contract, removal / Felling of Trees and Translocating Trees are in the contractor's scope.

The Tree Expert Committee visited the C2 site and observations were recommended to the BBMP -Forest for Transplantation. Accordingly, BBMP issued an Official Memorandum dated 27/12/2022 with a total number of trees proposed for translocation 58 no's. Similarly, BBMP issued an Official Memorandum dated 24/22/2023 with a total number of trees proposed for translocation 73 no's and Official Memorandum dated 17/03/2023 are 47 no's.

During the Monitoring of the Transplanted Trees from January 2025 to March 2025 for OM1 17 trees completed with survival symptoms of 11 no's and 06 no's tree did not show any symptoms. Similarly, for OM2 11 no's trees completed with survival symptoms of 07 no's and 33 no's with 16 No's trees completed with survival symptoms.

Survival rate of transplanted of Trees for OM1 is 64 %, OM2 the survival rate is 63%, and OM 3 Survival rate is 48 % only.

Abbreviations

BBMP	:	Bruhat Bengaluru Mahanagara Palike
BSRP	:	Bangalore Suburban Railway Project
CA	:	Compensatory Afforestation
GKVK	:	Gandi Krishi Vignana Kendra
GOI	:	Government of India
GOK	:	Government of Karnataka
KRIDE	:	The Rail Infrastructure Development Company (KARNATAKA) Limited
MOR	:	Ministry of Railways
OM	:	Official Memorandum
TOD	:	Transient Oriented Development
TEC	:	Tree Expert Committee
UAS	:	University of Agricultural Science

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Chapter - 1

1.0 Introduction

In India Bengaluru is considered as the fastest growing city with lot of new establishments in industries, extension of layouts, business opportunities, medical & engineering colleges, software parks, commercial hubs, construction of residential apartments. In the meantime, infrastructure should grow parallel to the present development especially transportation sector with roads / rail connectivity is also necessary. As per the India Mobility Final report prepared by Global Monitor Network, the Road Density of the Bengaluru is 8.2 km Per sqkm compared to 21.3 km Per sqkm all most less than 1/3rd of the Delhi. It clearly indicates that Bengaluru roads are always congested followed by consuming of fuel with air pollutants emission into the atmosphere will creates unhealthy AQI and an average person pass almost struck 240 hours in dense traffic may leads to loss in business associated with productivity. Metro Rail can provide service in inside the city instead of connecting from one end to another end and connecting to suburban area. Presently population of the city is nearly 14 million such that alone metro or other type of transportation service not able to meet the demand of public mobility. In this scenario, Rail Infrastructure Development Company (Karnataka) Limited, bringing Bengaluru Suburban Rail Project (BSRP) to meet the needs of public Mass Rapid Transport Systems which is faster than metro with less curves, Reliable, connecting from Bengaluru urban to rural, improving environmental quality, enhancing social and women security and TOD implementation.

1.1 Project Background

K RIDE is entrusted with the responsibility of implementation of Bengaluru Suburban Railway Project (BSRP), a new Suburban Railway Project envisaging construction of 4 dedicated Electrified Suburban Rail corridors over a network of 148 kilometres (km) with 4 interchange stations, 57 No's Stations. The influence Zone of the project's extents over 186 Villages within the radius of 5 Km from the project Corridor. Dedicated Corridor of BSRP is planned for design speed of 90 Kmph. The project predominantly runs parallel to the existing Railway Network except few diversions to cross the existing Railway / Metro / Highways Systems. The distance from the centre of the Track of the SWR are 16.5 mts / 7.5 mts / 4.5 mts depends on the space availability and future plans of the SWR. It will link Bengaluru to its satellite townships, suburbs, surrounding areas and provide a rail-based Mass Rapid Transit System (MRTS).

1.1.1 Details of the four dedicated Rail corridors are:

Corridor – 1: KSR Bengaluru City to Devanahalli (41.40Km), extended to Akkupet Depot
Corridor– 2: Benniganahalli to Chikkabanavara (25.01Km), extended to Soladevanahalli Depot.
Corridor – 3: Kengeri to Whitefield (via KSR and Cantonment) (35.52Km) &
Corridor – 4: Heelalige to Rajankunte (46.24Km).

The project comprises of four Corridors at a total length of 148.17 km.

Figure 1.0, Shows all corridors with specific colours for corridors 1, Corridor 2, Corridor 3 and Corridor 4.

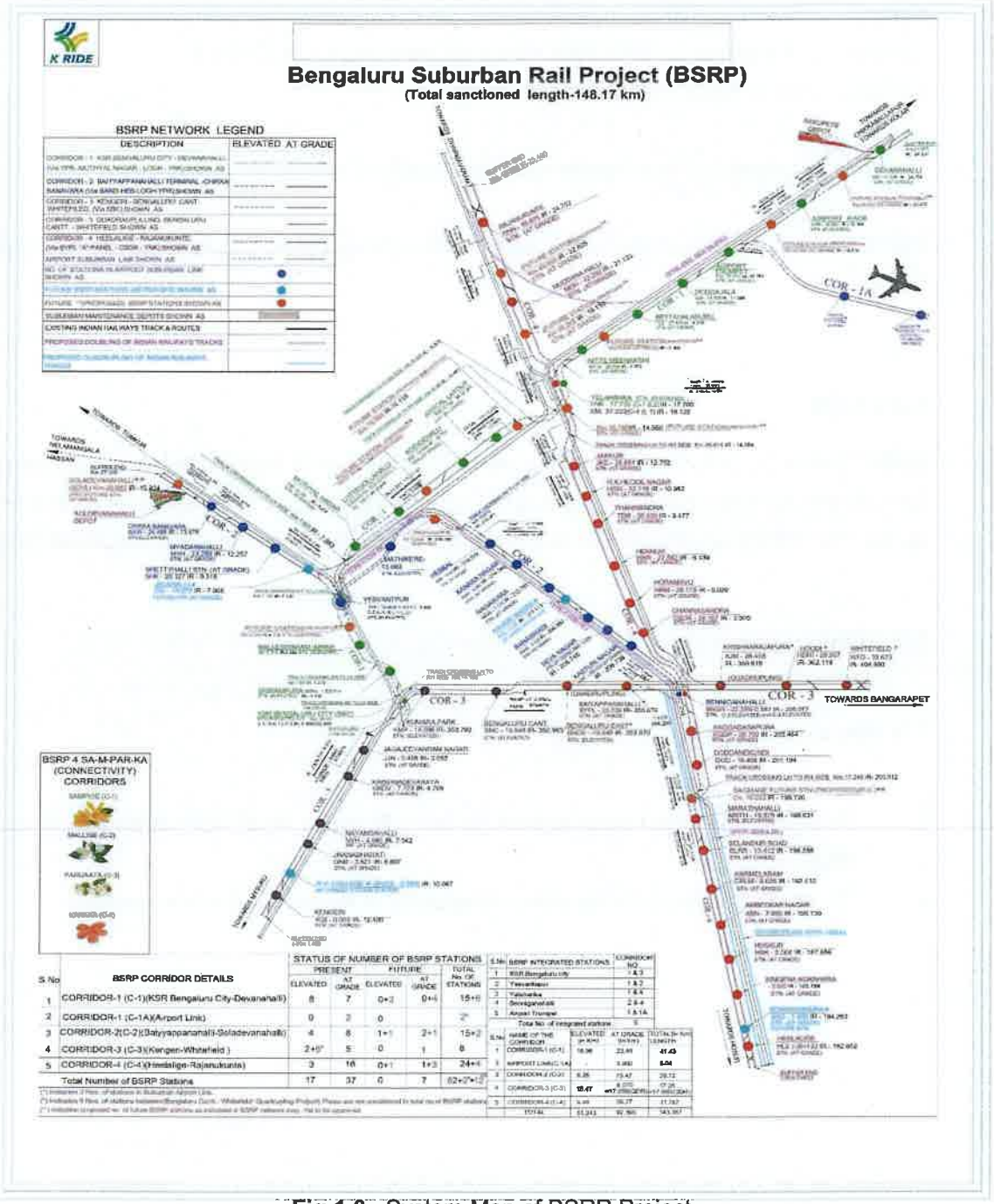
1.2 Scope

BSRP Corridor 2 (Civil Works) excluding stations construction is awarded to L & T. According to the contract, removal / Felling of Trees and Translocating Trees is in the scope of contractor as per the TEC recommendations. GC recommended TMRH Plantations based on credential review.

1.2.1 Objectives

The objectives this report is as follows:

2. To present the Tree Transplantation Quarterly Progress report from January to March 2025
3. To understand the survival nature / adaptability of the trees to the new locations



S No	BSRP CORRIDOR DETAILS	PRESENT ELEVATED	PRESENT AT GRADE	FUTURE ELEVATED	FUTURE AT GRADE	TOTAL No. OF STATIONS
1	CORRIDOR-1 (C-1)(KSR Bengaluru City-Devanahalli)	8	7	0+2	0+6	15+8
2	CORRIDOR-1 (C-1A)(Airport Link)	0	2	0		*
3	CORRIDOR-2(C-2)(Satyapanahalli-Baladevanahalli)	4	6	1+1	2+1	15+2
4	CORRIDOR-3 (C-3)(Kengeri-Whitefield)	2+0*	5	0	1	8
5	CORRIDOR-4 (C-4)(Heelalige-Rajanukunte)	3	16	0+1	1+3	24+4
	Total Number of BSRP Stations	17	37	0	7	62+2*+12

S.No	BSRP INTEGRATED STATIONS	CORRIDOR NO.
1	KSR Bengaluru city	1 & 3
2	Yeshwanthpur	1 & 2
3	Yelahanka	1 & 4
4	Sevagarahalli	2 & 4
5	Airport Terminal	1 & 1A
	Total No. of integrated stations	5

S.No	NAME OF THE CORRIDOR	ELEVATED (in Km)	AT GRADE (in Km)	TOTAL (in Km) LENGTH
1	CORRIDOR-1 (C-1)	18.36	23.44	41.43
2	AIRPORT LINK (C-1A)		5.44	5.44
3	CORRIDOR-2 (C-2)	6.26	19.47	25.73
4	CORRIDOR-3 (C-3)	18.47	6.05	37.25
5	CORRIDOR-4 (C-4)	5.49	36.77	41.767
	TOTAL	53.243	91.165	143.357

Fig 1.0. System Map of BSRP Project

Chapter - 2

2.0 Official Memorandum (OM) – 1 Details

BBMP – Forest issued OM – 1 dated 27/12/2022 (Baiyappanahalli to Chikkabanavara) with schedule 1 consisting of 58 No's of trees for translocation, 268 No's trees for felling and 315 No's of trees for retaining. Transplanted location identified viz close to KV Ground, Beside Badminton court opposite the Treatment Plant, Yeshwantpur Quarters colony nearby opposite to the treatment plant, diagonally opposite to the KV Ground, Yeshwanthpur, Bengaluru. Soil sample was collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 17 trees were translocated to K V School Ground, along compound wall such that only 11 No's of trees shows survival of symptoms.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and Tree like Tabebuia rosea showing pink flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

2.1 Compensatory Afforestation for OM -1

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 58 Transplanted plus 338 no's felling multiplied by 10 times is equal to 3260 No's. Accordingly, BBMP – Forest selected plot at GKVK, Campus, Biodiversity Park under Zonal Area Research Center (ZARS), Director of Research, UAS (B). In

this park BBMP -Forest, Yelahanka Zone planting in association with UAS (B). The following figure No. 2.0 shows the location of GKVK for CA pink in a line.

Figure 2.0: Location showing CA at GKVK Campus

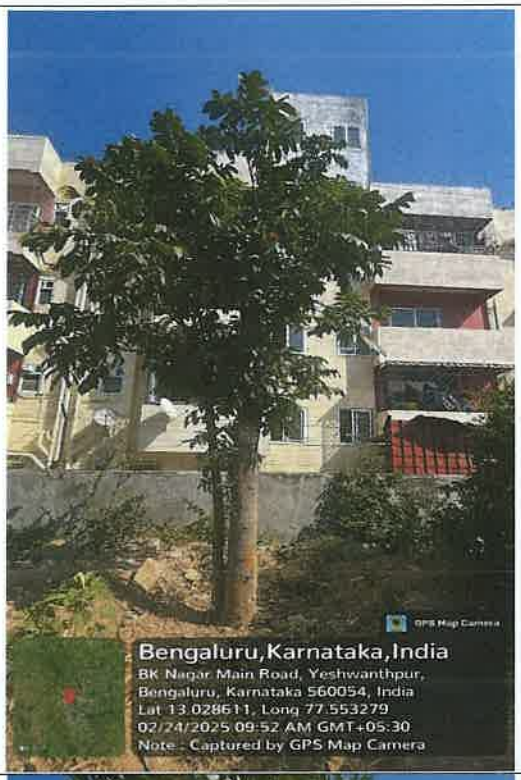
2.2. Tree Transplantation status for January to March 2025

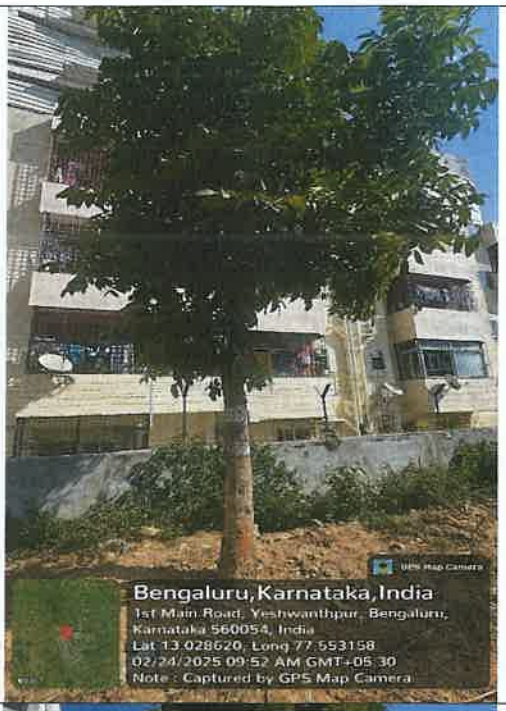
The following table no. 2.0 highlights the status of Transplanted Trees at K V School Ground, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 2.1 for ready reference. Maintenance period of transplanted tree is 3 years. It's clear evident that out of 17 trees were transplanted, only 11 trees were showing survival symptoms.

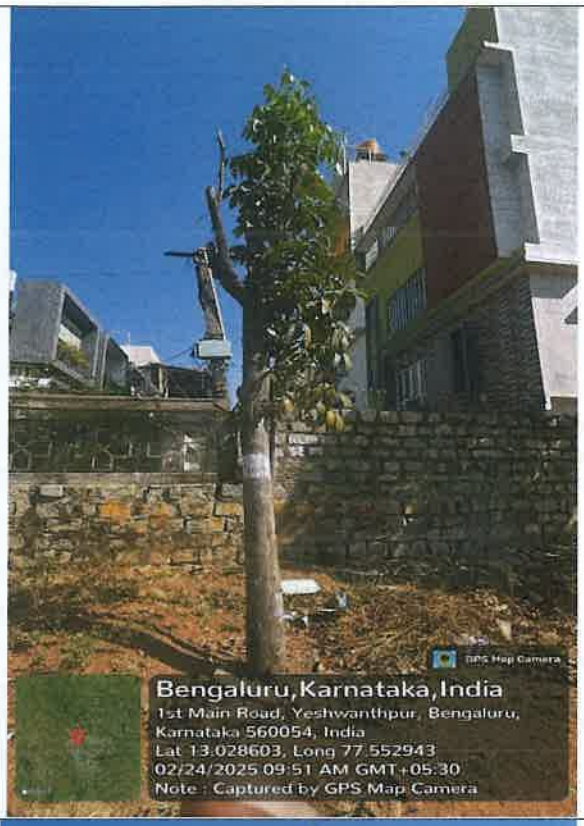
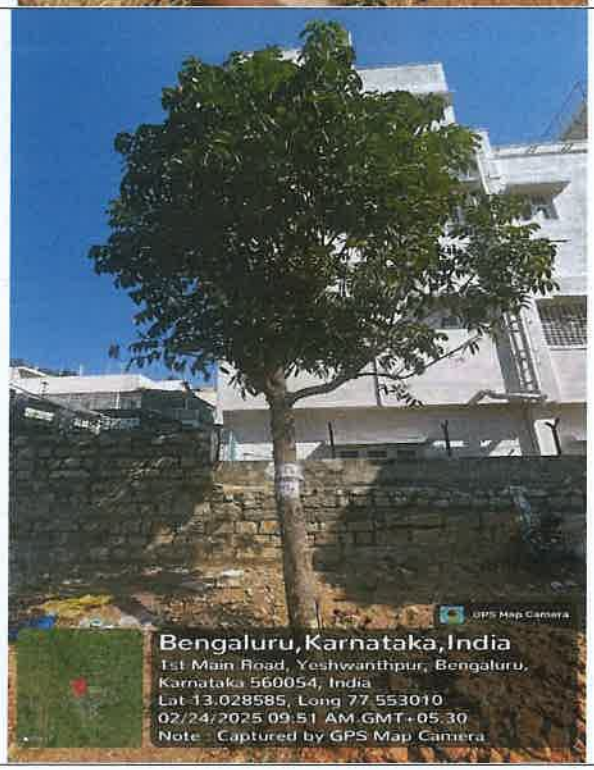
Table 2.0: Translocated Tree Status for OM 1 at KV School Ground – January to March 2025

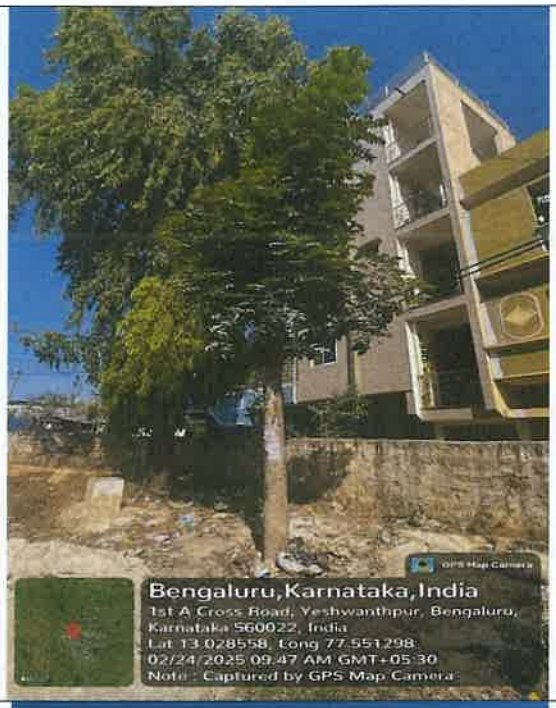
Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
1.	385	Mahogany	Dense fresh leaves were observed	
2.	386	Tabebuiarosea	Fresh leaves were observed	
3.	399	Mahogany	Dense fresh leaves were observed	
4.	403	Mahogany	Dense fresh leaves were observed	
5.	407	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
6.	408	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
7.	409	Mahogany	*Not Showing any Survival symptoms*	However, compensatory afforestation was made with grown up plant / seedling.
8.	414	Mahogany	Healthy and Dense fresh leaves were observed	
9.	417	Mahogany	Fresh leaves were observed	
10.	418	Mahogany	Fresh leaves were observed	
11.	423	Tore Matti	Fresh leaves were observed	
12.	424	Tabebuia Rosea	Fresh leaves were. observed	
13.	429	Tabebuia Rosea	Healthy and Dense fresh leaves were observed	
14.	430	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
15.	432	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
16.	433	Jamun	Fresh leaves were. observed	
17.	434	Jamun	*Not Showing any Survival symptoms*	Due to the translocation shock.

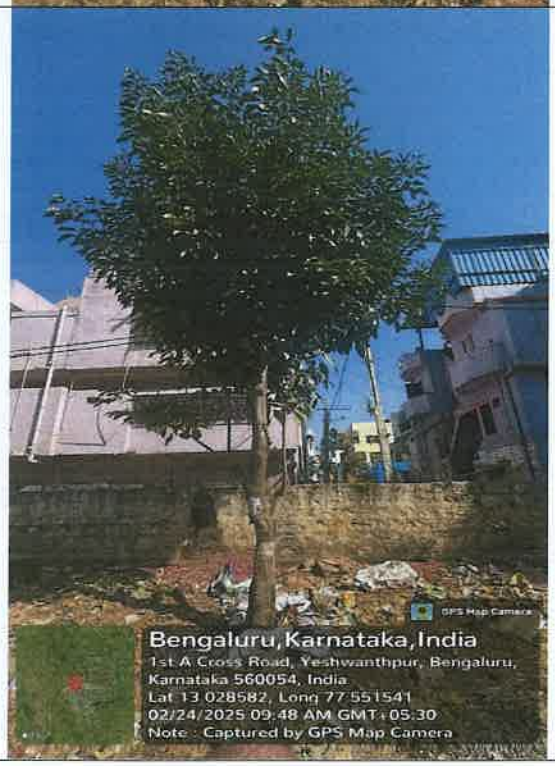
Table 2.1: Photographs of Translocated Tree Status for OM 1 at KV School Ground – January to March 2025

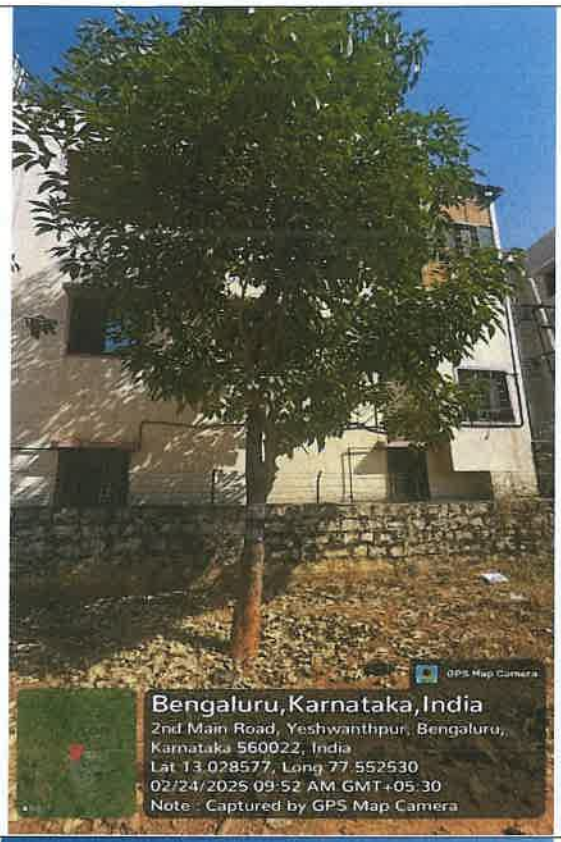
Tree No	Tree photograph
385	
386	

399		 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028620, Long 77.553158 02/24/2025 09:52 AM GMT+05:30 Note : Captured by GPS Map Camera
403		 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028592, Long 77.553058 02/24/2025 09:52 AM GMT+05:30 Note : Captured by GPS Map Camera

409		 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028603, Long 77.552943 02/24/2025 09:51 AM GMT+05:30 Note : Captured by GPS Map Camera
414		 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028585, Long 77.553010 02/24/2025 09:51 AM GMT+05:30 Note : Captured by GPS Map Camera

417		 GPS Map Camera Bengaluru,Karnataka,India 1st A Cross Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.028558, Long 77.551298 02/24/2025 09:47 AM GMT+05:30 Note : Captured by GPS Map Camera
418		 GPS Map Camera Bengaluru,Karnataka,India 1st A Cross Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028599, Long 77.551388 02/24/2025 09:47 AM GMT+05:30 Note : Captured by GPS Map Camera

423	 GPS Map Camera Bengaluru,Karnataka,India 2nd Main Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028590, Long 77.552455 02/24/2025 09:51 AM GMT+05:30 Note : Captured by GPS Map Camera
424	 GPS Map Camera Bengaluru,Karnataka,India 1st A Cross Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028582, Long 77.551541 02/24/2025 09:48 AM GMT+05:30 Note : Captured by GPS Map Camera

429		 GPS Map Camera Bengaluru,Karnataka,India 2nd Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.028577, Long 77.552530 02/24/2025 09:52 AM GMT+05:30 Note : Captured by GPS Map Camera
433		 GPS Map Camera Bengaluru,Karnataka,India 1st A Cross Road, Yeshwanthpur, Bengaluru, Karnataka 560054, India Lat 13.028594, Long 77.551415 02/24/2025 09:47 AM GMT+05:30 Note : Captured by GPS Map Camera

2.3 Survival rate

The survival rate of transplanted trees is presented in the following table 2.2.

Table 2.2: Percentage of survival of Transplanted trees - OM 1

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	16 / 17	14 / 17	13 / 17	12 / 17	12 / 17	11 / 17	11 / 17
1	94 %	82 %	76 %	70 %	70 %	64 %	64%

2.4 Conclusion

During this quarter, the survival rate of transplanted trees remains at 64 % compared to the previous quarter. Transplanted trees were 17 no's out of 58 no's and remaining are 41 no's. Only 11 no's of tree show the symptoms of fresh leaves, sprouts etc.

3.0 Official Memorandum (OM) – 2 Details

BBMP – Forest issued OM - 2 dated 24/02/2023 (Baiyappanahalli Railway Station to Lottegollahalli Railway Station) with schedule 1 consisting of 73 no's of trees for translocation, 1234 no's trees for felling and 123 no's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite to the Treatment Plant, Yeshwantpur Quarters colony nearby opposite to the treatment plant, Yeshwanthpur, Bengaluru. Soil sample was collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 11 trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 07 No's of trees shows survival of symptoms.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

3.1 Compensatory Afforestation for OM -2

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in the OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 73 Transplanted plus 1234 no's felling multiplied by 10 times is equal to 13070 No's. Accordingly, BBMP – Forest selected Dasarahalli BBMP Zone for planting.

3.2. Tree Transplantation status for January to March 2025

The following table no. 3.0 highlights the status of Transplanted Trees at Yeshwanthpur Colony opposite to the treatment plant with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 3.1 for ready reference. Maintenance period of transplanted tree is 3 years. Its clear evident that out of 11 no's of trees were transplanted, only 7 no's trees were showing survival symptoms.

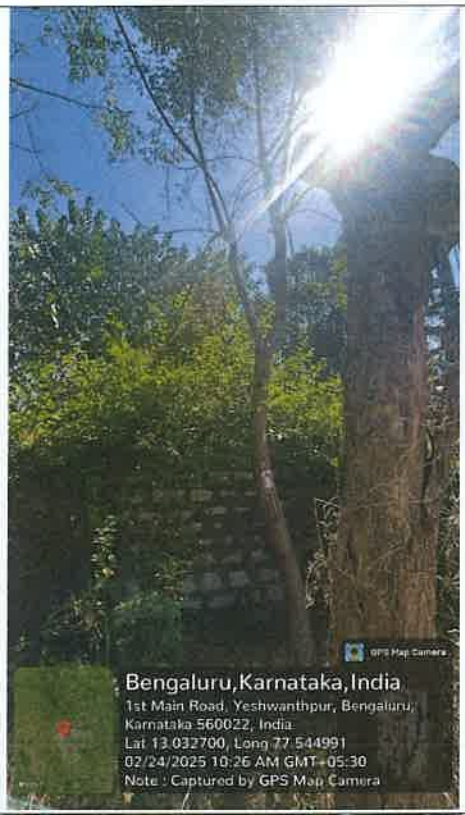
Table 3.0: Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – January to March 2025

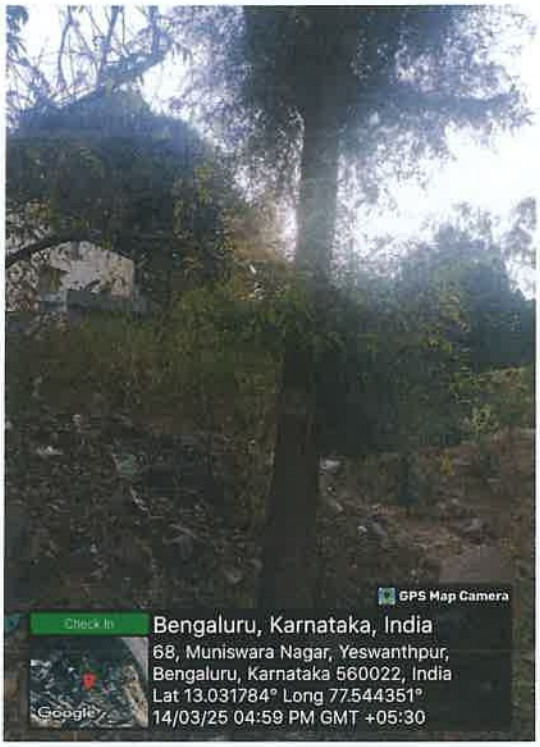
Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
1.	11	Nerale	Not showing any survival symptoms	Due to the Translocation shock
2.	21	Nerale	Not showing any survival symptoms	Due to the Translocation shock
3.	36	Atthi	Not showing any survival symptoms	Due to the Translocation shock
4.	208	Mahogany	Healthy	
5.	212	Mahogany	Healthy	
6.	206	Mahogany	Not showing any survival symptoms	Due to the Translocation shock
7.	207	Tabeuia Rosia	Fresh leaves were observed	
8.	649	Sihi hunase	Fresh leaves observed	
9.	651	Sihi hunase	Fresh leaves observed	
10.	755	Hebbevu	Fresh leaves observed	
11.	1424	Honge	Fresh leaves observed	

Table 3.1: Photos of Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – January to March 2025

Tree No	Tree photograph
207	
208	

212	 GPS Map Camera Bengaluru, Karnataka, India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.031158, Long 77.544879 02/24/2025 10:16 AM GMT+05:30 Note : Captured by GPS Map Camera
651	 GPS Map Camera Bengaluru, Karnataka, India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.031423, Long 77.544715 02/24/2025 10:16 AM GMT+05:30 Note : Captured by GPS Map Camera

755	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032700, Long 77.544991 02/24/2025 10:26 AM GMT+05:30 Note : Captured by GPS Map Camera
1424	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032519, Long 77.544998 02/24/2025 10:27 AM GMT+05:30 Note : Captured by GPS Map Camera

649	 GPS Map Camera Check In Bengaluru, Karnataka, India 68, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031784° Long 77.544351° 14/03/25 04:59 PM GMT +05:30 Google

3.3 Survival rate

The survival rate of transplanted trees is presented in the following table 3.2.

Table 3.2: Percentage of survival of Transplanted trees – OM2

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	6 / 7	4 / 7	4 / 7	7 / 11	7 / 11	7 / 11	7 / 11
1	85 %	57 %	57 %	63 %	63 %	63 %	63 %

3.4 Conclusion

During this quarter, the survival rate of transplanted trees remains at 63 % compared to the previous quarters. Transplanted trees were 11 no's out of 73 no's and remaining are 62 no's. Only 07 no's of tree show the symptoms of fresh leaves, sprouts etc.

4.0 Official Memorandum (OM) – 3 Details

BBMP – Forest issued OM-3 dated 17/03/2023 (Lottegollahalli Railway Station to Chikkabaanavara Station) with schedule 1 consisting of 47 no's of trees for translocation, 596 no's trees for felling and 135 No's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite to the Treatment Plant, Yeshwantpur Quarters colony nearby opposite to the treatment plant, Yeshwanthpur, Bengaluru. Soil sample was collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. At present, only 33 no's of trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 16 no's of trees show survival of symptoms and remaining trees not showing any symptoms of survival.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

4.1 Compensatory Afforestation for OM -3

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 47 Transplanted plus 596 no's felling multiplied by 10 times is equal to 6430 No's. Accordingly, BBMP – Forest selected R R Nagara BBMP Zone, NICE Road for planting.

4.2. Tree Transplantation status for January to March 2025

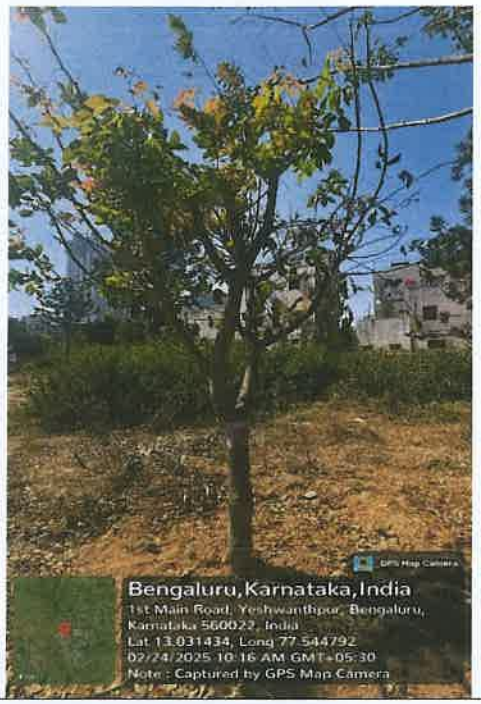
The following table no. 4.0 highlights the status of Transplanted Trees at Yeshwanthpur Colony opposite to the treatment plant, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 4.1 for ready reference. Maintenance period of transplanted tree is 3 years. Its clear evident that out of 33 no's of trees were transplanted, only 16 trees were showing survival symptoms.

Table 4.0: Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – January to March 2025

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
1.	237	Buruga	*Not showing any survival symptoms*	Due to the translocation shock
2.	241	Honge	*Fresh leaves were observed*	
3.	242	Memosops elangi	*Not showing any survival symptoms*	Due to the translocation shock
4.	243	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock
5.	259	Honge	Healthy leaves were observed	
6.	260	Honge	*Not showing any survival symptoms*	Due to the translocation shock
7.	261	Honge	*Not showing any survival symptoms*	Due to the translocation shock
8.	262	Honge	Healthy leaves were observed	
9.	264	Honge	Healthy leaves were observed	
10.	276	Basavanapadha	Healthy leaves were observed	
11.	280	Tabebuia rosea	Healthy leaves were observed	
12.	344	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock
13.	358	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock
14.	362	Atti	*Not showing any survival symptoms*	Due to the translocation shock
15.	586	Rain tree	Healthy leaves were observed	
16.	598	Kakke	*Not showing any survival symptoms*	Due to the translocation shock

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
17.	599	Kakke	*Not showing any survival symptoms*	Due to the translocation shock
18.	616	Rain Tree	Healthy leaves were observed	
19.	624	Rain Tree	Healthy leaves were observed	
20.	625	Rain tree	Healthy leaves were observed	
21.	650	Rain tree	Healthy leaves were observed	
22.	653	Rain tree	Healthy leaves were observed	
23.	654	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock
24.	667	Rain tree	Healthy leaves were observed	
25.	701	Atti	Healthy leaves were observed	
26.	702	Halasu	*Not showing any survival symptoms*	Due to the translocation shock
27.	768	Kaadu badami	*Not showing any survival symptoms*	Due to the translocation shock
28.	867/1	Sandal	*Not showing any survival symptoms*	Due to the translocation shock
29.	873	Sisso	Healthy leaves were observed	
30.	964	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock
31.	969	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock
32.	971	Kaadu badami	leaves were observed	
33.	972	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock

Table 4.1: Photos of Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – January to March 2025

Tree No	Tree photograph
241	

259	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032009 Long 77.544108 02/24/2025 10:20 AM GMT+05:30 Note: Captured by GPS Map Camera
262	 Yeshwanthpur, Bengaluru, 560022, Karnataka, India Latitude 13.032202° Longitude 77.543978° Local 11:36:38 GMT 06:06:38 Altitude: 912.3 meters Thursday, 02/27/2025

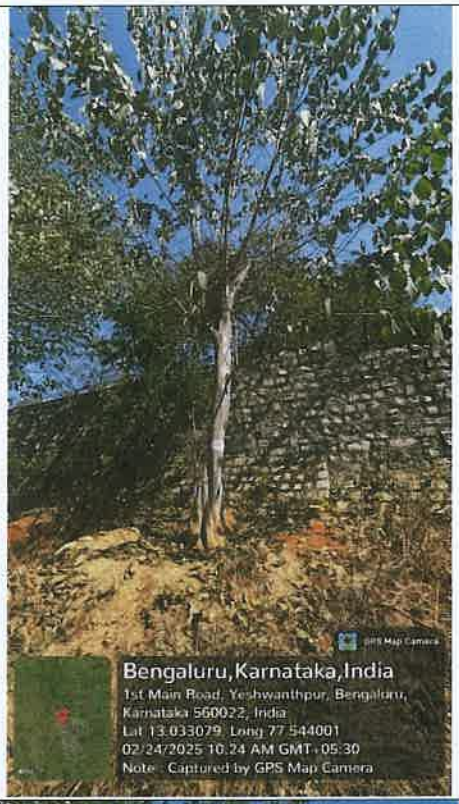
264	 Yeshwanthpur, Bengaluru, 560022, Karnataka, India Latitude 13.032011° Longitude 77.544412° Local 11:39:10 GMT 06:09:10 Altitude 909.9 meters Thursday, 02/27/2025
276	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032544, Long 77.544277 02/24/2025 10:23 AM GMT+05:30 Note: Captured by GPS Map Camera

260	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.031679, Long 77.544336 02/24/2025 10:18 AM GMT+05:30 Note : Captured by GPS Map Camera
280	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032552, Long 77.544216 02/24/2025 10:22 AM GMT+05:30 Note : Captured by GPS Map Camera

650	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.031456, Long 77.544767 02/24/2025 10:16 AM GMT+05:30 Note : Captured by GPS Map Camera
653	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.031604, Long 77.544709 02/24/2025 10:17 AM GMT+05:30 Note : Captured by GPS Map Camera

667	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032526, Long 77.543986 02/24/2025 10:21 AM GMT +05:30 Note : Captured by GPS Map Camera
586	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032404, Long 77.544983 02/24/2025 10:50 AM GMT +05:30 Note : Captured by GPS Map Camera

624		 624 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032930, Long 77.544335 02/24/2025 10:25 AM GMT+05:30 Note : Captured by GPS Map Camera
625		 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032953, Long 77.544289 02/24/2025 10:24 AM GMT+05:30 Note : Captured by GPS Map Camera

701	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.033079 Long 77.544001 02/24/2025 10:24 AM GMT+05:30 Note : Captured by GPS Map Camera
616	 Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032526, Long 77.543986 02/24/2025 10:21 AM GMT+05:30 Note : Captured by GPS Map Camera

873	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032903, Long 77.544272 02/24/2025 10:25 AM GMT+05:30 Note : Captured by GPS Map Camera
971	 GPS Map Camera Bengaluru,Karnataka,India 1st Main Road, Yeshwanthpur, Bengaluru, Karnataka 560022, India Lat 13.032226, Long 77.545034 02/24/2025 10:49 AM GMT+05:30 Note : Captured by GPS Map Camera

4.3 Survival rate

The survival rate of transplanted trees is presented in the following table 4.2.

Table 4.2: Percentage of survival of Transplanted trees – OM3

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	-	7 / 33	7 / 33	19 / 33	18 / 33	18 / 33	16 / 33
1	-	21 %	21 %	57 %	57 %	54 %	48 %

4.4 Conclusion

During this quarter, the survival rate of transplanted trees has reduced from 54 % to 61% compared to the previous quarter. Transplanted trees were 33 no's out of 47 no's, and the remaining are 14 no's. Only 16 no's of tree show the symptoms of fresh leaves, sprouts etc.

Vinod. P.R

Resident Engineer-Environment

General Consultants-K.RIDE

Rail Infrastructure Development Company (Karnataka) Limited

A JV of Govt. of Karnataka & Ministry of Railways

Bengaluru Suburban Railway Project (BSRP)

Corridor 2

Tree Translocation Quarterly Report – Year 2025 -2026

April to June (2nd Qtr)

Executive Summary

K – RIDE, Executive agency of BSRP project compromising of the four corridors with the Joint Venture of GOK and GOI through MOR. L & T awarded corridor 2 including at-grade and elevated construction work excluding Station works. According to the contract, removal / Felling of Trees and Translocating Trees are in the contractor's scope.

The Tree Expert Committee visited the C2 site and observations were recommended to the BBMP -Forest for Transplantation. Accordingly, BBMP issued an Official Memorandum dated 27/12/2022 with a total number of trees proposed for translocation 58 no's. Similarly, BBMP issued an Official Memorandum dated 24/22/2023 with a total number of trees proposed for translocation 73 no's and Official Memorandum dated 17/03/2023 are 47 no's.

During the Monitoring of the Transplanted Trees from April 2025 to June 2025 for OM1 17 trees completed with survival symptoms of 12 no's and 05 no's tree did not show any symptoms. Similarly, for OM2 11 no's trees completed with healthy condition of 04 no's did not show any symptoms, and OM3- 33 no's with 15 No's trees completed with healthy condition.

Survival rate of transplanted of Trees for OM1 is 70 %, OM2 the survival rate is 63%, and OM 3 Survival rate is 45 % only.

Abbreviations

BBMP	:	Bruhat Bengaluru Mahanagara Palike
BSRP	:	Bangalore Suburban Railway Project
CA	:	Compensatory Afforestation
GKVK	:	Gandi Krishi Vignana Kendra
GOI	:	Government of India
GOK	:	Government of Karnataka
KRIDE	:	The Rail Infrastructure Development Company (KARNATAKA) Limited
MOR	:	Ministry of Railways
OM	:	Official Memorandum
TOD	:	Transient Oriented Development
TEC	:	Tree Expert Committee
UAS	:	University of Agricultural Science

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Chapter - 1

1.0 Introduction

In India Bengaluru is considered as the fastest growing city with lot of new establishments in industries, extension of layouts, business opportunities, medical & engineering colleges, software parks, commercial hubs, construction of residential apartments. In the meantime, infrastructure should grow parallel to the present development especially transportation sector with roads / rail connectivity is also necessary. As per the India Mobility Final report prepared by Global Monitor Network, the Road Density of the Bengaluru is 8.2 km Per sqkm compared to 21.3 km Per sqkm all most less than 1/3rd of the Delhi. It clearly indicates that Bengaluru roads are always congested followed by consuming of fuel with air pollutants emission into the atmosphere will creates unhealthy AQI and an average person pass almost struck 240 hours in dense traffic may leads to loss in business associated with productivity. Metro Rail can provide service in inside the city instead of connecting from one end to another end and connecting to suburban area. Presently population of the city is nearly 14 million such that alone metro or other type of transportation service not able to meet the demand of public mobility. In this scenario, Rail Infrastructure Development Company (Karnataka) Limited, bringing Bengaluru Suburban Rail Project (BSRP) to meet the needs of public Mass Rapid Transport Systems which is faster than metro with less curves, Reliable, connecting from Bengaluru urban to rural, improving environmental quality, enhancing social and women security and TOD implementation.

1.1 Project Background

K RIDE is entrusted with the responsibility of implementation of Bengaluru Suburban Railway Project (BSRP), a new Suburban Railway Project envisaging construction of 4 dedicated Electrified Suburban Rail corridors over a network of 148 kilometres (km) with 4 interchange stations, 57 No's Stations. The influence Zone of the project's extents over 186 Villages within the radius of 5 Km from the project Corridor. Dedicated Corridor of BSRP is planned for design speed of 90 Kmph. The project predominantly runs parallel to the existing Railway Network except few diversions to cross the existing Railway / Metro / Highways Systems. The distance from the centre of the Track of the SWR are 16.5 mts / 7.5 mts / 4.5 mts depends on the space availability and future plans of the SWR. It will link Bengaluru to its satellite townships, suburbs, surrounding areas and provide a rail-based Mass Rapid Transit System (MRTS).

1.1.1 Details of the four dedicated Rail corridors are:

Corridor – 1: KSR Bengaluru City to Devanahalli (41.40Km), extended to Akkupet Depot
Corridor – 2: Benniganahalli to Chikkabanavara (25.01Km), extended to Soladevanahalli Depot.
Corridor – 3: Kengeri to Whitefield (via KSR and Cantonment) (35.52Km) &
Corridor – 4: Heelalige to Rajankunte (46.24Km).

The project comprises of four Corridors at a total length of 148.17 km.

Figure 1.0, Shows all corridors with specific colours for corridors 1, Corridor 2, Corridor 3 and Corridor 4.

1.2 Scope

BSRP Corridor 2 (Civil Works) excluding stations construction is awarded to L & T. According to the contract, removal / Felling of Trees and Translocating Trees is in the scope of contractor as per the TEC recommendations. GC recommended TMRH Plantations based on credential review.

1.2.1 Objectives

The objectives this report is as follows:

34. To present the Tree Transplantation Quarterly Progress report from April to June 2025
35. To understand the survival nature / adaptability of the trees to the new locations

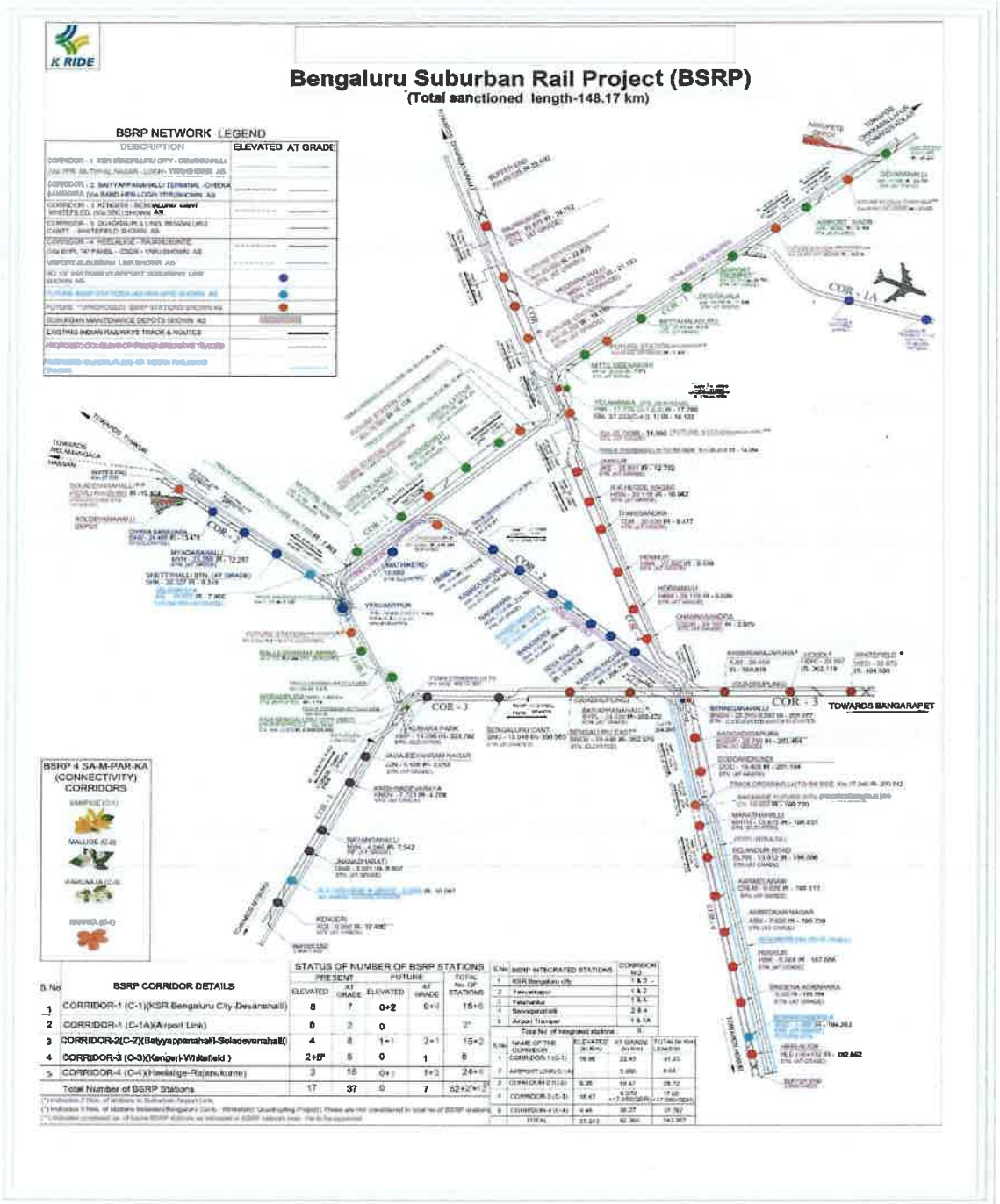


Fig 1.0. System Map of BSRP Project

Chapter - 2

2.0 Official Memorandum (OM) – 1 Details

BBMP – Forest issued OM – 1 dated 27/12/2022 (Baiyappanahalli to Chikkabanavara) with schedule 1 consisting of 58 No's of trees for translocation, 268 No's trees for felling and 315 No's of trees for retaining. Transplanted location identified viz close to KV Ground, Beside Badminton court opposite the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite to the treatment plant, diagonally opposite to the KV Ground, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 17 trees were translocated to K V School Ground, along compound wall such that only 12 No's of trees show Healthy condition / survival symptoms.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and Tree like Tabebuia rosea showing pink flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

2.1 Compensatory Afforestation for OM -1

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 58 Transplanted plus 338 no's felling multiplied by 10 times is equal to 3260 No's. Accordingly, BBMP – Forest selected plot at GKVK, Campus, Biodiversity Park under Zonal Area Research Centre (ZARS), Director of Research, UAS (B). In

this park BBMP -Forest, Yelahanka Zone planting in association with UAS (B). The following figure No. 2.0 shows the location of GKVK for CA pink in a line.

Figure 2.0: Location showing CA at GKVK Campus

2.2. Tree Transplantation status for April to June 2025

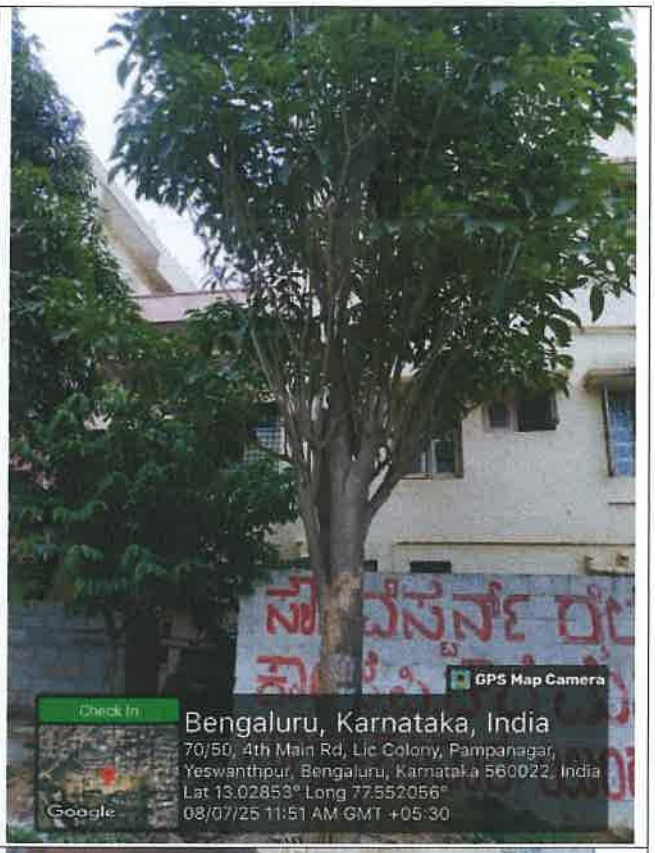
The following table no. 2.0 highlights the status of Transplanted Trees at K V School Ground, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 2.1 for ready reference. Maintenance period of transplanted tree is 3 years. It's clear evident that out of 17 trees were transplanted, only 12 trees were showing healthy conditions.

Table 2.0: Translocated Tree Status for OM 1 at KV School Ground – April to June 2025

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
36.	385	Mahogany	Healthy Condition	
37.	386	Tabebuia rosea	Fresh leaves were observed	
38.	399	Mahogany	Healthy Condition	
39.	403	Mahogany	Healthy Condition	
40.	407	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
41.	408	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
42.	409	Mahogany	Healthy Condition	However, compensatory effort was made with grown up plant / seedling.
43.	414	Mahogany	Healthy Condition	
44.	417	Mahogany	Healthy Condition	
45.	418	Mahogany	Healthy Condition	
46.	423	Tore Matti	Healthy Condition	
47.	424	Tabebuia Rosea	Healthy Condition	
48.	429	Tabebuia Rosea	Healthy Condition	
49.	430	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
50.	432	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
51.	433	Jamun	Healthy Condition	
52.	434	Jamun	*Not Showing any Survival symptoms*	Due to the translocation shock.

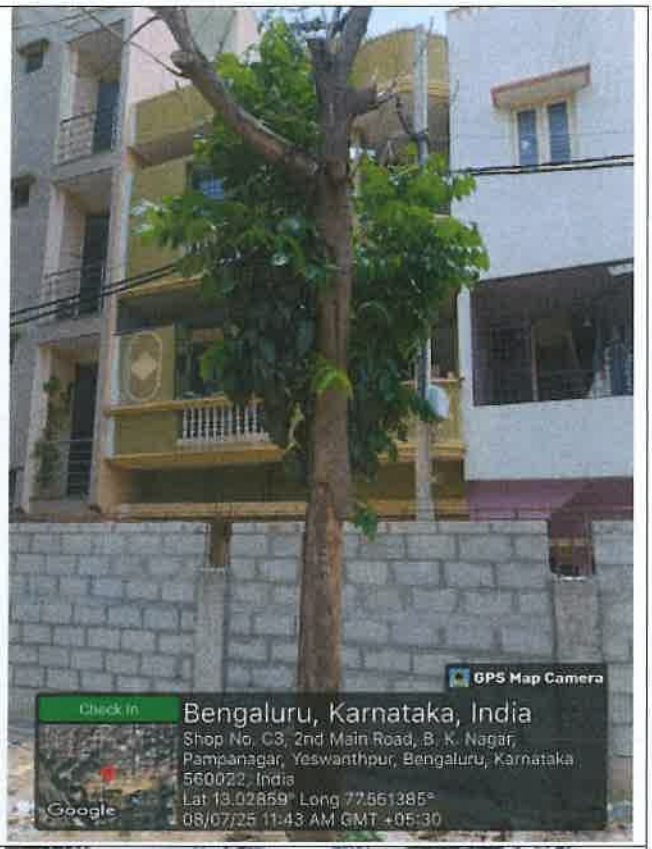
Table 2.1: Photographs of Translocated Tree Status for OM 1 at KV School Ground – April to June 2025

Tree No	Tree photograph
385	

386	 GPS Map Camera Check In Bengaluru, Karnataka, India 70/50, 4th Main Rd, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.02853° Long 77.552056° 08/07/25 11:51 AM GMT +05:30 Google
399	 GPS Map Camera Check In Bengaluru, Karnataka, India 337, Lic Colony, Pampanagar, Mathikere, Bengaluru, Karnataka 560054, India Lat 13.028513° Long 77.553055° 08/07/25 12:09 PM GMT +05:30 Google

403	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 337, Lic Colony, Pampanagar, Mathikere, Bengaluru, Karnataka 560054, India Lat 13.028572° Long 77.553044° 08/07/25 12:05 PM GMT +05:30
409	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 337, Lic Colony, Pampanagar, Mathikere, Bengaluru, Karnataka 560054, India Lat 13.028599° Long 77.553001° 08/07/25 12:00 PM GMT +05:30

414	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 337, Lic Colony, Pampanagar, Mathikere, Bengaluru, Karnataka 560054, India Lat 13.02858° Long 77.552981° 08/07/25 12:03 PM GMT +05:30
417	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 23, 1st Main Rd, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028589° Long 77.551358° 08/07/25 11:43 AM GMT +05:30

418	 GPS Map Camera Check In Bengaluru, Karnataka, India Shop No, C3, 2nd Main Road, B. K. Nagar, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.02859° Long 77.561385° 08/07/25 11:43 AM GMT +05:30 Google
423	 GPS Map Camera Check In Bengaluru, Karnataka, India 72/2, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028545° Long 77.552466° 08/07/25 11:54 AM GMT +05:30 Google

424	 GPS Map Camera Check In Bengaluru, Karnataka, India Shop No. C3, 2nd Main Road, B. K. Nagar, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028565° Long 77.551523° 08/07/25 11:48 AM GMT +05:30 Google
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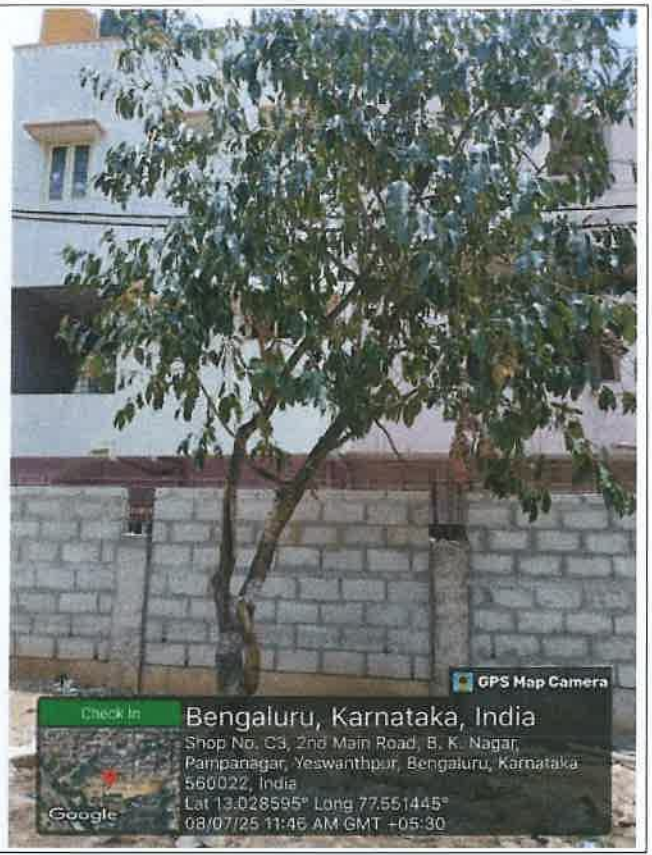
433	

2.3 Survival rate

The survival rate of transplanted trees is presented in the following table 2.2.

Table 2.2: Percentage of survival of Transplanted trees - OM 1

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	16 / 17	14 / 17	13 / 17	12 / 17	12 / 17	11 / 17	11 / 17
1	94 %	82 %	76 %	70 %	70 %	64 %	64%

Table 2.2: In continuation of the above table, Percentage of survival of Transplanted trees - OM 1

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	12 / 17						
2	70 %						

2.4 Conclusion

During this quarter, the survival rate of transplanted trees remains at 70% compared to the previous quarter. Transplanted trees were 17 no's out of 58 no's and remaining are 41 no's. Only 12 no's of tree show the symptoms of healthy conditions.

3.0 Official Memorandum (OM) – 2 Details

BBMP – Forest issued OM - 2 dated 24/02/2023 (Baiyappanahalli Railway Station to Lottegollahalli Railway Station) with schedule 1 consisting of 73 no's of trees for translocation, 1234 no's trees for felling and 123 no's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite the treatment plant, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 11 trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 07 No's of trees shows survival of healthy condition.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

3.1 Compensatory Afforestation for OM -2

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in the OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 73 Transplanted plus 1234 no's felling multiplied by 10 times is equal to 13070 No's. Accordingly, BBMP – Forest selected Dasarahalli BBMP Zone for planting.

3.2. Tree Transplantation status for April to June 2025

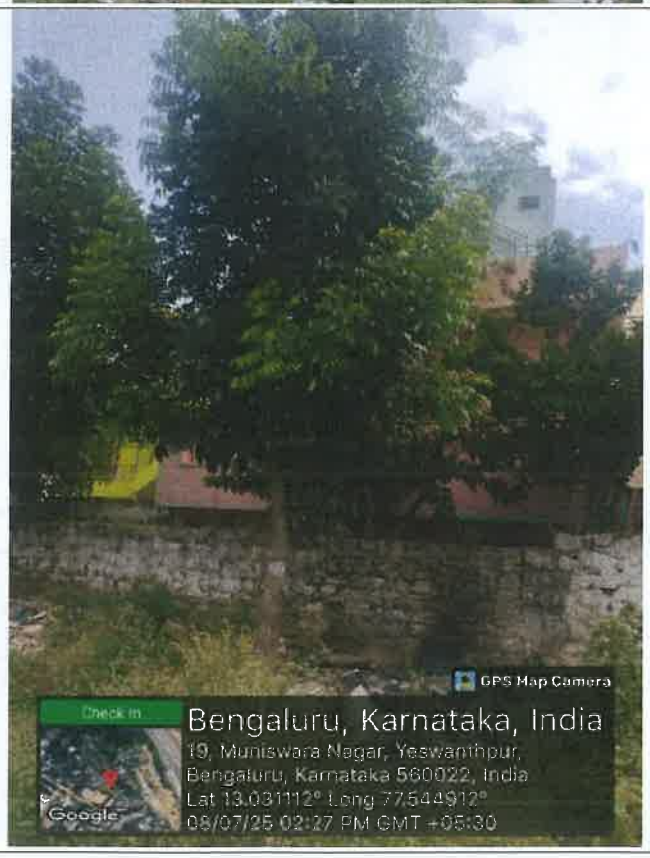
The following table no. 3.0 highlights the status of Transplanted Trees at Yeshwanthpur Colony opposite to the treatment plant with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 3.1 for ready reference. Maintenance period of transplanted tree is 3 years. Its clear evident that out of 11 no's of trees were transplanted, only 7 no's trees were showing healthy conditions.

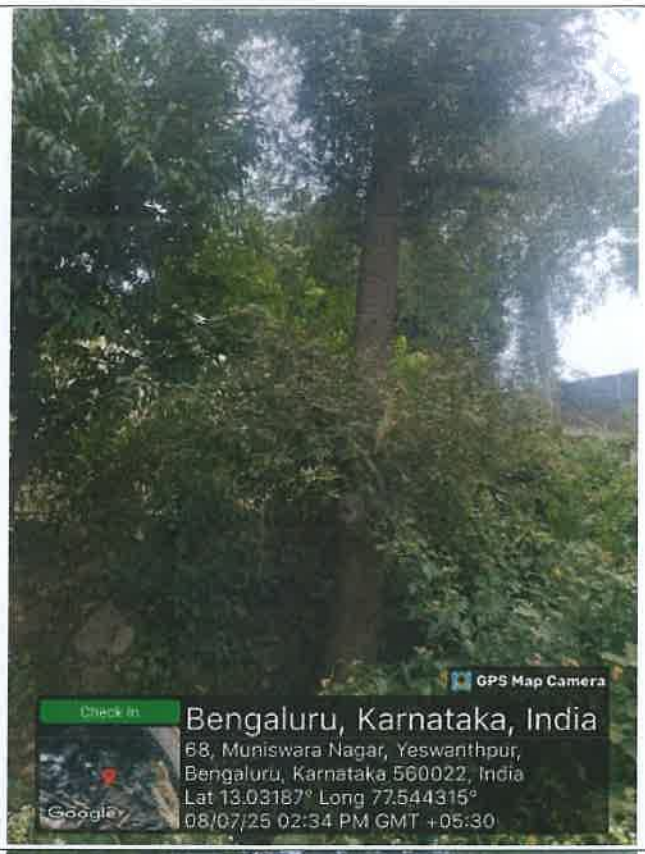
Table 3.0: Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – April to June 2025

Sl. No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
53.	11	Nerale	*Not showing any survival symptoms*	Due to the Translocation shock
54.	21	Nerale	*Not showing any survival symptoms*	Due to the Translocation shock
55.	36	Atthi	*Not showing any survival symptoms*	Due to the Translocation shock
56.	208	Mahogany	Healthy	
57.	212	Mahogany	Healthy	
58.	206	Mahogany	*Not showing any survival symptoms*	Due to the Translocation shock
59.	207	Tabeuia Rosia	Healthy	
60.	649	Sihi hunase	Healthy	
61.	651	Sihi hunase	Healthy	
62.	755	Hebbevu	Healthy	
63.	1424	Honge	Healthy	

Table 3.1: Photos of Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – April to June 2025

Tree No	Tree photograph
207	

208	 GPS Map Camera Check in Bengaluru, Karnataka, India 19, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031125° Long 77.544946° 08/07/25 02:26 PM GMT +05:30 Google
212	 GPS Map Camera Check in Bengaluru, Karnataka, India 19, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031112° Long 77.544912° 08/07/25 02:27 PM GMT +05:30 Google

649	 GPS Map Camera Check In Bengaluru, Karnataka, India 68, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.03187° Long 77.544315° 08/07/25 02:34 PM GMT +05:30 Google
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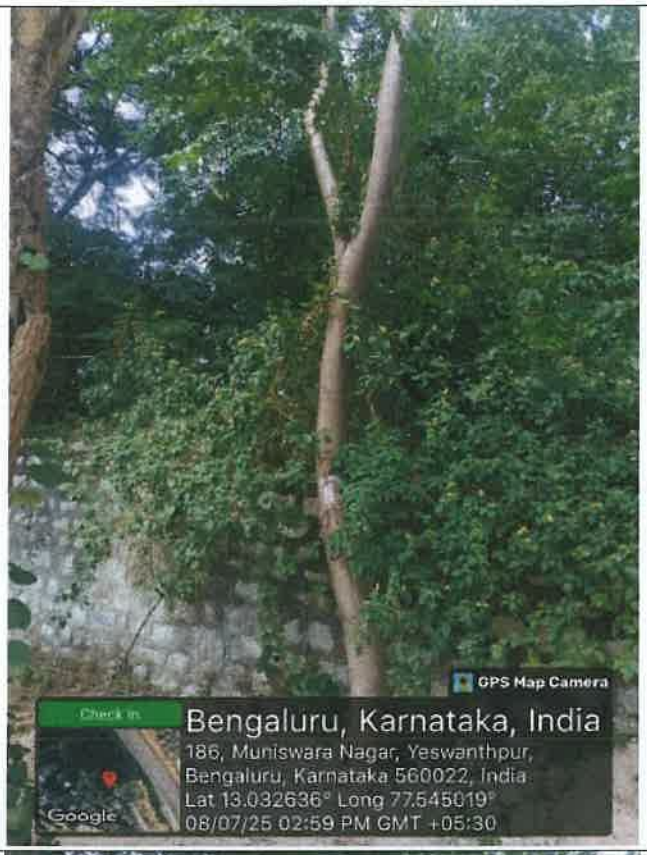
755	 GPS Map Camera Check In Bengaluru, Karnataka, India 186, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032636° Long 77.545019° 08/07/25 02:59 PM GMT +05:30 Google
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3.3 Survival rate

The survival rate of transplanted trees is presented in the following table 3.2.

Table 3.2: Percentage of survival of Transplanted trees – OM2

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	6 / 7	4 / 7	4 / 7	7 / 11	7 / 11	7 / 11	7 / 11
1	85 %	57 %	57 %	63 %	63 %	63 %	63 %

Table 3.2: In continuation of the above table, Percentage of survival of Transplanted trees - OM 2

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	7 / 11						
1	63 %						

3.4 Conclusion

During this quarter, the survival rate of transplanted trees remains at 63% compared to the previous quarters. Transplanted trees were 11 no's out of 73 no's and remaining are 62 no's. Only 07 no's of tree show the symptoms of Healthy condition.

4.0 Official Memorandum (OM) – 3 Details

BBMP – Forest issued OM-3 dated 17/03/2023 (Lottegollahalli Railway Station to Chikkabanavara Station) with schedule 1 consisting of 47 no's of trees for translocation, 596 no's trees for felling and 135 No's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite to the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite to the treatment plant, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. At present, only 33 no's of trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 15 no's of trees show survival symptoms and remaining trees not showing any symptoms of survival.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

4.1 Compensatory Afforestation for OM -3

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 47 Transplanted plus 596 no's felling multiplied by 10 times is equal to 6430 No's. Accordingly, BBMP – Forest selected R R Nagara BBMP Zone, NICE Road for planting.

4.2. Tree Transplantation status for April to June 2025

The following table no. 4.0 highlights the status of Transplanted Trees at Yeshwanthpur Colony opposite to the treatment plant, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 4.1 for ready reference. Maintenance period of transplanted tree is 3 years. It's clear evident that out of 33 no's of trees were transplanted, only 15 trees were showing survival symptoms.

Table 4.0: Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – April to June 2025

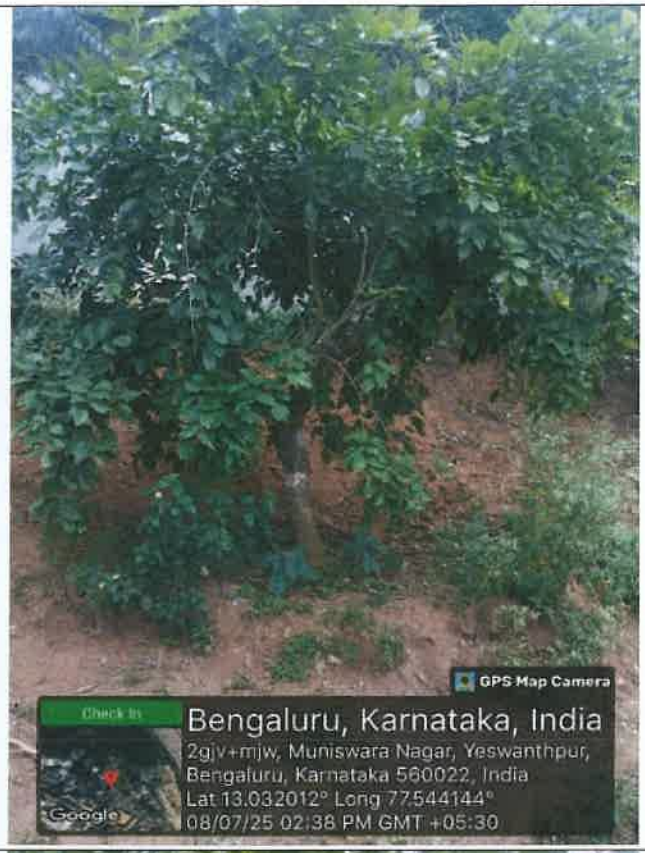
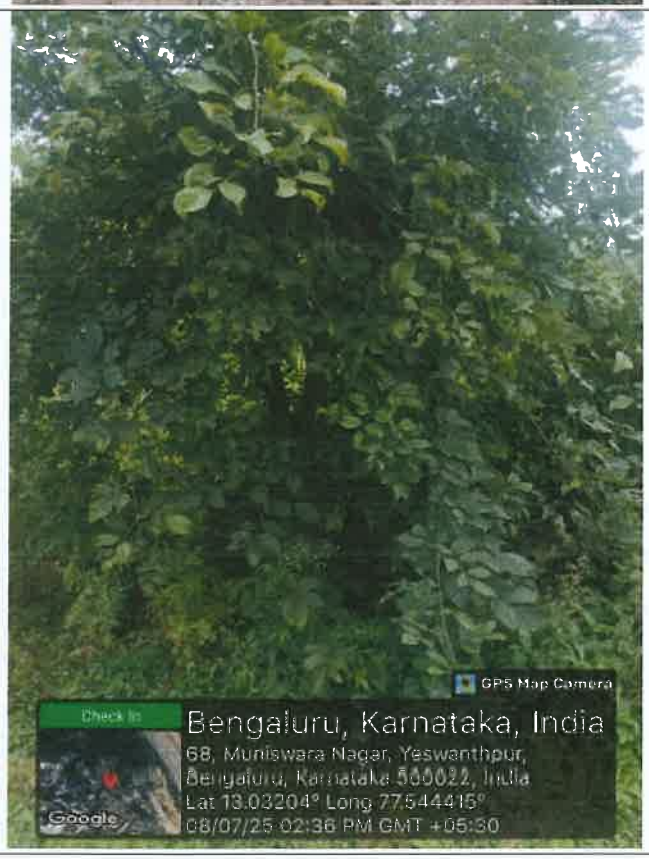
Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
64.	237	Buruga	*Not showing any survival symptoms*	Due to the translocation shock
65.	241	Honge	Healthy Condition	
66.	242	Memosops elangi	*Not showing any survival symptoms*	Due to the translocation shock
67.	243	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock
68.	259	Honge	Healthy Condition	
69.	260	Honge	*Not showing any survival symptoms*	Due to the translocation shock
70.	261	Honge	*Not showing any survival symptoms*	Due to the translocation shock
71.	262	Honge	Healthy leaves were observed	
72.	264	Honge	Healthy Condition	
73.	276	Basavanapadha	Healthy Condition	
74.	280	Tabebuia rosea	Healthy Condition	
75.	344	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock
76.	358	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
77.	362	Atti	*Not showing any survival symptoms*	Due to the translocation shock
78.	586	Rain tree	Healthy Condition	
79.	598	Kakke	*Not showing any survival symptoms*	Due to the translocation shock
80.	599	Kakke	*Not showing any survival symptoms*	Due to the translocation shock
81.	616	Rain Tree	Healthy Condition	
82.	624	Rain Tree	Healthy Condition	
83.	625	Rain tree	Healthy Condition	
84.	650	Rain tree	Healthy Condition	
85.	653	Rain tree	Healthy Condition	
86.	654	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock
87.	667	Rain tree	Healthy Condition	
88.	701	Atti	Healthy Condition	
89.	702	Halasu	*Not showing any survival symptoms*	Due to the translocation shock
90.	768	Kaadu badami	*Not showing any survival symptoms*	Due to the translocation shock
91.	867/1	Sandal	*Not showing any survival symptoms*	Due to the translocation shock
92.	873	Sisso	Healthy Condition	
93.	964	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock
94.	969	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock
95.	971	Kaadu badami	Healthy Condition	

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
96.	972	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock

Table 4.1: Photos of Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – April to June 2025

Tree No	Tree photograph
241	

259	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 2gjv+mjw, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032012° Long 77.544144° 08/07/25 02:38 PM GMT +05:30
264	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 68, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.03204° Long 77.544415° 08/07/25 02:36 PM GMT +05:30

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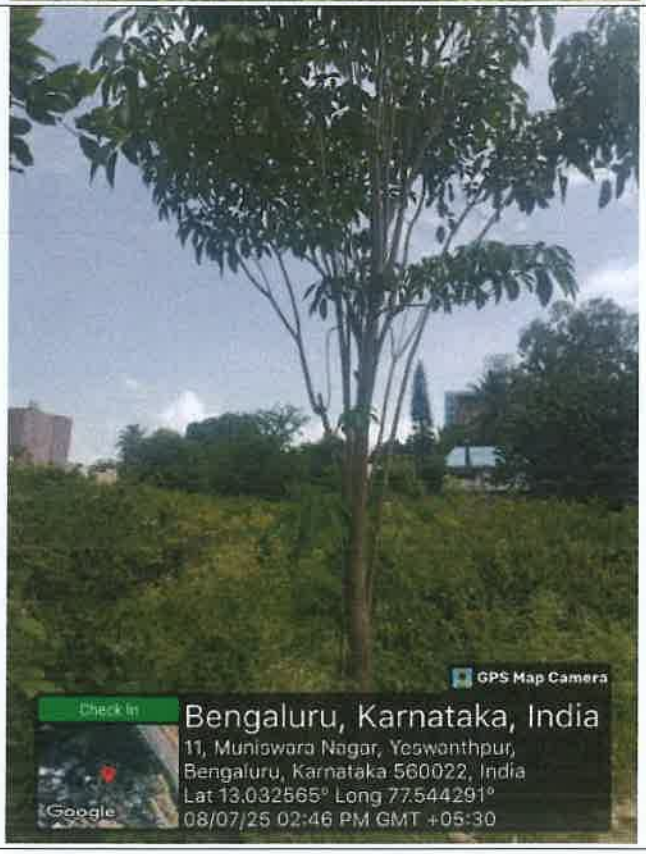
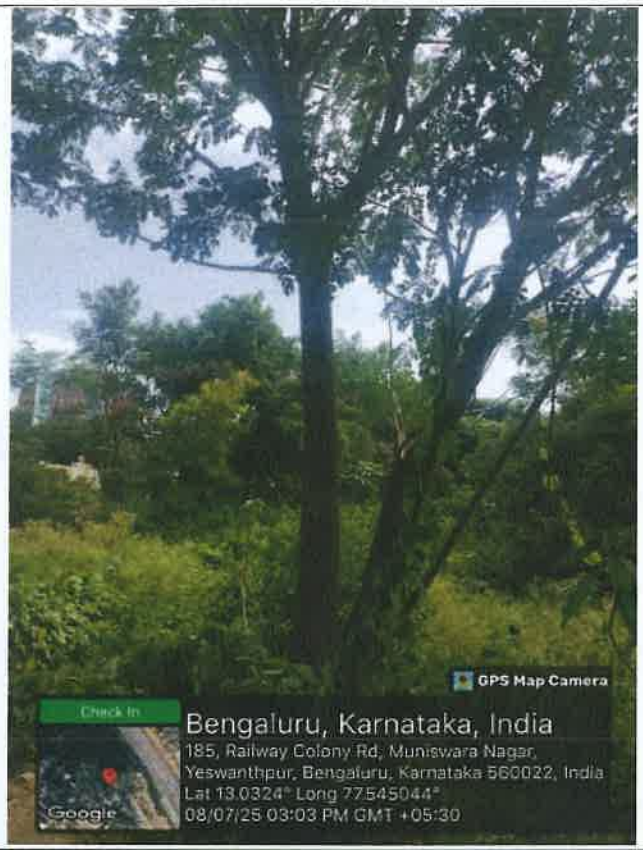
280	 GPS Map Camera Check In Bengaluru, Karnataka, India 11, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032565° Long 77.544291° 08/07/25 02:46 PM GMT +05:30 Google

586	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 185, Railway Colony Rd, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.0324° Long 77.545044° 08/07/25 03:03 PM GMT +05:30
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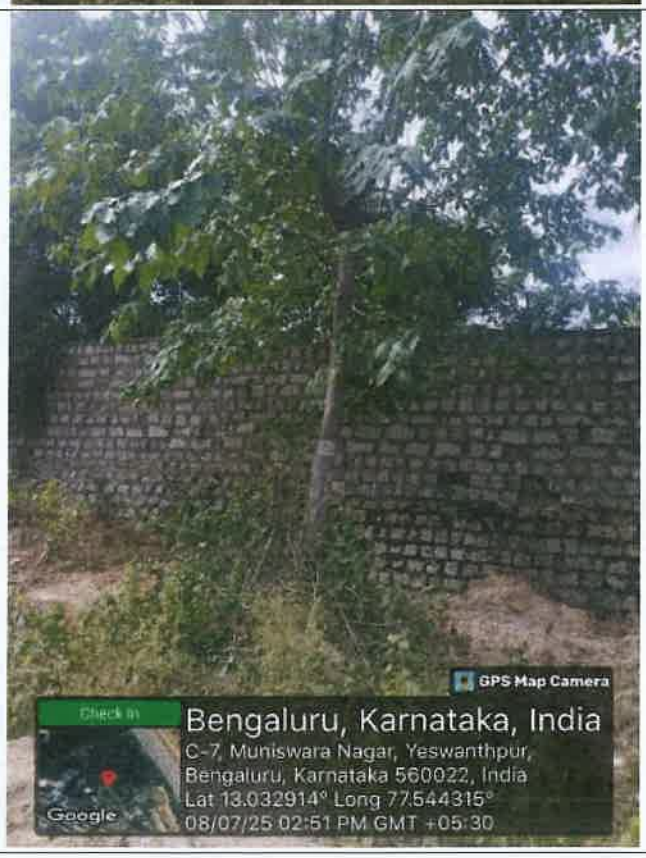
625	 GPS Map Camera Check In Google Bengaluru, Karnataka, India C-7, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032914° Long 77.544315° 08/07/25 02:51 PM GMT +05:30

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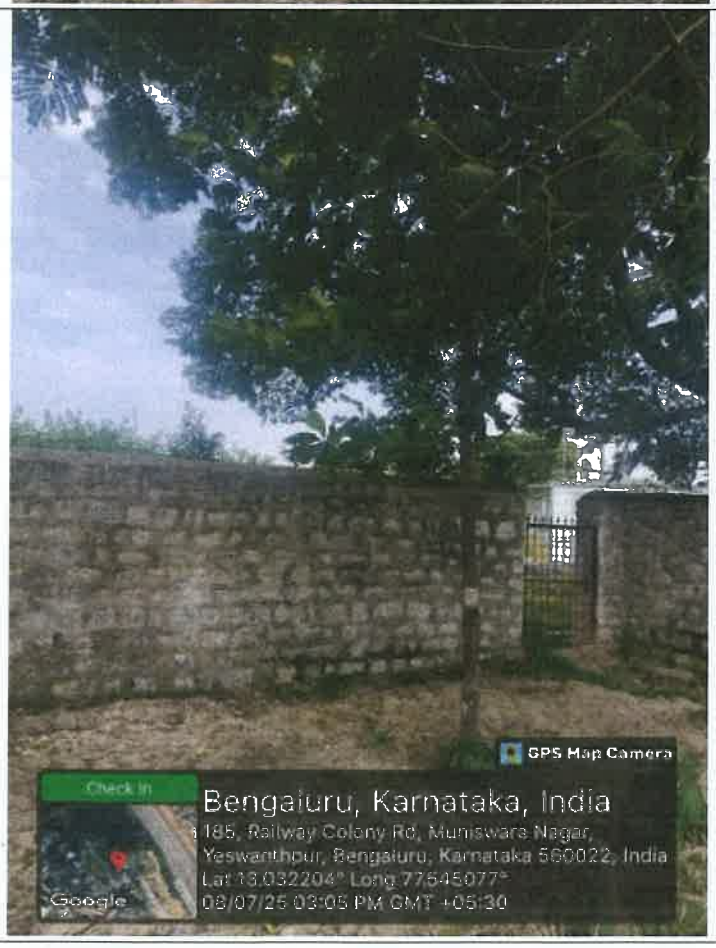
971	 GPS Map Camera Check in Google Bengaluru, Karnataka, India 185, Railway Colony Rd, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032204° Long 77.545077° 08/07/25 03:05 PM GMT +05:30

4.3 Survival rate

The survival rate of transplanted trees is presented in the following table 4.2.

Table 4.2: Percentage of survival of Transplanted trees – OM 3

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	-	7 / 33	7 / 33	19 / 33	18 / 33	18 / 33	16 / 33
1	-	21 %	21 %	57 %	57 %	54 %	48 %

Table 4.2: In continuation of the above table, Percentage of survival of Transplanted trees – OM 3

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	15 / 33						
2	45 %						

4.4 Conclusion

During this quarter, the survival rate of transplanted trees has reduced from 48 % to 45% compared to the previous quarter. Transplanted trees were 33 no's out of 47 no's, and the remaining are 14 no's. Only 15 no's of tree show the symptoms of Healthy Condition.

Vinod. P.R

Resident Engineer-Environment

General Consultants-K.RIDE

EGIS RAIL-AECOM BENGALURU GC/BSRP

Rail Infrastructure Development Company (Karnataka) Limited

A JV of Govt. of Karnataka & Ministry of Railways

Bengaluru Suburban Railway Project (BSRP)

Corridor 2

Tree Translocation Quarterly Report – Year 2025 -2026

July to September (3rd Qtr.)

Executive Summary

K – RIDE, Executive agency of BSRP project compromising of the four corridors with the Joint Venture of GOK and GOI through MOR. L & T awarded corridor 2 including at-grade and elevated construction work excluding Station works. According to the contract, removal / Felling of Trees and Translocating Trees are in the contractor's scope.

The Tree Expert Committee visited the C2 site and observations were recommended to the BBMP -Forest for Transplantation. Accordingly, BBMP issued an Official Memorandum dated 27/12/2022 with a total number of trees proposed for translocation 58 no's. Similarly, BBMP issued an Official Memorandum dated 24/22/2023 with a total number of trees proposed for translocation 73 no's and Official Memorandum dated 17/03/2023 are 47 no's.

During the Monitoring of the Transplanted Trees from July 2025 to Sep. 2025 for OM1 17 trees completed with survival symptoms of 12 no's and 05 no's tree did not show any symptoms. Similarly, for OM2 11 no's trees completed with 6 no. healthy condition of 05 no's did not show any symptoms, and OM3- 33 no's with 14 No's trees completed with healthy condition.

Survival rate of transplanted of Trees for OM1 is 70 %, OM2 the survival rate is 54.54%, and OM 3 Survival rate is 42 % only.

Abbreviations

BBMP	:	Bruhat Bengaluru Mahanagara Palike
BSRP	:	Bangalore Suburban Railway Project
CA	:	Compensatory Afforestation
GKVK	:	Gandi Krishi Vignana Kendra
GOI	:	Government of India
GOK	:	Government of Karnataka
KRIDE	:	The Rail Infrastructure Development Company (KARNATAKA) Limited
MOR	:	Ministry of Railways
OM	:	Official Memorandum
TOD	:	Transient Oriented Development
TEC	:	Tree Expert Committee
UAS	:	University of Agricultural Science

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Chapter - 1

1.0 Introduction

In India Bengaluru is considered as the fastest growing city with lot of new establishments in industries, extension of layouts, business opportunities, medical & engineering colleges, software parks, commercial hubs, construction of residential apartments. In the meantime, infrastructure should grow parallel to the present development especially transportation sector with roads / rail connectivity is also necessary. As per the India Mobility Final report prepared by Global Monitor Network, the Road Density of the Bengaluru is 8.2 km Per sqkm compared to 21.3 km Per sqkm all most less than 1/3rd of the Delhi. It clearly indicates that Bengaluru roads are always congested followed by consuming of fuel with air pollutants emission into the atmosphere will creates unhealthy AQI and an average person pass almost struck 240 hours in dense traffic may leads to loss in business associated with productivity. Metro Rail can provide service in inside the city instead of connecting from one end to another end and connecting to suburban area. Presently population of the city is nearly 14 million such that alone metro or other type of transportation service not able to meet the demand of public mobility. In this scenario, Rail Infrastructure Development Company (Karnataka) Limited, bringing Bengaluru Suburban Rail Project (BSRP) to meet the needs of public Mass Rapid Transport Systems which is faster than metro with less curves, Reliable, connecting from Bengaluru urban to rural, improving environmental quality, enhancing social and women security and TOD implementation.

1.1 Project Background

K RIDE is entrusted with the responsibility of implementation of Bengaluru Suburban Railway Project (BSRP), a new Suburban Railway Project envisaging construction of 4 dedicated Electrified Suburban Rail corridors over a network of 148 kilometres (km) with 4 interchange stations, 57 No's Stations. The influence Zone of the project's extents over 186 Villages within the radius of 5 Km from the project Corridor. Dedicated Corridor of BSRP is planned for design speed of 90 Kmph. The project predominantly runs parallel to the existing Railway Network except few diversions to cross the existing Railway / Metro / Highways Systems. The distance from the centre of the Track of the SWR are 16.5 mts / 7.5 mts / 4.5 mts depends on the space availability and future plans of the SWR. It will link Bengaluru to its satellite townships, suburbs, surrounding areas and provide a rail-based Mass Rapid Transit System (MRTS).

1.1.1 Details of the four dedicated Rail corridors are:

Corridor – 1: KSR Bengaluru City to Devanahalli (41.40Km), extended to Akkupet Depot
Corridor – 2: Benniganahalli to Chikkabanavara (25.01Km), extended to Soladevanahalli Depot.
Corridor – 3: Kengeri to Whitefield (via KSR and Cantonment) (35.52Km) &
Corridor – 4: Heelalige to Rajankunte (46.24Km).

The project comprises of four Corridors at a total length of 148.17 km.

Figure 1.0, Shows all corridors with specific colours for corridors 1, Corridor 2, Corridor 3 and Corridor 4.

1.2 Scope

BSRP Corridor 2 (Civil Works) excluding stations construction is awarded to L & T. According to the contract, removal / Felling of Trees and Translocating Trees is in the scope of contractor as per the TEC recommendations. GC recommended TMRH Plantations based on credential review.

1.2.1 Objectives

The objectives this report is as follows:

97. To present the Tree Transplantation Quarterly Progress report from July to September 2025
98. To understand the survival nature / adaptability of the trees to the new locations

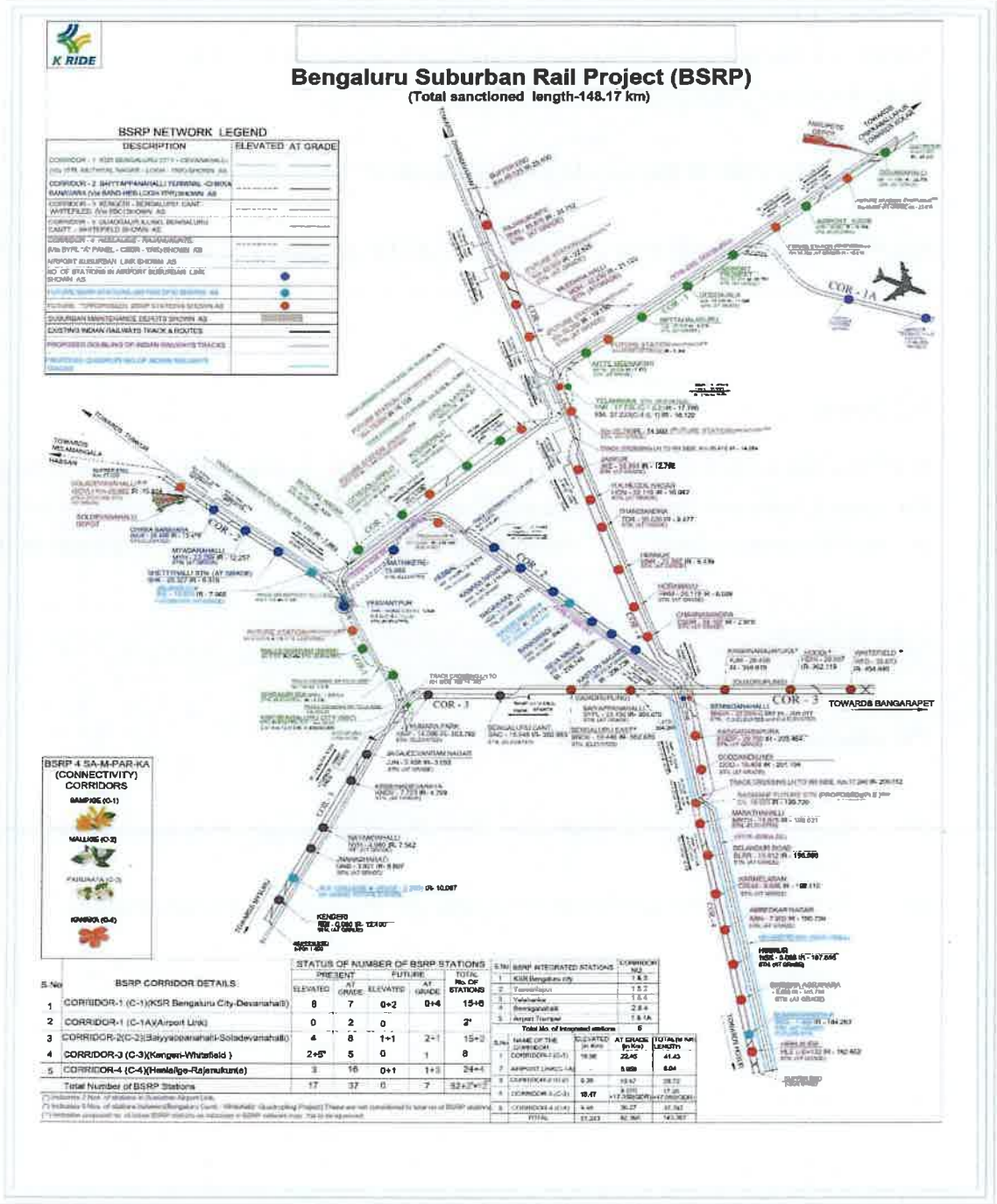

Fig 1.0. System Map of BSRP Project

Chapter - 2

2.0 Official Memorandum (OM) – 1 Details

BBMP – Forest issued OM – 1 dated 27/12/2022 (Baiyappanahalli to Chikkabanavara) with schedule 1 consisting of 58 No's of trees for translocation, 268 No's trees for felling and 315 No's of trees for retaining. Transplanted location identified viz close to KV Ground, Beside Badminton court opposite the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite to the treatment plant, diagonally opposite to the KV Ground, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 17 trees were translocated to K V School Ground, along compound wall such that only 12 No's of trees show Healthy condition / survival symptoms.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and Tree like Tabebuia rosea showing pink flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

2.1 Compensatory Afforestation for OM -1

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest

to implement compensatory afforestation for 58 Transplanted plus 338 no's felling multiplied by 10 times is equal to 3260 No's. Accordingly, BBMP – Forest selected plot at GKVK, Campus, Biodiversity Park under Zonal Area Research Centre (ZARS), Director of Research, UAS (B). In this park BBMP -Forest, Yelahanka Zone planting in association with UAS (B). The following figure No. 2.0 shows the location of GKVK for CA pink in a line.

Figure 2.0: Location showing CA at GKVK Campus

2.2. Tree Transplantation status for July to September 2025

The following table no. 2.0 highlights the status of Transplanted Trees at K V School Ground, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 2.1 for ready reference. Maintenance period of transplanted tree is 3 years. It's clear evident that out of 17 trees were transplanted, only 12 trees were showing healthy conditions.

Table 2.0: Translocated Tree Status for OM 1 at KV School Ground – July to September 2025

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
99.	385	Mahogany	Healthy Condition	
100.	386	Tabebuia rosea	Fresh leaves were observed	
101.	399	Mahogany	Healthy Condition	
102.	403	Mahogany	Healthy Condition	
103.	407	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
104.	408	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock
105.	409	Mahogany	Healthy Condition	However, compensatory effort was made with grown up plant / seedling.
106.	414	Mahogany	Healthy Condition	
107.	417	Mahogany	Healthy Condition	
108.	418	Mahogany	Healthy Condition	
109.	423	Tore Matti	Healthy Condition	
110.	424	Tabebuia Rosea	Healthy Condition	
111.	429	Tabebuia Rosea	Healthy Condition	
112.	430	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
113.	432	Mahogany	*Not Showing any Survival symptoms*	Due to the translocation shock.
114.	433	Jamun	Healthy Condition	
115.	434	Jamun	*Not Showing any Survival symptoms*	Due to the translocation shock.

Table 2.1: Photographs of Translocated Tree Status for OM 1 at KV School Ground – July to September 2025.

Tree No	Tree photograph
385	

386	 GPS Map Camera Check In Bengaluru, Karnataka, India 9, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028522° Long 77.551981° 26/09/25 01:45 PM GMT +05:30 Google
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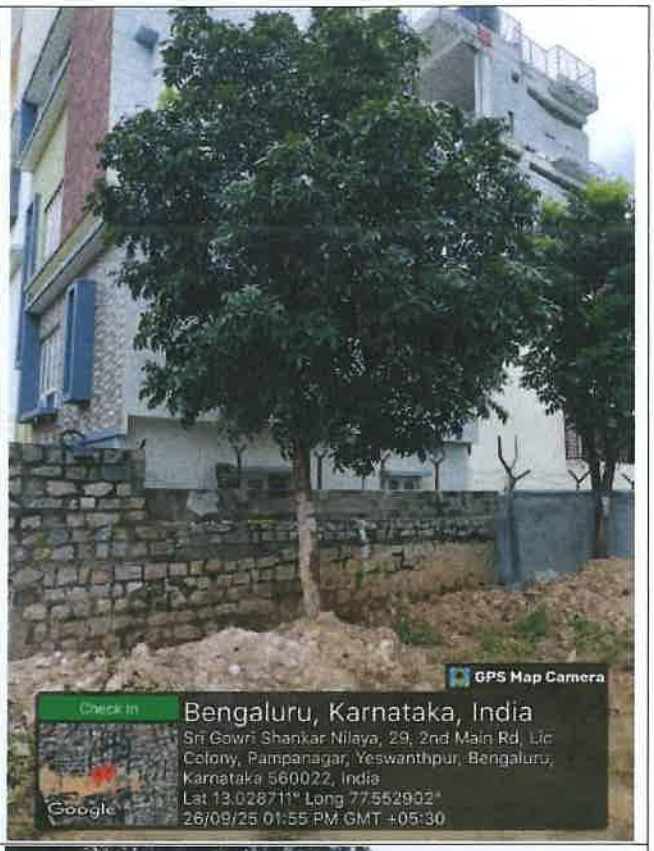
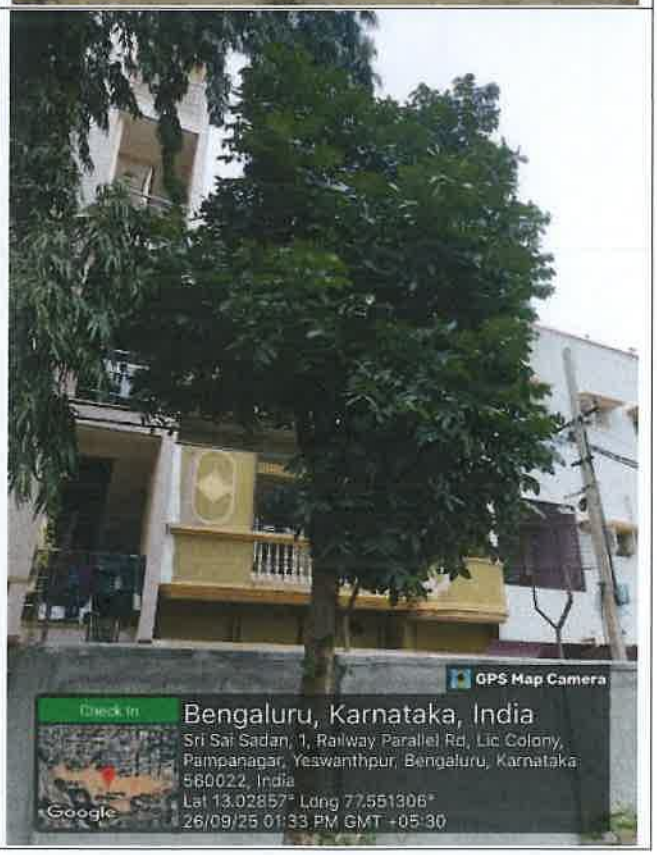
414	 GPS Map Camera Check In Bengaluru, Karnataka, India Sri Gowri Shankar Nilaya, 29, 2nd Main Rd, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028711° Long 77.552902° 26/09/25 01:55 PM GMT +05:30 Google
417	 GPS Map Camera Check In Bengaluru, Karnataka, India Sri Sai Sadan, 1, Railway Parallel Rd, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.02857° Long 77.551306° 26/09/25 01:33 PM GMT +05:30 Google

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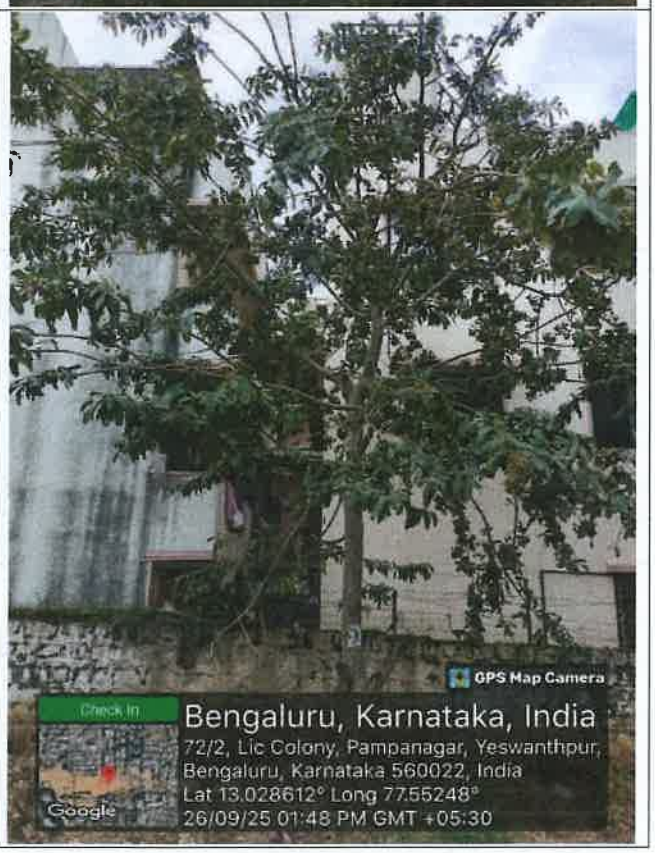
423	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 72/2, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028612° Long 77.55248° 26/09/25 01:48 PM GMT +05:30

424	 GPS Map Camera Check In Bengaluru, Karnataka, India Shop No. C3, 2nd Main Road, B. K. Nagar, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028562° Long 77.55154° 26/09/25 01:40 PM GMT +05:30 Google
429	 GPS Map Camera Check In Bengaluru, Karnataka, India 72/2, Lic Colony, Pampanagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.028541° Long 77.552547° 26/09/25 01:49 PM GMT +05:30 Google

433	

2.3 Survival rate

The survival rate of transplanted trees is presented in the following table 2.2.

Table 2.2: Percentage of survival of Transplanted trees - OM 1

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	16 / 17	14 / 17	13 / 17	12 / 17	12 / 17	11 / 17	11 / 17
1	94 %	82 %	76 %	70 %	70 %	64 %	64%

Table 2.2: In continuation of the above table, Percentage of survival of Transplanted trees - OM 1

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	12 / 17	12 / 17					
2	70 %	70 %					

2.4 Conclusion

During this quarter, the survival rate of transplanted trees remains at 70% compared to the previous quarter. Transplanted trees were 17 no's out of 58 no's and remaining are 41 no's. Only 12 no's of tree show the symptoms of healthy conditions out of 17 numbers.

3.0 Official Memorandum (OM) – 2 Details

BBMP – Forest issued OM - 2 dated 24/02/2023 (Baiyappanahalli Railway Station to Lottegollahalli Railway Station) with schedule 1 consisting of 73 no's of trees for translocation, 1234 no's trees for felling and 123 no's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite the treatment plant, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. Only 11 trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 06 No's of trees shows survival of healthy condition.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

3.1 Compensatory Afforestation for OM -2

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in the OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 73 Transplanted plus 1234 no's felling multiplied by 10 times is equal to 13070 No's. Accordingly, BBMP – Forest selected Dasarahalli BBMP Zone for planting.

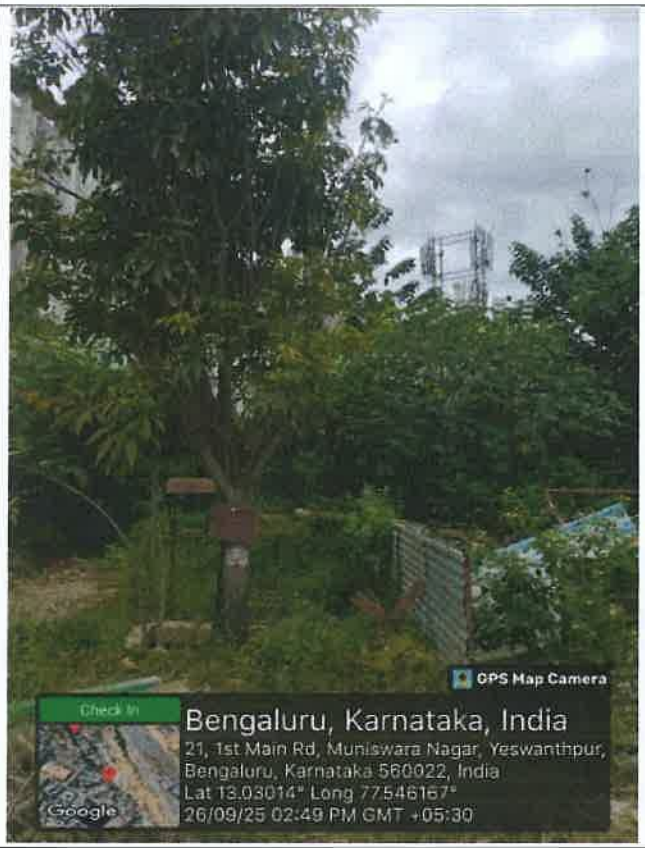
3.2. Tree Transplantation status for July to September 2025

The following table no. 3.0 highlights the status of Transplanted Trees at Yeshwanthpur Colony opposite to the treatment plant with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 3.1 for ready reference. Maintenance period of transplanted tree is 3 years. Its clear evident that out of 11 no's of trees were transplanted, only 6 no's trees were showing healthy conditions.

Table 3.0: Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – July to September 2025

Sl. No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
116.	11	Nerale	*Not showing any survival symptoms*	Due to the Translocation shock
117.	21	Nerale	*Not showing any survival symptoms*	Due to the Translocation shock
118.	36	Atthi	*Not showing any survival symptoms*	Due to the Translocation shock
119.	208	Mahogany	Healthy	
120.	212	Mahogany	Healthy	
121.	206	Mahogany	*Not showing any survival symptoms*	Due to the Translocation shock
122.	207	Tabeuia Rosia	Healthy	
123.	649	Sihi hunase	*Not showing any survival symptoms*	Due to the Translocation shock
124.	651	Sihi hunase	Healthy	
125.	755	Hebbevu	Healthy	
126.	1424	Honge	Healthy	

Table 3.1: Photos of Translocated Tree Status for OM-2 at Yeshwanthpur Colony Opposite to treatment plant – July to September 2025

Tree No	Tree photograph
207	

208	 GPS Map Camera Check In Bengaluru, Karnataka, India 19, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.03107° Long 77.544868° 26/09/25 12:07 PM GMT +05:30 Google
212	 GPS Map Camera Check In Bengaluru, Karnataka, India 19, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031098° Long 77.544916° 26/09/25 12:08 PM GMT +05:30 Google

651	 GPS Map Camera Check In Bengaluru, Karnataka, India 25, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031385° Long 77.54481° 26/09/25 12:14 PM GMT +05:30 Google
755	 GPS Map Camera Check In Bengaluru, Karnataka, India 186, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032626° Long 77.54499° 26/09/25 02:58 PM GMT +05:30 Google

1424	

3.3 Survival rate

The survival rate of transplanted trees is presented in the following table 3.2.

Table 3.2: Percentage of survival of Transplanted trees – OM2

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	6 / 7	4 / 7	4 / 7	7 / 11	7 / 11	7 / 11	7 / 11
1	85 %	57 %	57 %	63 %	63 %	63 %	63 %

Table 3.2: In continuation of the above table, Percentage of survival of Transplanted Trees - OM 2

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	7 / 11	6 / 11					
1	63 %	54.54 %					

3.4 Conclusion

During this quarter, the survival rate of transplanted trees has reduced from 63 % to 54.54 % compared to the previous quarter. Transplanted trees were 11 no's out of 73 no's and remaining are 62 no's. Only 06 no's of tree show the symptoms of Healthy condition out of 11 numbers.

4.0 Official Memorandum (OM) – 3 Details

BBMP – Forest issued OM-3 dated 17/03/2023 (Lottegollahalli Railway Station to Chikkabanavara Station) with schedule 1 consisting of 47 no's of trees for translocation, 596 no's trees for felling and 135 No's of trees for retaining. Transplanted location identified viz Beside Badminton court opposite to the Treatment Plant, Yeshwanthpur Quarters colony nearby opposite to the treatment plant, Yeshwanthpur, Bengaluru. Soil samples were collected at identified locations and required parameters of soil were tested at the University of Agricultural Science (Gandhi Krishi Vignan Kendra Bengaluru).

This transplantation was done by the experienced agency TMRH, appointed by L & T through GC by reviewing the credentials of proposed agency. At present, only 33 no's of trees were translocated to Yeshwanthpur colony opposite the treatment plant, such that only 14 no's of trees show survival symptoms and remaining trees not showing any symptoms of survival.

Survival of the tree mainly depends on the Translocation of the tree to the identified receptor with necessary arrangements, Architecture of the tree, proper maintenance, acclimatization of the tree to the new soil regime. Survival of the tree showing prompt healthy leaves, sprouts, and some Tree showing premature flowers during the first quarter. However, survival of trees can be expected after one year also such that adjusting to the present soil conditions and survival rate should observed for all the seasons. Methodology adopted for the tree translocation is Root Ball Method as per the UAS, GKVK, guideline 2020. Translocation of trees monitored by K RIDE & GC under the supervision of BBMP Tree officer or Officer deputed by tree officer BBMP.

4.1 Compensatory Afforestation for OM -3

Compensatory Afforestation (CA) compulsory required for both Transplanted Trees and Felling in the project as per the conditions laid down in OM. In this regard K RIDE requested BBMP – Forest to implement compensatory afforestation for 47 Transplanted plus 596 no's felling multiplied by 10 times is equal to 6430 No's. Accordingly, BBMP – Forest selected R R Nagara BBMP Zone, NICE Road for planting.

4.2. Tree Transplantation status for July to September 2025

The following table no. 4.0 highlights the status of Transplanted Trees at Yeshwanthpur Railway Colony opposite to the treatment plant, along compound wall with the status of healthy leaves / sprouts / fresh leaves / not survived / not showing survival symptoms and further photographs attached in the table 4.1 for ready reference. Maintenance period of transplanted tree is 3 years. It's clear evident that out of 33 no's of trees were transplanted, only 14 trees were showing survival symptoms.

Table 4.0: Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – July to September 2025

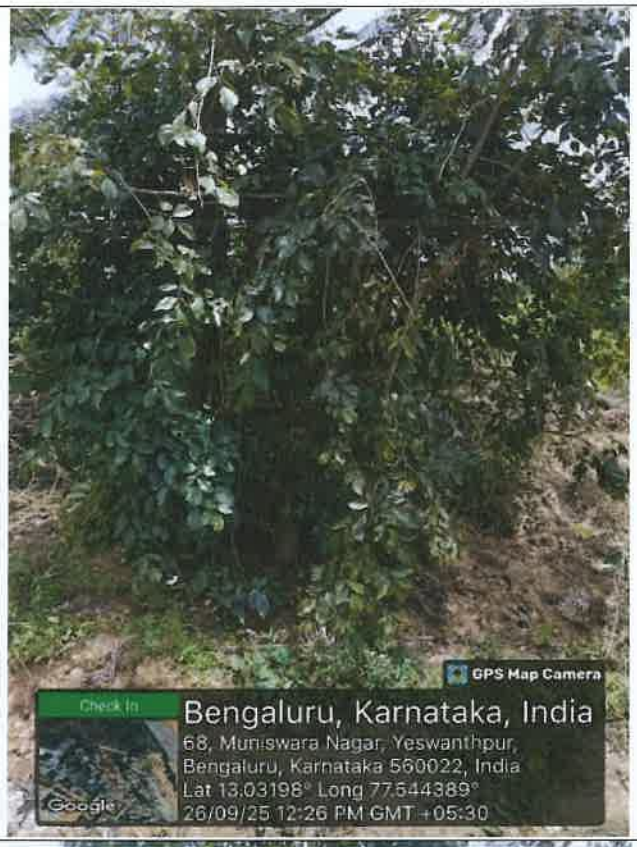
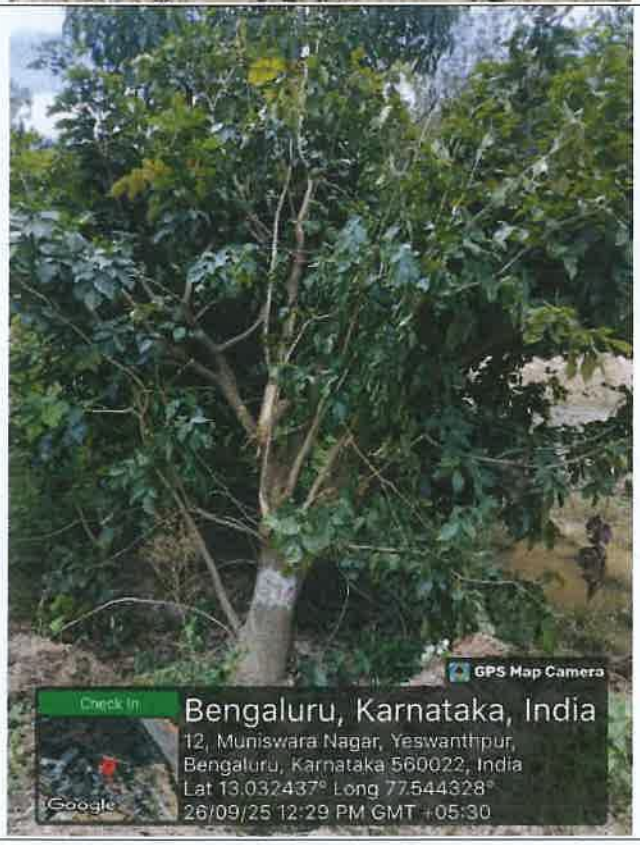
Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
127.	237	Buruga	*Not showing any survival symptoms*	Due to the translocation shock
128.	241	Honge	Healthy Condition	
129.	242	Memosops elangi	*Not showing any survival symptoms*	Due to the translocation shock
130.	243	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock
131.	259	Honge	*Not showing any survival symptoms*	Due to the translocation shock
132.	260	Honge	*Not showing any survival symptoms*	Due to the translocation shock
133.	261	Honge	*Not showing any survival symptoms*	Due to the translocation shock
134.	262	Honge	Healthy leaves were observed	
135.	264	Honge	Healthy Condition	
136.	276	Basavanapadha	Healthy Condition	
137.	280	Tabebuia rosea	Healthy Condition	
138.	344	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock

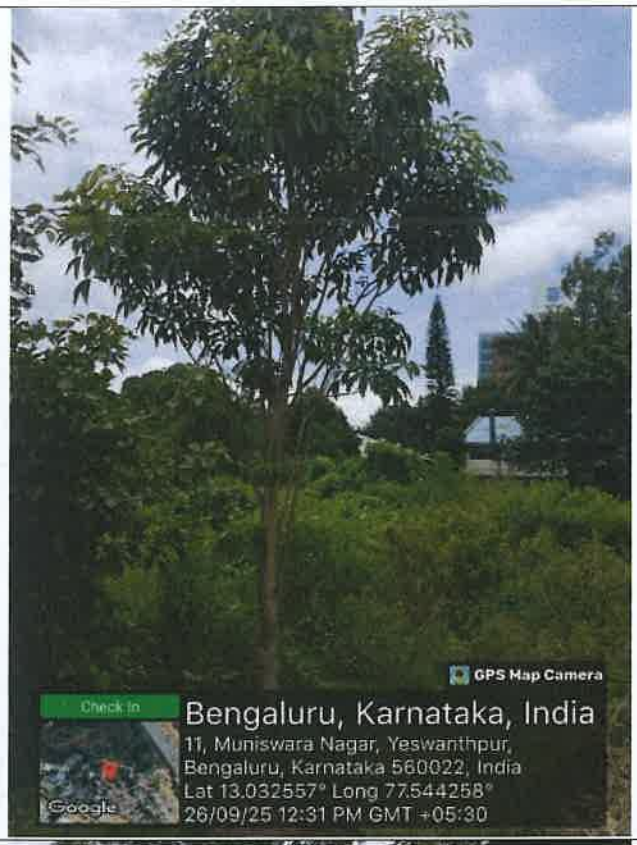
Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
139.	358	Tremma orientalis	*Not showing any survival symptoms*	Due to the translocation shock
140.	362	Atti	*Not showing any survival symptoms*	Due to the translocation shock
141.	586	Rain tree	Healthy Condition	
142.	598	Kakke	*Not showing any survival symptoms*	Due to the translocation shock
143.	599	Kakke	*Not showing any survival symptoms*	Due to the translocation shock
144.	616	Rain Tree	Healthy Condition	
145.	624	Rain Tree	Healthy Condition	
146.	625	Rain tree	Healthy Condition	
147.	650	Rain tree	Healthy Condition	
148.	653	Rain tree	Healthy Condition	
149.	654	Rain tree	*Not showing any survival symptoms*	Due to the translocation shock
150.	667	Rain tree	Healthy Condition	
151.	701	Atti	Healthy Condition	
152.	702	Halasu	*Not showing any survival symptoms*	Due to the translocation shock
153.	768	Kaadu badami	*Not showing any survival symptoms*	Due to the translocation shock
154.	867/1	Sandal	*Not showing any survival symptoms*	Due to the translocation shock
155.	873	Sisso	Healthy Condition	
156.	964	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock
157.	969	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock

Sl No	Tree No	Species	Condition of Tree (Healthy / New Sprouts / Any other)	Remarks
158.	971	Kaadu badami	Healthy Condition	
159.	972	Benjamina	*Not showing any survival symptoms*	Due to the translocation shock

Table 4.1: Photos of Translocated Tree Status for OM-3 at Yeshwanthpur Colony Opposite to treatment plant – July to September 2025

Tree No	Tree photograph
241	

264	 GPS Map Camera Check In Bengaluru, Karnataka, India 68, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.03198° Long 77.544389° 26/09/25 12:26 PM GMT +05:30 Google
276	 GPS Map Camera Check In Bengaluru, Karnataka, India 12, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032437° Long 77.544328° 26/09/25 12:29 PM GMT +05:30 Google

280	 GPS Map Camera Check In Bengaluru, Karnataka, India 11, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032557° Long 77.544258° 26/09/25 12:31 PM GMT +05:30 Google
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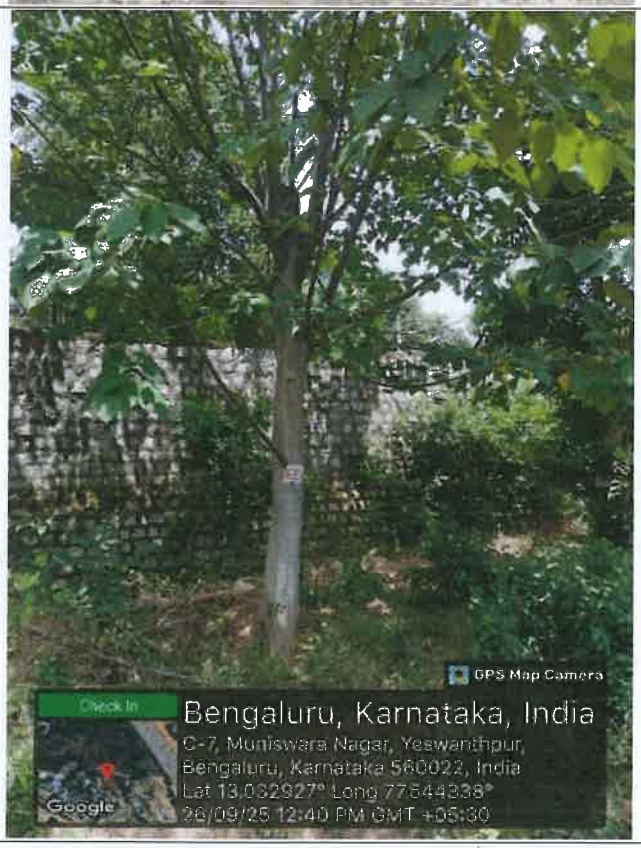
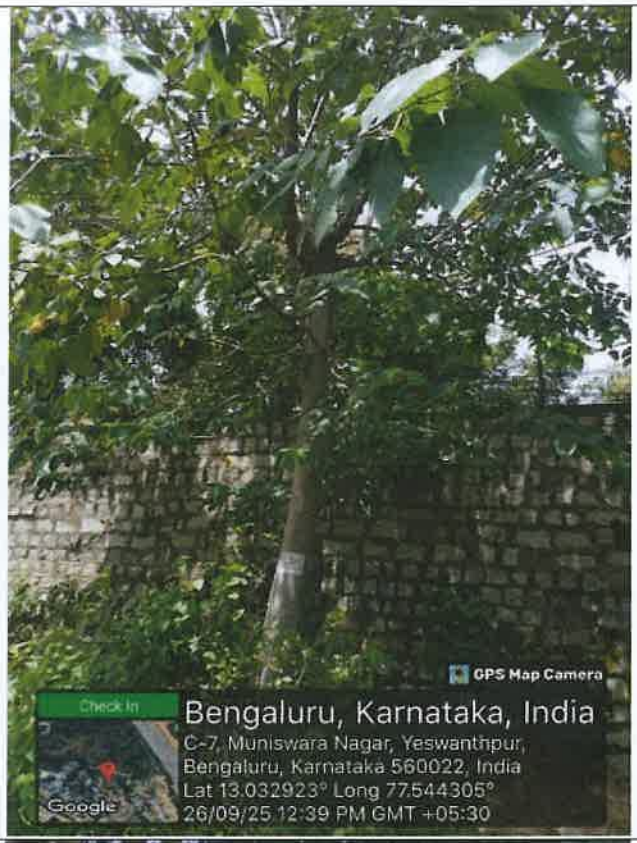
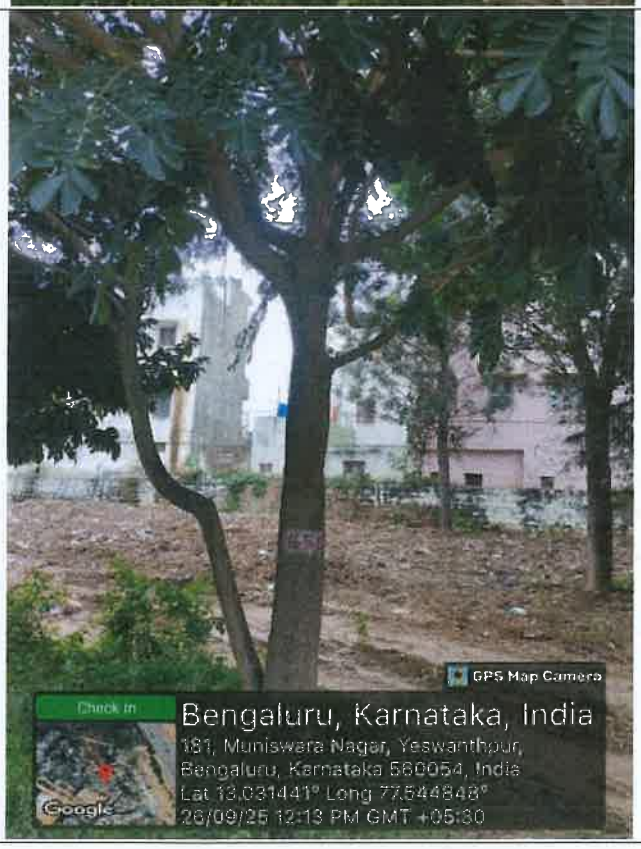
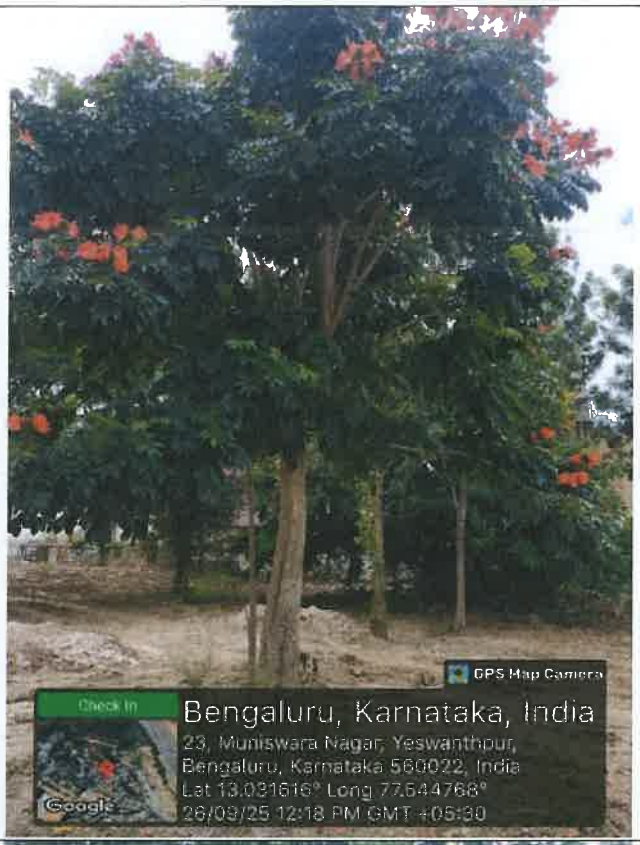
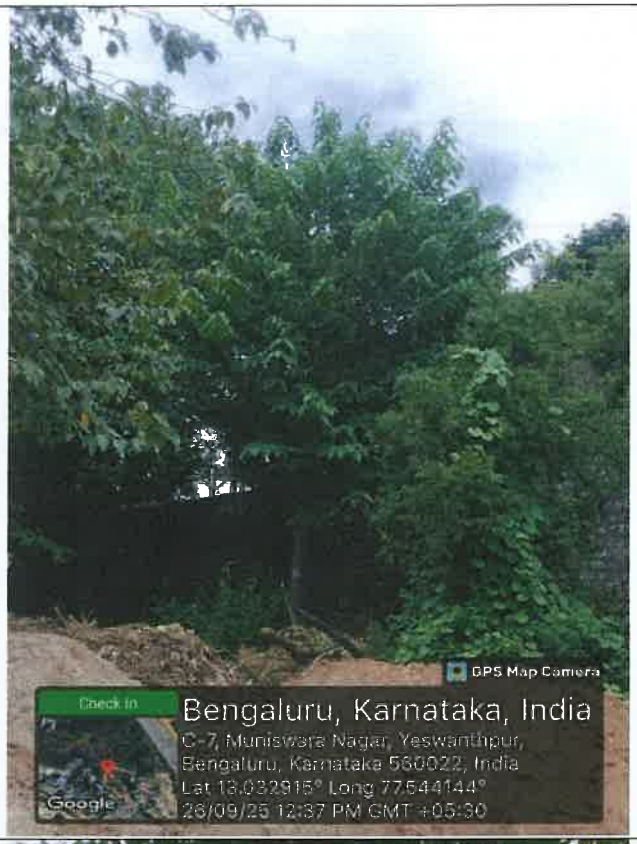
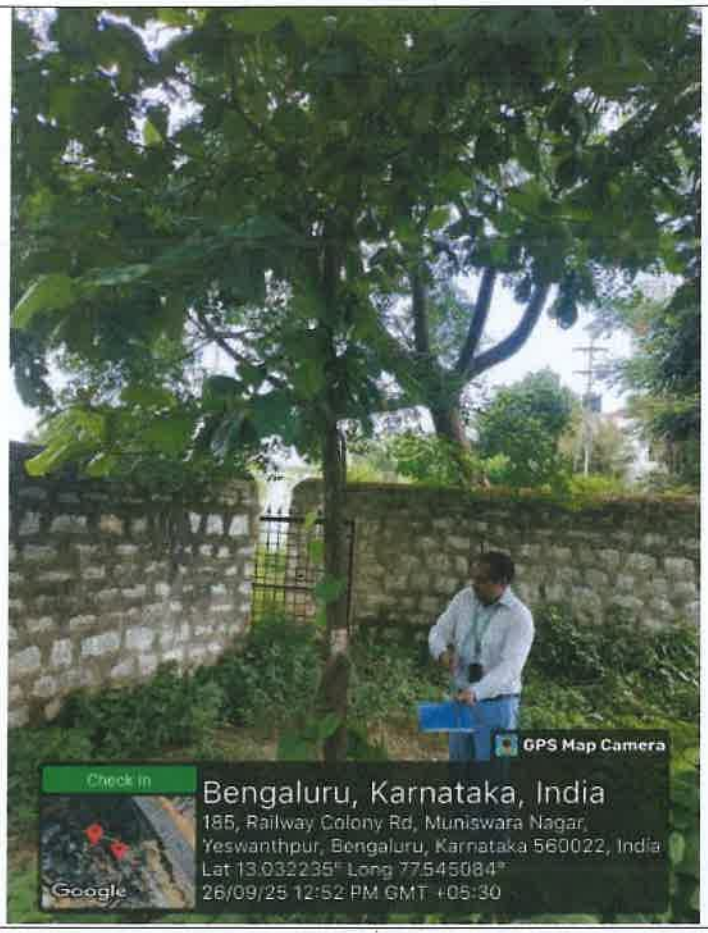
616	 GPS Map Camera Check In Bengaluru, Karnataka, India 11, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032557° Long 77.544134° 26/09/25 12:35 PM GMT +05:30 Google
624	 GPS Map Camera Check In Bengaluru, Karnataka, India C-7, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032927° Long 77.544336° 26/09/25 12:40 PM GMT +05:30 Google

625	 GPS Map Camera Check In Google Bengaluru, Karnataka, India C-7, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032923° Long 77.544305° 26/09/25 12:39 PM GMT +05:30
650	 GPS Map Camera Check In Google Bengaluru, Karnataka, India 181, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560054, India Lat 13.031441° Long 77.544848° 26/09/25 12:13 PM GMT +05:30

653	 GPS Map Camera Check In Bengaluru, Karnataka, India 23, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.031616° Long 77.544768° 26/09/25 12:18 PM GMT +05:30 Google
667	 GPS Map Camera Check In Bengaluru, Karnataka, India 11, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032549° Long 77.544161° 26/09/25 12:34 PM GMT +05:30 Google

701	 GPS Map Camera Check In Google Bengaluru, Karnataka, India C-7, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032915° Long 77.544144° 26/09/25 12:37 PM GMT +05:30
873	 GPS Map Camera Check In Google Bengaluru, Karnataka, India C-7, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032951° Long 77.544405° 26/09/25 12:42 PM GMT +05:30

971	 GPS Map Camera Check in Bengaluru, Karnataka, India 185, Railway Colony Rd, Muniswara Nagar, Yeswanthpur, Bengaluru, Karnataka 560022, India Lat 13.032235° Long 77.545084° 26/09/25 12:52 PM GMT +05:30 Google

4.3 Survival rate

The survival rate of transplanted trees is presented in the following table 4.2.

Table 4.2: Percentage of survival of Transplanted trees – OM 3

Sl No	July to September 2023	October to December 2023	January to March 2024	April to June 2024	July to September 2024	October to December 2024	January to March 2025
Survived v/s Transplanted	-	7 / 33	7 / 33	19 / 33	18 / 33	18 / 33	16 / 33
1	-	21 %	21 %	57 %	57 %	54 %	48 %

Table 4.2: In continuation of the above table, Percentage of survival of Transplanted trees – OM 3

Sl No	April to June 2025	July to September 2025	October to December 2025	January to March 2026	April to June 2026	July to September 2026	October to December 2026
Survived v/s Transplanted	15 / 33	14 / 33					
2	45 %	42.42 %					

4.4 Conclusion

During this quarter, the survival rate of transplanted trees has reduced from 45 % to 42% compared to the previous quarter. Transplanted trees were 33 no's out of 47 no's, and the remaining are 14 no's. Only 14 no's of tree show the symptoms of Healthy Condition out of 33 numbers.

Vinod. P.R

Resident Engineer-Environment

General Consultants-K.RIDE

EGIS RAIL-AECOM-LEA BENGALURU GC/BSRP

1. Compensatory Afforestation Under BBMP (Now GBA)

K-RIDE has requested with BBMP (Now GBA) for undertaking Compensatory Afforestation. As part of this initiative, a total of 34,220 trees have been planted for Corridor–2 and are being maintained by BBMP (Now GBA) through designated contractors for a period of three years. Similarly, 20,780 trees have been planted for Corridor-4 under the Compensatory Afforestation program in the Mahadevapura Zone.

Table 1: Current status of Compensatory Afforestation undertaken by BBMP (Now GBA)

Corridor	Official Memorandum No	CA as per OMs	CA Completed as on Aug 2025	Location
2	DCF/PR/1642/2022-23 Dated:27.12.2022	3,260	3,260	GKVK Campus
2	DCF/PR/1952/2022-23 Dated:24.02.2023	13,070	13,190	Dasarahalli Zone
2	DCF/PR/2042/2022-23 Dated:17.03.2023	9,890	9,890	NICE Road
2	DCF/PR/356/2024-25 Dated:29.05.2024	7,880	7,880	Bommanahalli Zone
4	DCF/PR/1903/2024-25 Date:21.01.2025	28,050	20,780*	Mahadevapura Zone
	Total	**62,150**	**55,000**	

***-Note-** There is a balance of 7,150 trees which needs to be compensated, out of which planting of 2,000 Nos of tress are under progress by BBMP (Now GBA) in Mahadevapura Zone.

The remaining 5,150 trees are already planted by BDA in NPK Layout. All the locations of compensatory afforestation are geotagged and some of the photos has be shown below.

Location of CA:

1. **GKVK:** A total of 3260 trees are planted in GKVK Campus as part of CA.

Compensatory Afforestation at GKVK- Cluster 1 & 2

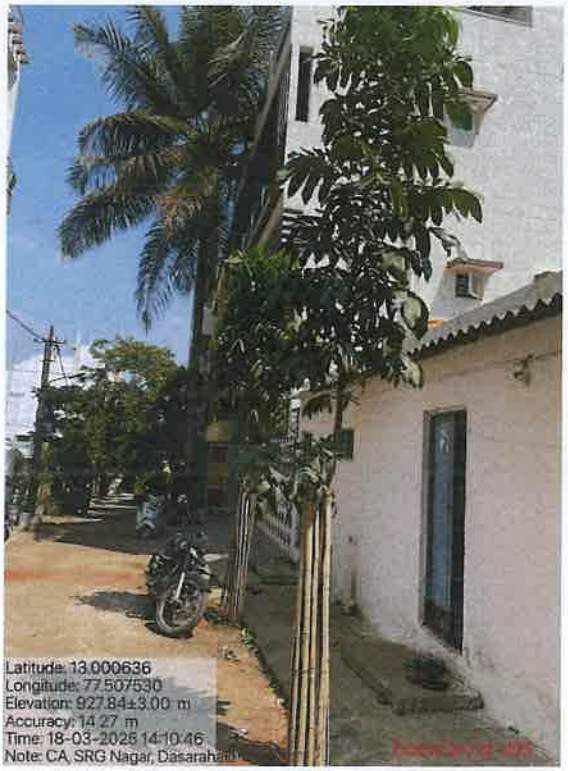
Compensatory Afforestation at GKVK- Cluster 3,4 & 5

2. **Dasarahalli:** A total of 13070 trees are planted in Dasarahalli zone as part of CA.

Compensatory Afforestation at Dasarahalli Zone – Cluster 1,2,3

Compensatory Afforestation at Dasarahalli Zone – Cluster 4

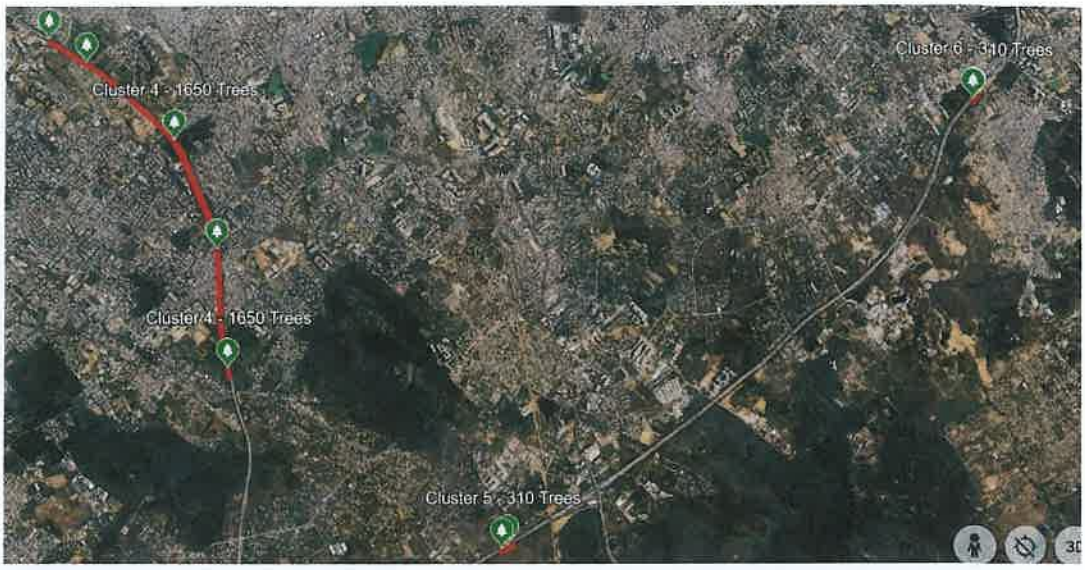
Compensatory Afforestation at Dasarahalli Zone – Cluster 1,2,3



3. **NICE Road:** A total of 9890 trees is planted in NICE Road as part of CA.

Compensatory Afforestation at NICE Road (CA1)

Compensatory Afforestation at NICE Road –Cluster 1,2 & 3 (CA2)



Compensatory Afforestation at NICE Road –Cluster 3,4 & 5 (CA2)

Vinod. P.R
Resident Engineer-Environment
General Consultants-K.RIDE

1. Compensatory Afforestation Under BDA

K-RIDE has entered into a Memorandum of Understanding (MoU) with BDA for undertaking Compensatory Afforestation. As part of this initiative, a total of 30,00 trees have been planted for Corridor–4 and are being maintained by BDA through designated contractors for a period of three years.

Table 1: Current status of Compensatory Afforestation undertaken by BDA

Corridor	Official Memorandum No	CA as per OMs	CA Completed as on Aug 2025	Location
4	A9/TREE CUTTING/CR-294/2022-23 Date:27.10.2023 & 08.08.2023	10,710	10,710	NPK layout- • 10,200 trees in Block-1,2,3, • 510 trees in Block-4 (Part-A)
4	DCF/PR/1903/2024-25 Date:21.01.2025	5,150	5,150*	NPK Layout- • 1,290 Trees in Block-4(Part A), • 1,800 trees in Block-4 (Part B) • 2,060 trees in Block-5
2	**DCF/GBA/PR. 02/2025-26 Date:04.10.2025**	**1,020**	**1,020**	**NPK Layout-** • **640 trees in Block-5** • **380 trees in Block-6 (Part-A)**
-	**Reserved for Future OMs**		**13,120**	
	Total	**16,880**	**30,000**	

***-Note-** With reference to Compensatory Afforestation of OM No: DCF/PR/1903/2024-25 Date:21.01.2025, a total of 28,050 Nos of trees needs to be planted, out of which 20,780 is already planted, 2,000 trees planting is under progress by BBMP (Now GBA) at Mahadevapura Zone. For the remaining 5,150 trees are planted in NPK Layout by BDA in Block-4 & 5 as per the above mentioned table.

With reference to the OM received from BBMP (now GBA) on 04.10.2025, K-RIDE has already completed the Compensatory Afforestation in Nadaprabhu Kempegowda layout in Block-5 and Block-6 (Part-A) as per the above table.

The remaining 13,120 Nos of Trees is reserved for future OMs.

The details of block wise Compensatory Afforestation at Nadaprabhu Kempegowda Layout (NPKL) is as shown below.

Table 2: Block-wise Compensatory Afforestation details

Sl. No.	NPK Layout	No of Saplings planted
1	Block-1 (Part A)	2,700
2	Block-1 (Part-B)	2,100

Sl. No.	NPK Layout	No of Saplings planted
3	Block - 2	2,700
4	Block - 3	2,700
5	Block – 4 (Part-A)	1,800
6	Block – 4 (Part-B)	1,800
7	Block – 5	2,700
8	Block – 6 (Part-A)	2,700
9	Block – 6 (Part-B)	2,700
10	Block – 7	2,700
11	Block – 8 (Part-A) (Block- 9)	2,700
12	Block – 8 (Part-B)	2,700
	Total	**30,000**

All the Compensatory Afforestation area have been geo-tagged to ensure future reference and maintenance of the trees.

Some of the photos of the CA area is as shown below.

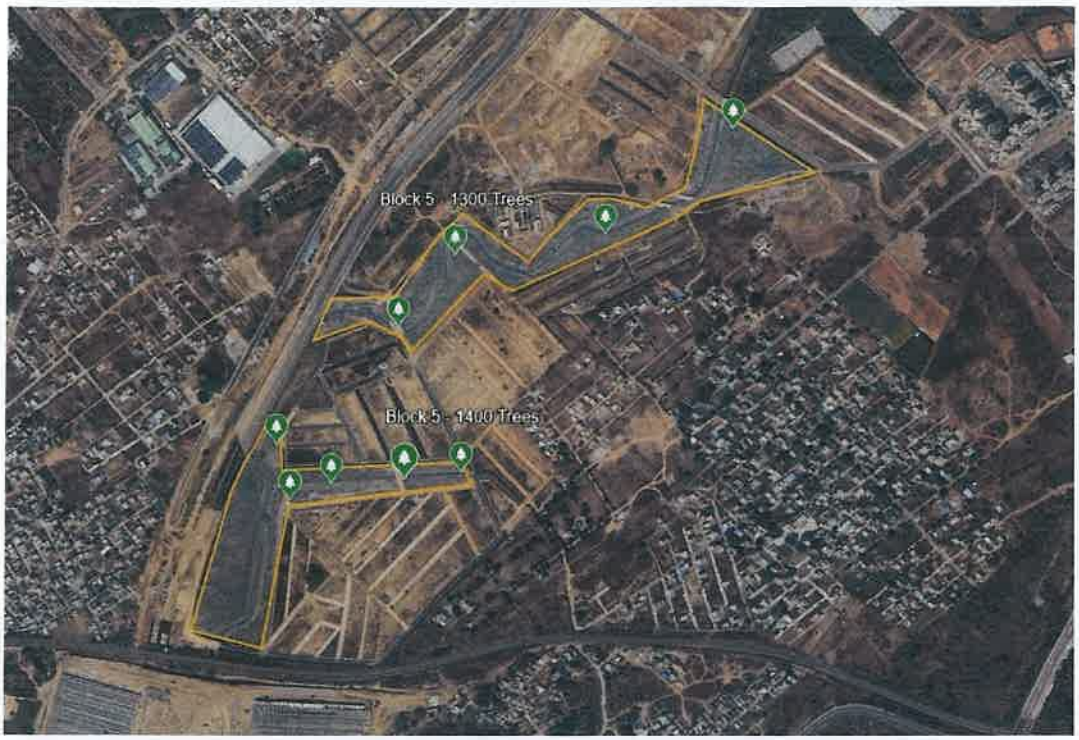
1. **NPK Layout:** A total of 22650 trees is planted in NPK Layout as part of CA.

Compensatory Afforestation at NPKL – Block 1

Compensatory Afforestation at NPKL – Block 2

Compensatory Afforestation at NPKL – Block 3

Compensatory Afforestation at NPKL – Block 4



Compensatory Afforestation at NPKL – Block 5

Compensatory Afforestation at NPKL – Block 6

Compensatory Afforestation at NPKL – Bloc 7

Compensatory Afforestation at NPKL – Block 8

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