BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
Original Application No.1219/2024

In the Matter of:

News Item titled "KPSCB directs BBMP to redirect sewage flow in Kodichikkanahalli" appearing in The Hindu dated 18.09.2024.

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Date : 23.02.2026

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Reply on behalf of the Respondent No.1 - Bruhat Bengaluru MahanagaraPalike

MOST RESPECTFULLY SUBMITTED:

1. The present proceedings have been initiated by this Hon'ble Tribunal based on the above-mentioned newspaper article. The article referred to oral complaints from residents which led to Karnataka State Pollution Control Board (KSPCB) directing the storm-water drain division of Bruhat Bengaluru Mahanagara Palike ("**BBMP**") to divert the flow of sewage from a storm-water drain attached to Vakil Marina, a housing society in Kodichikkanahalli near Madiwala lake into the Bangalore Water Supply and Sewerage Board's ("**BWSSB**") underground drainage.

2. On 15.05.2025, Greater Bangalore Authority was established, replacing BBMP. BBMP continued to function during the transition phase until the new Authority became fully operational on 02.09.2025. On 28.11.2025, this Hon'ble Tribunal substituted BBMP with GBA.

3. Accordingly, after checking the place of complaint, a letter has been written from the BBMP to the Executive Engineer, South-1 Division, BWSSB, stating that it is an offence to discharge sewage water into the lake and storm water drains at the mentioned place, and as per Section 72 of the Bangalore Water Supply and Sewerage Corporation Act, 1964, it is prohibited to discharge sewage water into the storm-water drains sewage water directly from residential/commercial

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ಬೊಮ್ಮನಹಳ್ಳಿ ವಿಭಾಗ
ದಕ್ಷಿಣ ನಗರ ಪಾಲಿಕೆ.

buildings into the canals, water canals and water bodies and have been asked to submit a report.

4. At present Bommanahalli division, South zone-2, Bangalore South City Corporation of Greater Bangalore Authority is maintaining the drains.

5. In view of the directions issued by this Hon'ble Tribunal *vide* order 04.10.2024, the following steps have been taken to prevent sewage into the storm water drain:

   a. The rainwater drainage system consists of Puttenahalli lake Outlet Drain, Sarakki Lake Kodi Canal, Arakere Lake Outlet Drain,Hulimavu Lake Kodi Canal which flow together near Madiwala Lake and join Agara Lake via Kodichikkanahalli and Silkboard. The proposed rainwater drainage system is mentioned as K-209 in the master plan.

   b. The Catchment area is 23.17Sqm, and according to the rainfall data, hydraulic design, 153.9 Cusecs of rainwater should flow in the canal at the proposed Kodichikkanahalli location (chainage 5100 meters).

   c. Accordingly, retaining wall has been constructed on both sides of the canal, designed according to the amount of water entering the StormWater Channel, and necessary measures are being taken to prevent the water flowing in the canal from flowing into the adjacent areas and measures are taken to avoid flooding such as desilting regularly.

   d. BBMP is the authority responsible for regular maintenance of storm water drain. The silt accumulated in the storm water drain is being desilted four times in a year under the annual maintenance work,

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ನಗರ ಪಾಲಿಕೆ.

including solid waste materials such as silt, and necessary measures are being taken to prevent any flood damage during the rainy season. True copy of the photographs are attached as **Annexure A-1**

6. It is submitted that BBMP is taking necessary measures for regular maintenance of drains.
7. It is further submitted that a retaining wall has been constructed surrounding the canal because to control and divert the flow of waste water (sewer water) coming into the Madiwala lake and also at few locations retaining wall level is reduced to certain heights to allow the inflow of rain water into lakes during rainy seasons.
8. BBMP, craves leave of this Hon'ble Tribunal for filing additional reply, if required, in future.
9. In light of the above submission, it is respectfully submitted that BBMP (GBA), shall abide by any order(s) or direction(s) passed by this Hon'ble Tribunal in the instant Application.

Through Respondent No. 1

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬೊಮ್ಮನಹಳ್ಳಿ ವಿಭಾಗ
ಬೆಂಗಳೂರು ದಕ್ಷಿಣ ನಗರ ಪಾಲಿಕೆ.

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AFFIDAVIT

I, Sri Ravi, s/o Late H Dasaiah, aged about 57 years, working as Executive Engineer, Bommanahalli Division, Bengaluru South City Corporation, Bengaluru 560068 hereby solemnly affirm and state and oath as follows:

1. That I am working as the Executive Engineer, Bommanahalli Zone of Bengaluru South City Corporation under Greater Bengaluru Authority and the authorised representative of Bengaluru South City Corporation in the above petition and as such I am fully conversant with the facts and circumstances of this case, hence competent to swear this affidavit.

2. That I have gone through the contents of the accompanying Reply which are true and correct to the best of my knowledge and no part of it is false and nothing material has been concealed there from. The annexures are true copy of their original. That the facts stated therein are based on the instructions given to the Advocate.

3. That the facts stated in the above affidavit are true and correct and nothing material has been concealed there from.

Verified at Bgaur ~~on~~ this the 23 day of Feb, 2026

Executive Engineer
Bommanahalli Division
Bangalore South City Corporation
DEPONENT

Verification

I deponent above-named sate that this is my name and signature, and what is stated in paragraphs 1 to 3 are true and correct as of my knowledge and belief. No material facts have been concealed.

Place: Bgaur

Date: 23/2

Executive Engineer
Bommanahalli Division
Bangalore South City Corporation
DEPONENT

SWORN TO BEFORE ME
23/2/2026
CHANDRASHEKARAIAH. S
Advocate & Notary
No. 9/7, Kempegowda Nilaya
3rd Cross, Muthurayaswamy Extension
Sunkadakatte, Bangalore-560091

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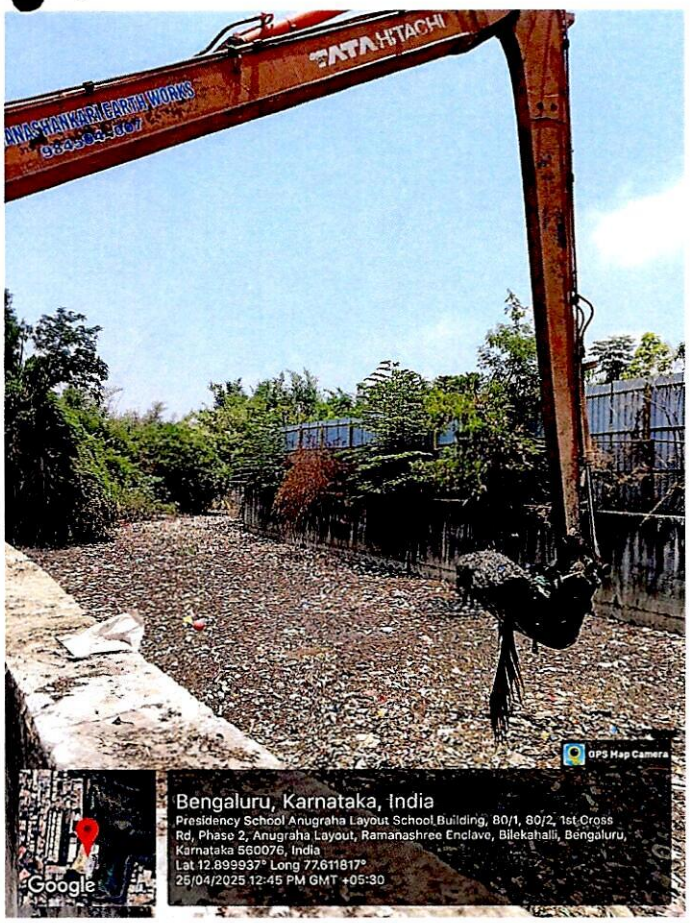
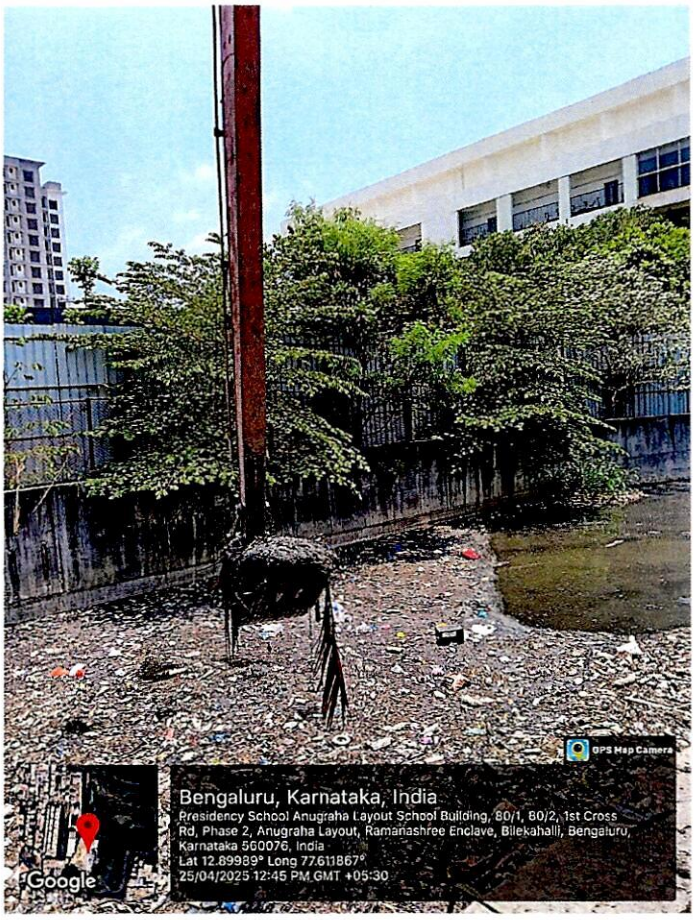
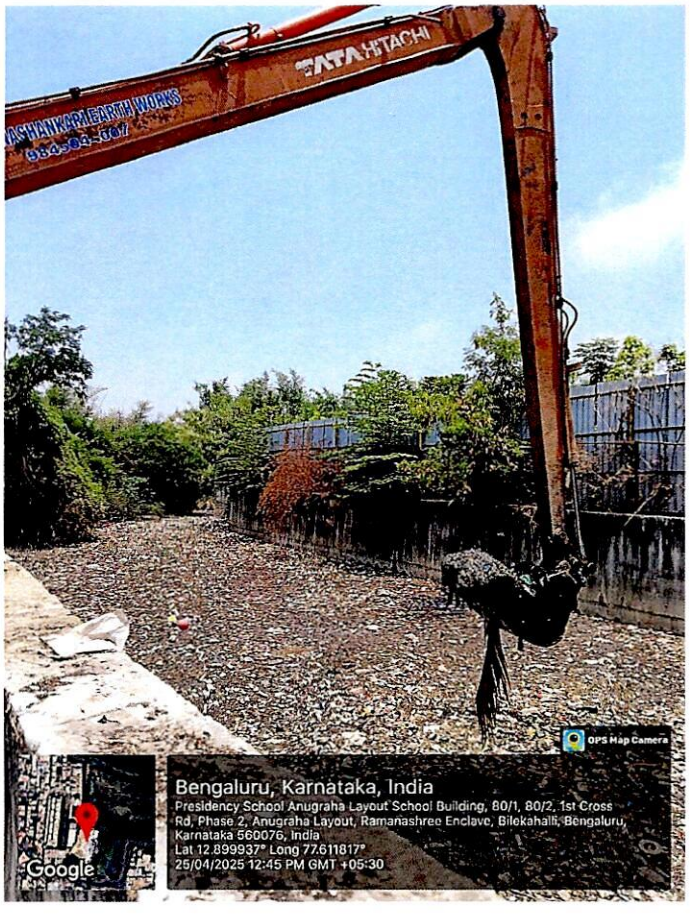
Reg. No.....192 Date 23/2/2026

ANNEXURE A-1 79







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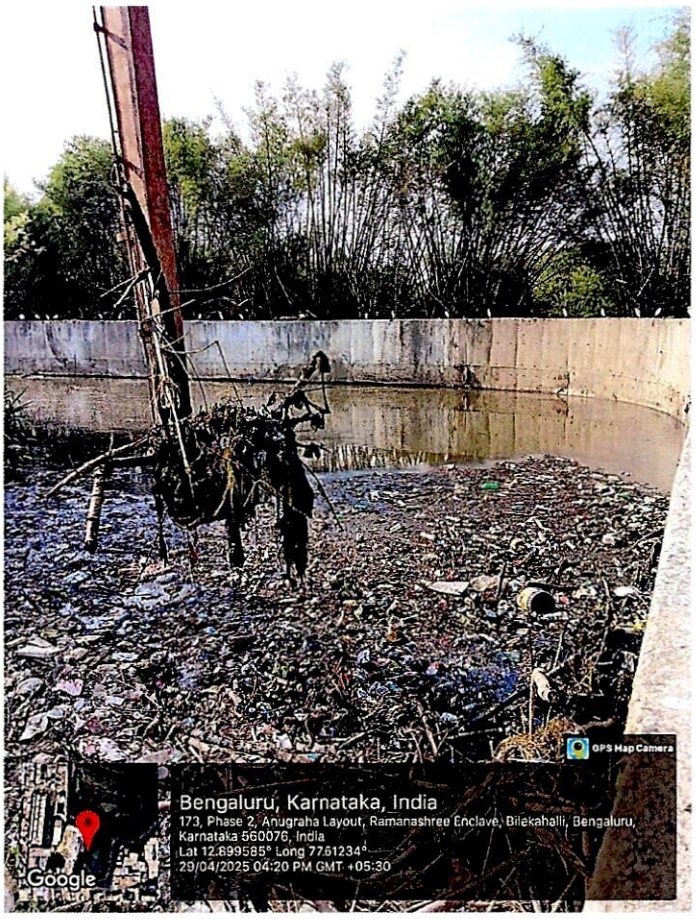
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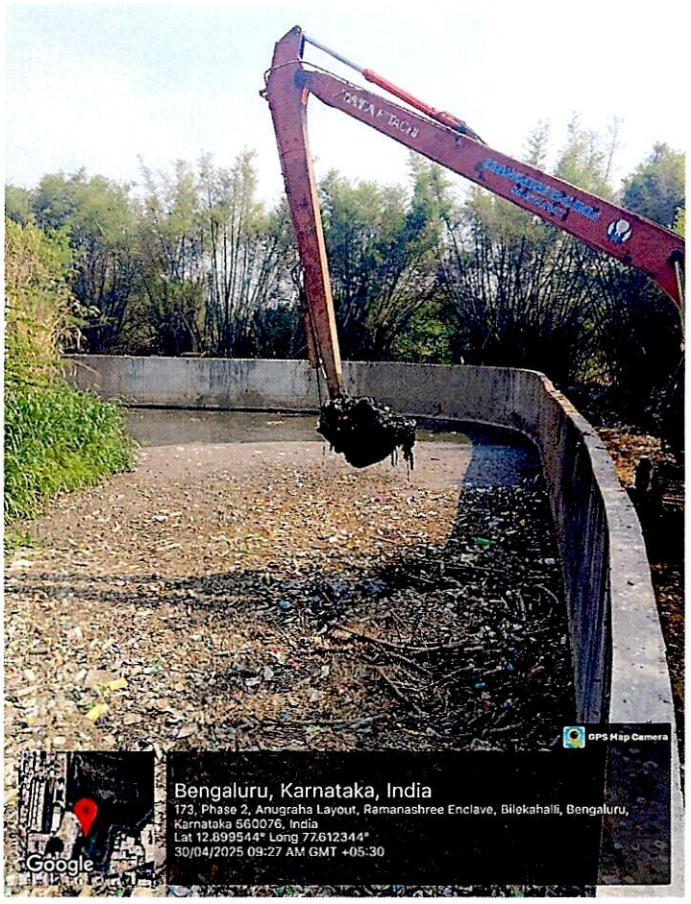
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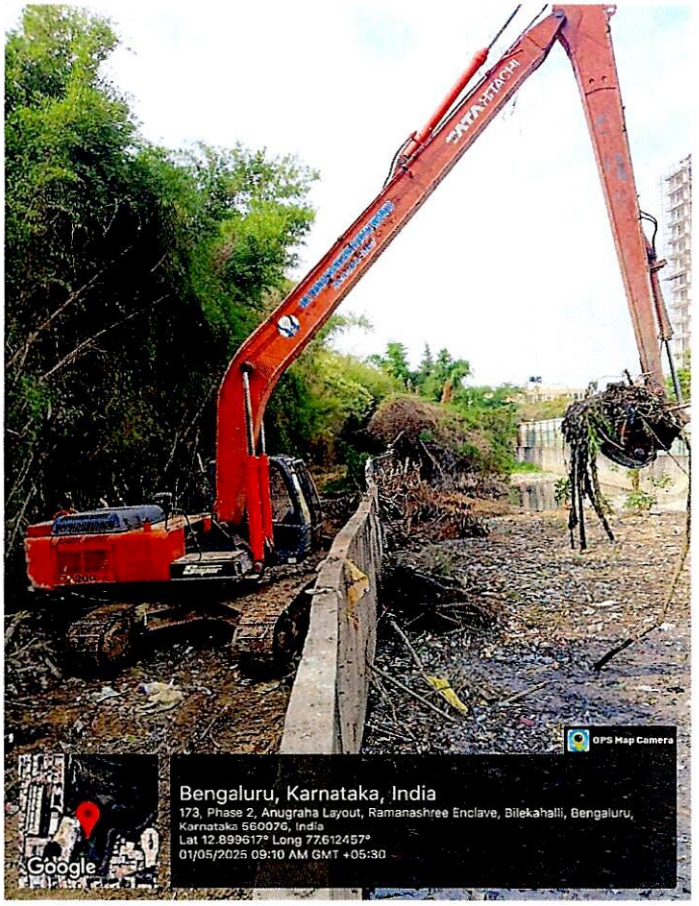
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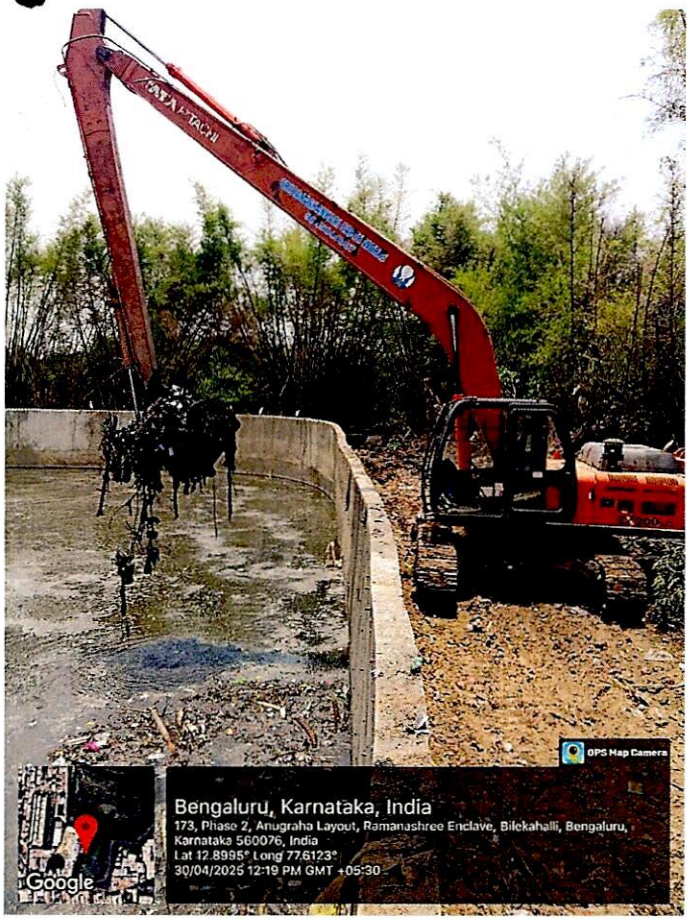
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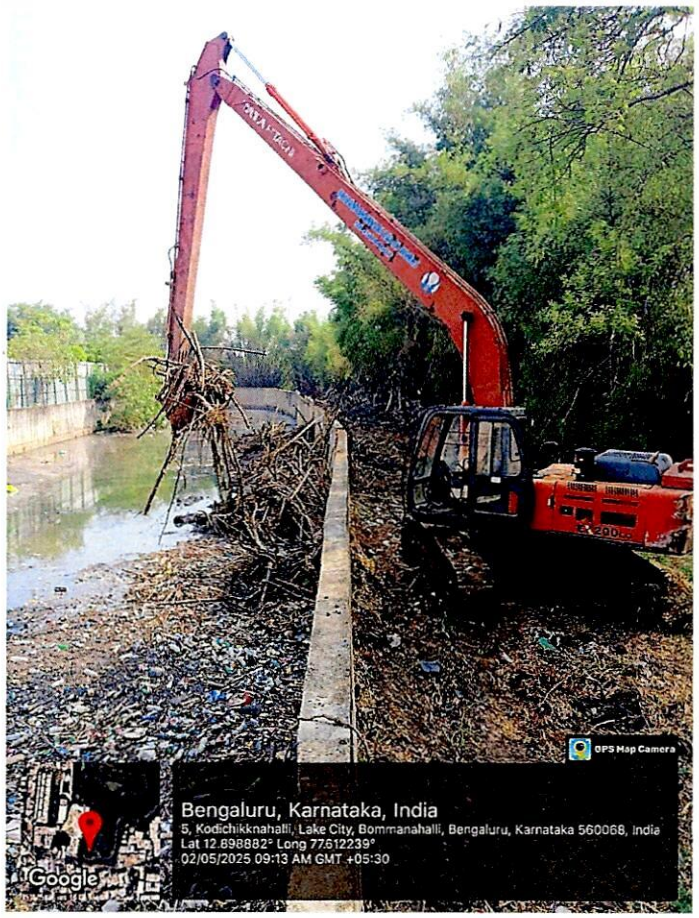
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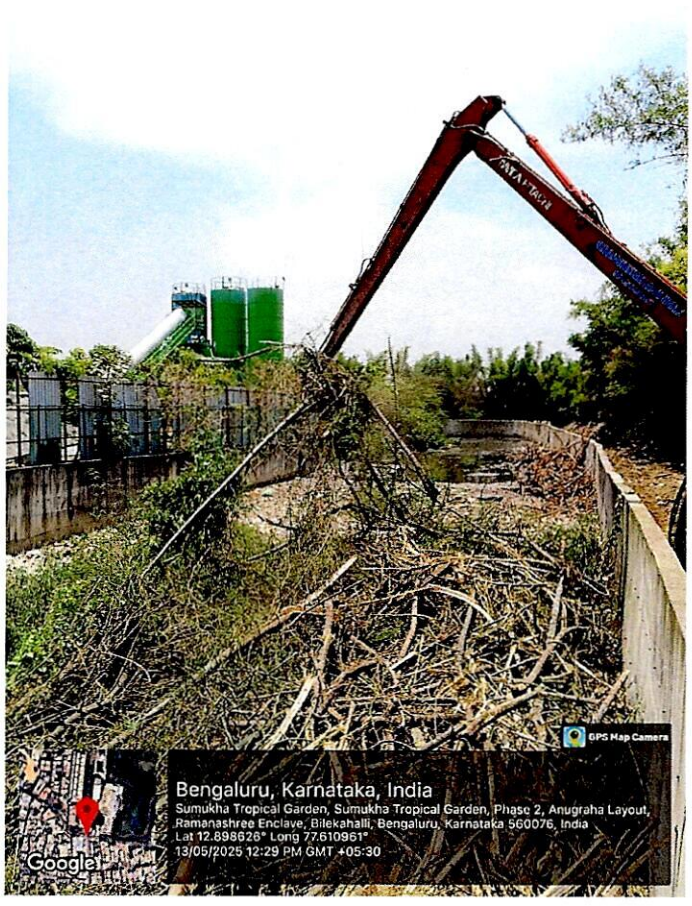
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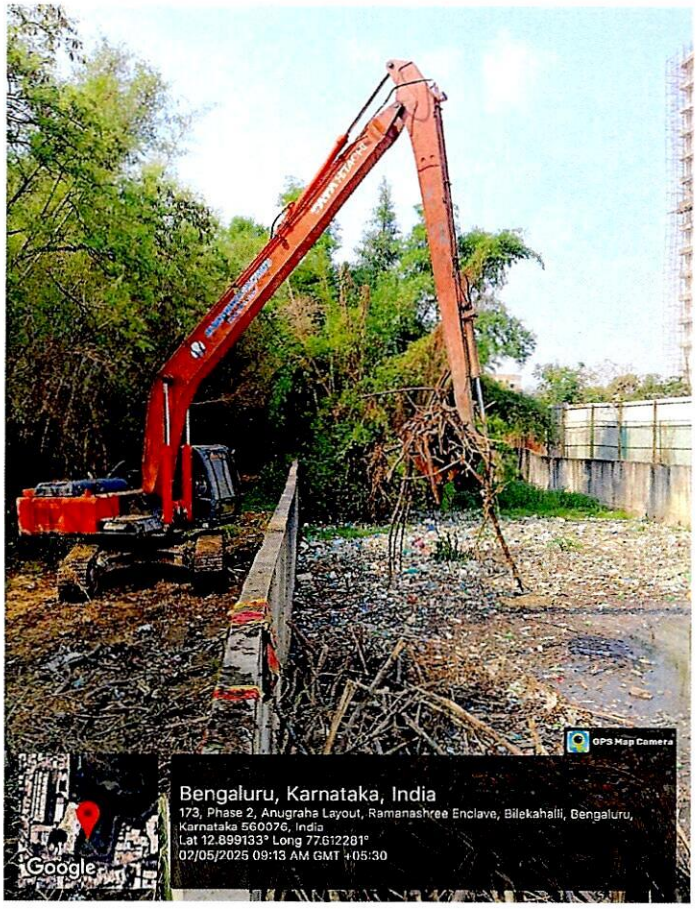
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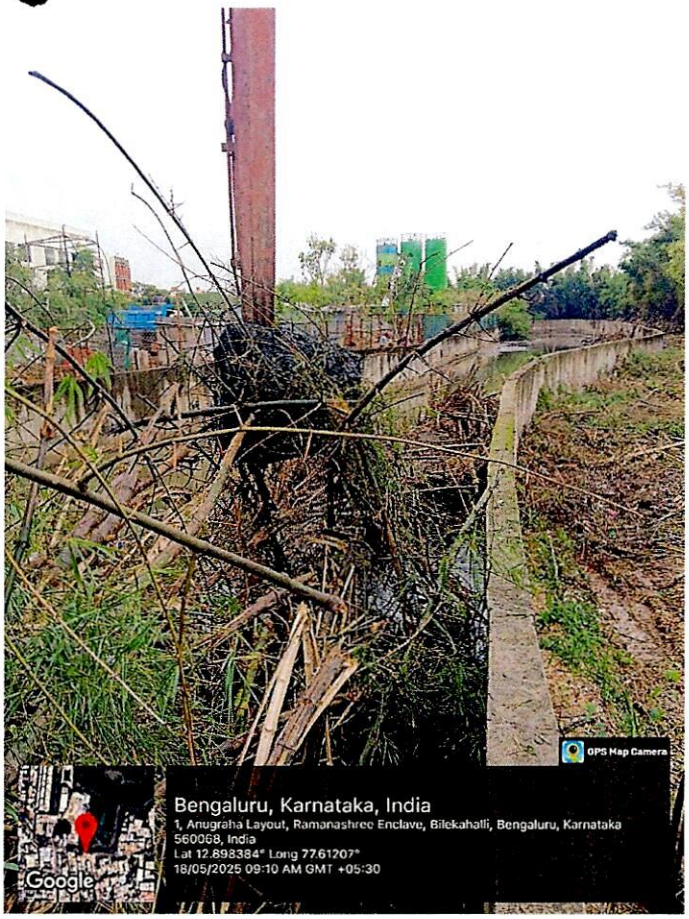
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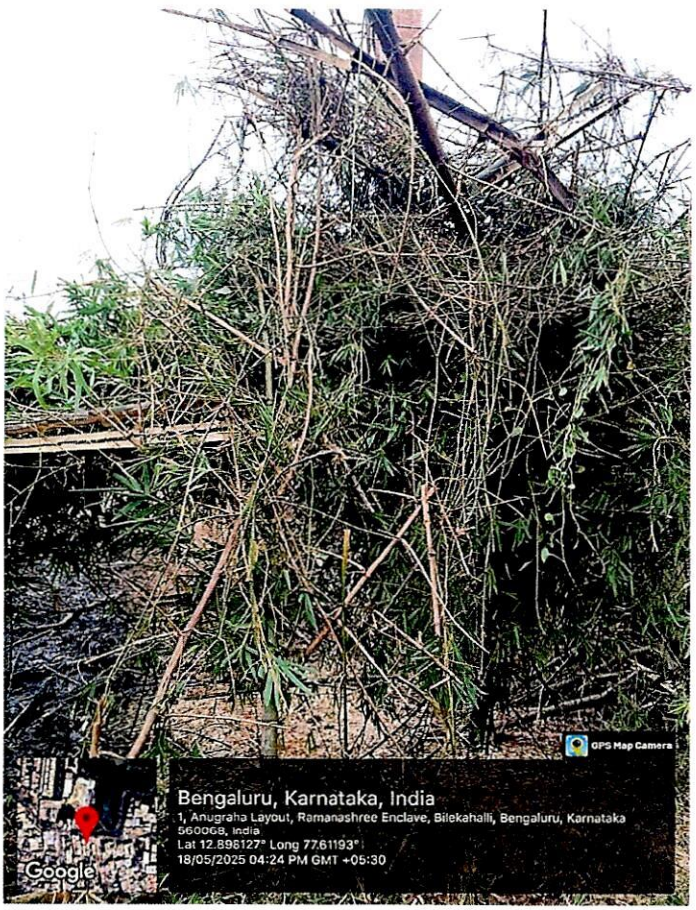
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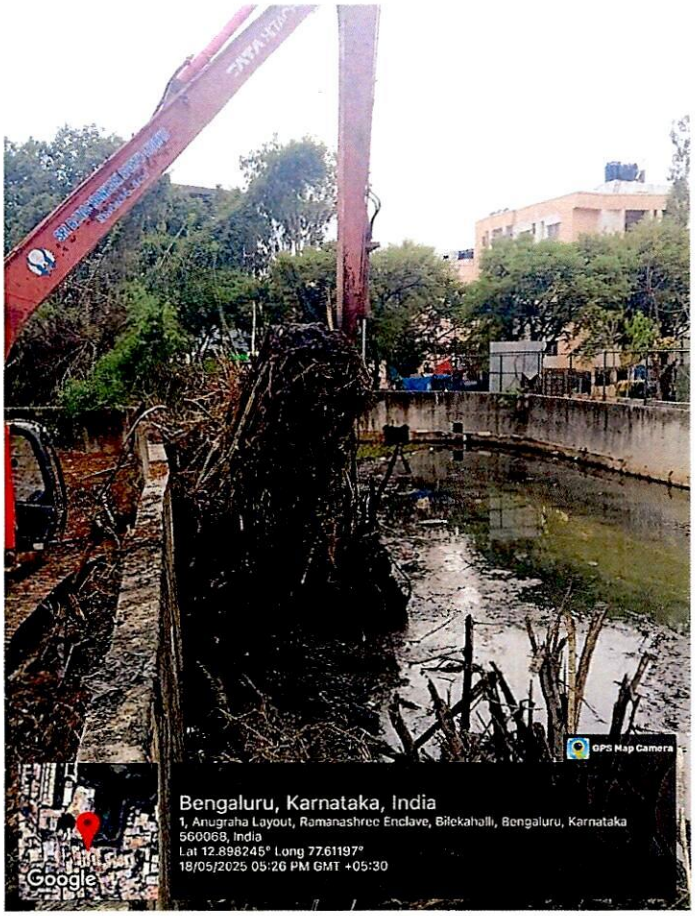
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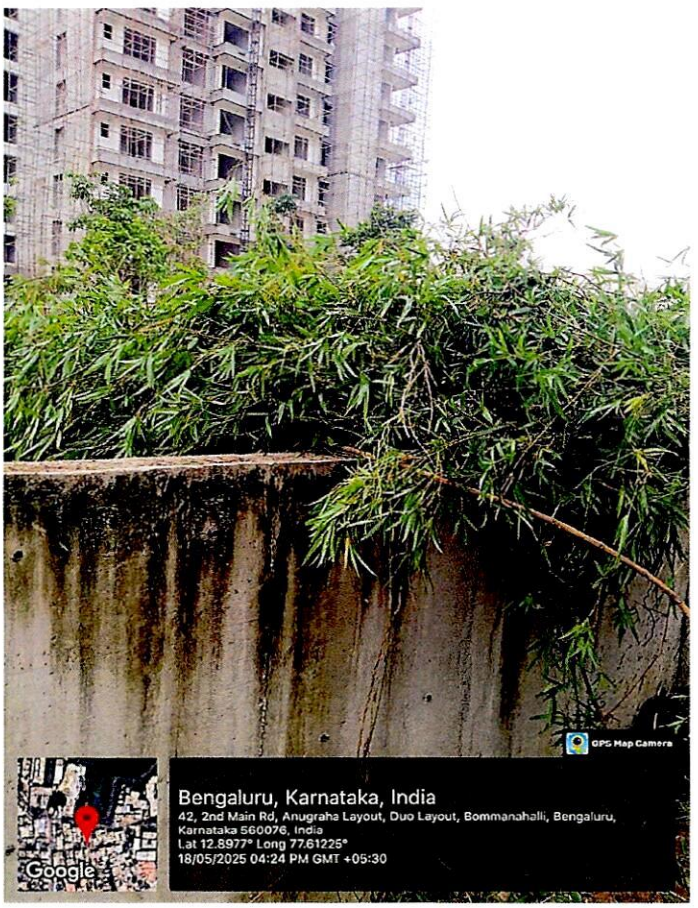
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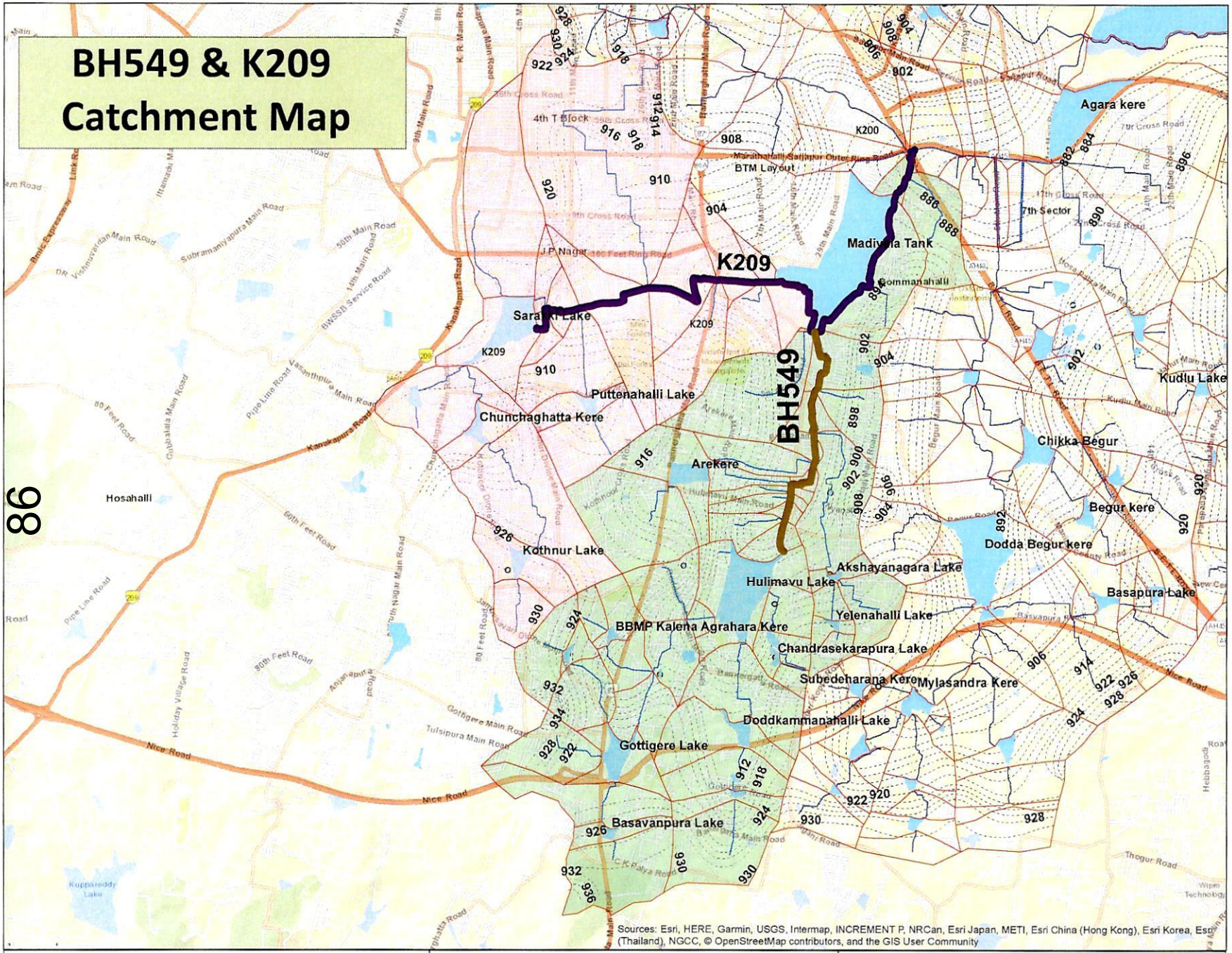
BH549 & K209 Catchment Map



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12

N

Legend

- BH549
- K209
- Contour
- Drains
- BH549
- K209
- Tank
- Microwatershed

CONSULTANT-
J N Projects Pvt. Ltd.

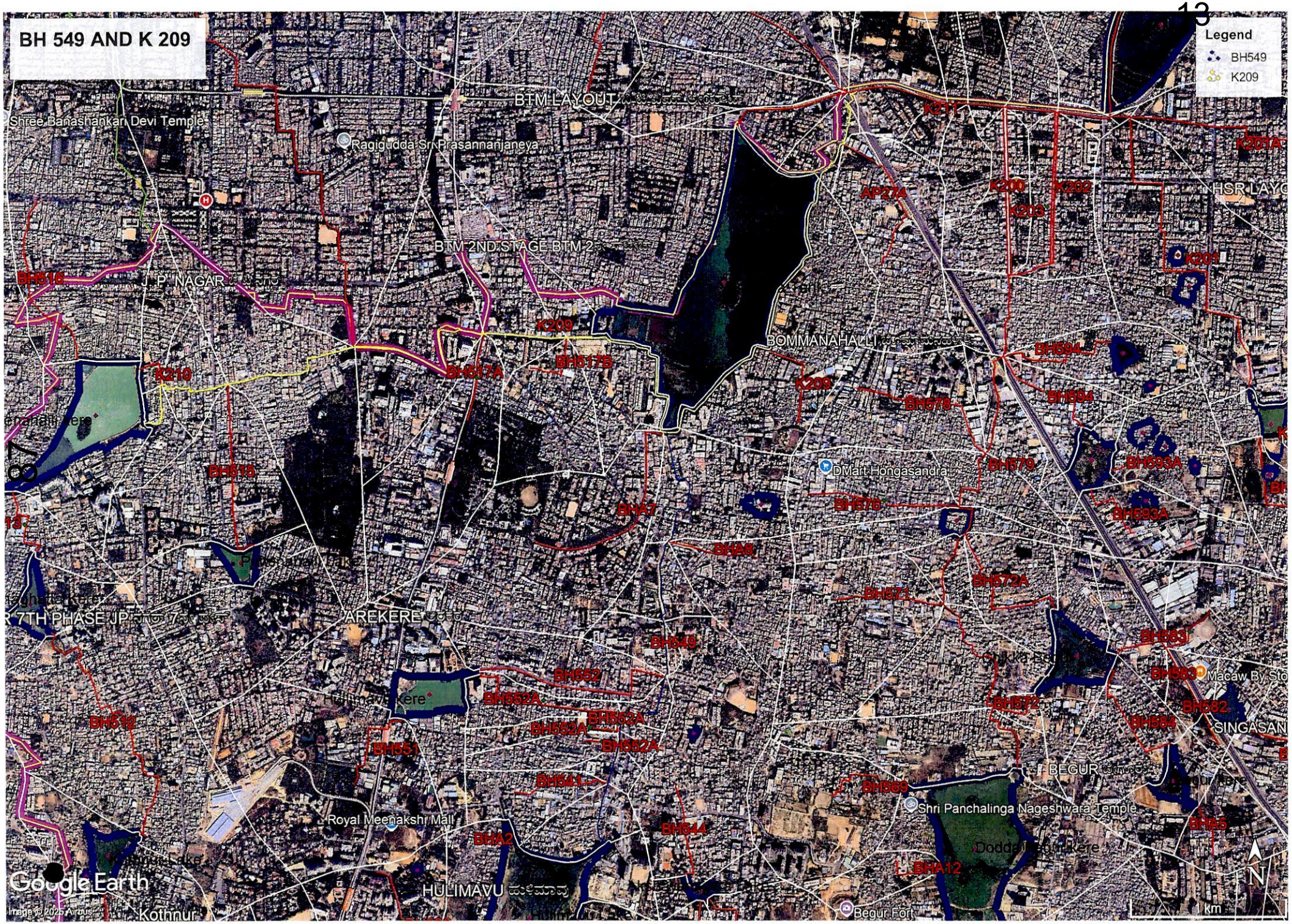
CLIENT - BBMP

Bruhat Bengaluru Mahanagara Palike

1 cm = 428 m

0 370 740 1,480 2,220 Meters

ASST. EXECTUVE ENGINEER, SWD, BBMP	EXECUTIVE ENGINEER, SWD, BBMP	CHIEF ENGINEER, SWD, BBMP


BH 549 AND K 209
Legend
BH549
K209
BTM LAYOUT
Shree Banashankari Devi Temple
Ragigudda Sri Prasannanjaneya
BTM 2ND STAGE BTM 2
J. P. NAGAR
BOMMANAHALLI
DMart Hongasandra
AREKERE
7TH PHASE JP
Royal Meenakshi Mall
HULIMAVU
Kothnur
Shri Panchalinga Nageshwara Temple
BEGUR
Begur Fort
Macaw By Sto
SINGASAN
HSR LAYO
K209
K210
K211
K200
K202
K203
K201
K201A
AP274
BH516
BH517A
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BH552
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BH551
BH541
BH544
BHA2
BHA12
BH572
BH583
BH582
BH584
BH569
BHA5
BH512
BH515
Google Earth
Image © 2025 Airbus
1 km
N

HYDRAULIC DESIGN FOR BH579 FOR 5 YEAR RETURN PERIOD

DATA	
Total Catchment area (Sq.km)	23.17
Drain ID	BH 549 & K 209
Travelling length (m)	5500.00
From Chainage	0.00
To Chainage	7500.00
Type of land cover	Open Area
Impermiability factor (c)	0.8
Existing Depth (in m)	2.00
Existing width (in m)	6

1 Slope Calculation:

Elevation at Catchment Starting =	910.000
Elevation of Drain at Starting =	890.000
Travelling length =	5500.000

$$\text{Slope (S)} = \frac{910.000 - 890.000}{5500.000}$$

Slope (S) = 0.003636364 i.e, 1 in 275.00

Provide a slope of 1 in 275.00

2 Time of Concentration (Tc)

Length (L) is taken from furthest point to concentrated point

$$t_c = 0.0195 * L^{0.77} * S^{-0.385}$$

Tc = **128.6047381 min**

Where

L = Traveling Length

S = Slope

By Interpolating Time of Concentration in IDF CURVE we get,

$$I = \frac{a}{t^n} \qquad I = 29.89$$ **Taking a = 335.81** **n = 0.458**

Avg. Intensity from IDF, I = **29.89** **mm/hr** (Refer : CPHEEO Manual Pg-3-7, Table - 3.6)

Therefore,

3 The Discharge (Q) can be calculated using Rational Method

Q = 10 C I A **(Refer : CPHEEO Manual)**

Where' **(Refer : CPHEEO Manual Pg-3-6, Table - 3.5)**

Q = The Discharge in M^3

C = Impermiability Factor

I = Intensity of Rainfall in mm/hr

A = Effective Area in Sq. km

Q = 10 x C x I x A x 100

Q = 10 x 0.80 x 29.89 x 10.85 x 100

Q = 554041.04 m^3/hr

Q = 153.9002889 m^3/sec

4 Section Design

Depth of Drain(d) = 3.10 m

Assume Velocity of Flow in the Drain as (V) = 3.00 m/s **Assume Non-Scouring** **3 m/s**

$$\text{Flow Area required a} = \frac{Q}{v}$$

= **51.3000963 Sq. m**

$$\text{Width of Flow required} = \frac{a}{d}$$

w = 16.54841816 m

Consider a Width of flow as = **16.54841816 m**

Actual Area(a) = width X depth

Actual Area(a) = 51.3000963 in Sq.m

Lenth of Perimeter = w + 2 x d

= 22.74841816 m

P = 22.74841816 m

$$\text{Hydraulic Radius} = \frac{a}{P}$$

R = 2.255106088 m

The Bed fall can be calculated as

Elevation of Drain at Starting =	890.000
Elevation of Drain at Ending =	875.000
Total length of Drain =	7500.000
	0.0020

n = 0.023
R = 2.255106088
S = 500
S = 500

Provide slope 1 in 500

6 Actual Velocity (v)

$$v = \frac{1}{n} R^{[2/3]} S^{[\frac{1}{2}]}$$

v = 3.344 m/s

Therefore, Discharge Q = a x v

Q = 171.5339126 m³/sec

Actual Discharge is Greater than the Required, Hence the Section is Sufficient

B = 16.00 m
d = 3.10 m
A = 49.60 Sq.m
P = 22.75 m
R = 2.26 m

For minimum Freeboard (Refer: CPHEEO Manual page no.-103, Table 5.12)

B (m) = 16.00
D (m) with Freeboard = 4.00

Hence provide 16.00 x 4.00

S. No.	Discharge (m³/s)	Freeboard (mm)
1	Below 3	450
2	3 and above but below 30	600
3	30 and above but below 300	900
4	300 and above but below 3000	1200
5	3000 and above	1500

The construction width of the stormwater drain (SWD) should be determined based on both design calculations and available land records.

1 If the available 'B' Karab land, as per revenue records or the village map, is greater than the required design width, the drain can be constructed according to the full width of the available land. This approach ensures adequate drainage capacity while considering future development in the locality.

2 However, if the available land, as per revenue records, is less than the required design width, the construction should strictly follow the width determined by design calculations based on rainfall data. This ensures that the drain functions efficiently within the given land constraints.