

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 125 of 2017

And

Original Application No. 217 of 2017

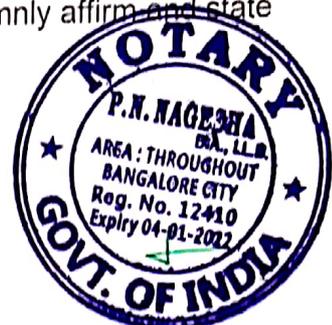
IN THE MATTER OF:

Court on its own motion	...	Applicant
	Versus	
State of Karnataka	...	Respondent
	AND	
Dr. Kupendra Reddy	...	Applicant
	Versus	
State of Karnataka	...	Respondent

AFFIDAVIT ON BEHALF OF URBAN DEVELOPMENT
DEPARTMENT, BANGALORE DEVELOPMENT AUTHORITY
AND THE MINOR IRRIGATION DEPARTMENT

I, Rakesh Singh, son of B P Singh aged 55 years, working as Additional Chief Secretary to Government, Urban Development Department, I am authorized signatory of the Respondent-1 and as such I am well acquainted with the facts and circumstances of the case. I do hereby solemnly affirm and state on oath as follows.

Rakesh Singh



1. I state that, the instant Affidavit is being filed as an explanation with respect to various compliances made by the Bangalore Development Authority, the Urban Development Authority and the Minor Irrigation Department in adherence with order dated 18.12.2019 passed by this Hon'ble Tribunal ('order dated 18.12.2019') in the instant matter *inter alia* with regards to the following:

- I. Eviction of Slum Dwellers who had encroached upon Bellandur Lake.
- II. Fencing of Bellandur Lake.
- III. Tender for de-silting Bellandur Lake and Varthur Lake.
- IV. Development of Wetland and Biodiversity Parks.

2. I state that, pursuant to the Orders passed by this Hon'ble Tribunal, the aforementioned works have been executed by various Departments of the State Government and that the said works are at various stages of execution. However, during the continuous progress to comply with the Orders passed by this Hon'ble Tribunal, the Hon'ble Government of India had declared Nationwide Lock Down since 23.03.2020 onwards, in view of the COVID-19. Hence, there has been no progress of work from 24.03.2020 upto 14.04.2020. Further, vide order No. 15.04.2020 Department of Health and Family welfare, Government of India has classified Bengaluru urban



[Handwritten Signature]

under Red hot zone. Under the circumstances, the restrictions were continued till 03.05.2020 and as such though movement of non essential goods vehicles were permitted, still mainly the necessary cement and steel for the constructional activities could not be arranged because of shut down of the manufacturing units.

3. However, the said departments of the State of Karnataka have made the said compliances in adherence to the order dated 18.12.2019 of this Hon'ble Tribunal which is annexed by way of the detailed compliance report filed on behalf of State of Karnataka which is annexed herewith as Annexure-A1. The compliances relevant to the said departments are detailed herein below

a) Para No.28 (v) of Order dated 18.12.2019

“Encroachments which are still continuing be removed by using force wherever necessary. If any injunction has been granted by any court which is considered erroneous, higher forum can be moved so that law is upheld.”

Compliance - Out of the 228 slum dwellers, 128 have been evicted by Karnataka Slum Development Board as on date and have been allotted flats constructed by the Karnataka Slum Development Board. The remaining 100



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slum dwellers will be evicted after the vacation of interim relief granted by the Hon'ble High Court. The case was listed for hearing on 8.4.2020. However, this case was further adjourned for hearing on 15.05.2020

b) Para No.28 (viii) order dated 18.12.2019

“the State of Karnataka may either resolve the issue of fencing with the Defence establishment or put such establishment to notice to place their objections before this tribunal within one month of such notice after which the State of Karnataka will be at liberty to proceed with the fencing and such Defence establishment will stand restrained from interfering unless otherwise directed by this tribunal or any other authority.

Compliance - The diversion channel in the defence area has been completed.

The defence authority vide their letter No. 16600/Tfr/MOU/Q3L, Dated: 05.01.2020 addressed to ACS, UDD has informed as follows:

“A fencing project for 465 Acres of Defence land which includes the portion of Bellandur lake defence land has already been projected and the same is likely to be



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constructed in 2020. Hence, it is submitted that fencing work may please be undertaken in the balance portion of the lake other than 167 Acres and 20 Guntas which lies in defence land as the same is already under watch and ward duties of the army and no encroachment / dumping of waste is allowed on the subject matter".

BDA has completed fencing of Bellandur lake except the above reaches of the said lake which lies in the defence area.

- c) Para No. 28 (x) of the order dated 18.12.2019 Steps be taken expeditiously for de-silting, de-weeding. Analysis of sludge and silt may be carried out before its disposal based on the result of such analysis, the mode of disposal and protocol be determined in accordance with laid down principles under the relevant Rules

Compliance - Tenders for de- silting of both the lakes have been opened and tenders are being finalized. Parallely, de-silting work in Bellandur and Varthur lake has been started on 23.03.2020. The state was brought under lockdown because of Covid-19 and work was therefore temporarily suspended. Relaxation for construction industries has since been allowed by the State



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Government and the work of de-silting Bellandur and Varthur lake, has been resumed on 04.05.2020 and the work is in full swing However, the scope of de-silting work depends on the outcome of the analysis of soil samples being tested by KSPCB and the resultant protocol to be decided upon for disposal of the excavated sludge/silt. BDA will revisit the estimate for de-silting on the basis of these outcomes before awarding the de-silting work. Further as per the directions of the Monitoring committee headed by Hon'ble Justice N. Santhosh Hegde, the scope of the de-silting work will also be limited to the following:-

- 1) De-silting / de- weeding the lake
- 2) Transportation of the excavated sludge / silt to the quarry as per the protocol.
- 3) Formation of wet lands and development of bio diversity parks on the lines recommended by the Monitoring Committee.

In the meanwhile, to begin with, de-silting work has commenced, pending receipt of soil test results and finalisation of protocol, by excavating a trench in the centre of both the lakes and depositing the excavated material within the lake bed along the boundaries of the lakes. The excavated muck so deposited will be transported subsequently after firming up the protocol on



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the basis of soil test results. Photographs of the de-silting work in Bellandur and Varthur lakes are enclosed in the Annexure A1

d) para 28 (xii) of order dated 18.12.2019

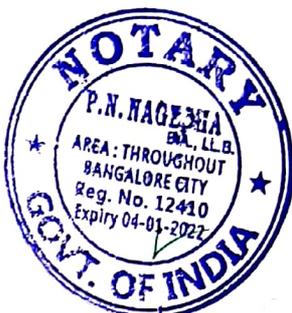
Steps may be taken to explore development of wetlands and biodiversity parks apart from other remedial action for reducing the pollution load on the recipient water bodies.

Compliance - A proposal has been submitted to the NGT Monitoring Committee regarding the development of wetlands and bio diversity parks by the BDA. The formation of wet lands and development of bio diversity parks on the lines recommended by the Monitoring Committee will be taken up under the main contract being awarded for de-silting work.

e) ParaNo.19 of Order dated 06.12.2018 of this Hon'ble Tribunal

- it is observed that post removal of waste from the Lake and from the Rajakaluves, the State ought to prepare a detailed project report with respect to disposal of the same.

Compliance – The Deputy Commissioner, Bangalore Urban has identified the quarry at Vitsandraand

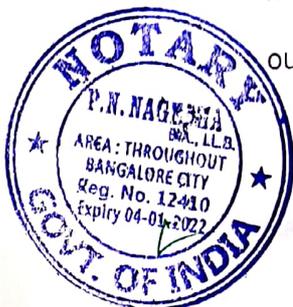


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Mylasandra villages in Bangalore South, which is 25kms away from the lake area. The quarry has been handed over to BDA for depositing the silt/sludge. The treatment of the quarry for depositing the sludge will be taken up after finalizing the protocol by KSPCB and CPCB

4. I state that, all the skilled labours were engaged by the contractor are generally hailing from the states of Jharkhand, Chhattisgarh, Bihar, West Bengal and Odisha. The Government of India in its directions on 29.04.2020 has allowed in situ activity for constructional purposes with guidelines to maintain social distance and other precautionary measures as per stipulations. Due to this, the contractor has actually started mobilizing the work force to the site and had also placed orders for constructional materials. However, physical activities in the site had been started on 02.05.2020, as the steel and cement reached the site on those days.

Unfortunately, in the meanwhile, Government of India in its order dated 02.05.2020 permitted the movement of migrant workers who want to go to their residences. Due to which most of the migrant workers from other states have moved out of the site and have gone to their native places. On the



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other hand, Bangalore being in the Red zone, no labourers from any other districts is allowed to enter Bangalore. This has resulted in acute shortage of labour force. Hence, the timelines fixed for the identified works for Bellandur and Varthur lakes may not be achievable. Also, at present the probable date of completion of all the works cannot be proposed till situation with respect to labourers and materials becomes clear.

5. I state that, the State of Karnataka having highest regards to the Orders passed by this Hon'ble Tribunal will try its level best to achieve complete compliance of the order dated 18.12.2019 in relation to the aforementioned works and comply with the orders passed by this Hon'ble Tribunal. Further, if the State Government is put into a situation where the works pertaining to Cleaning and Rejuvenation of Bellandur and Varthur Lake is unlikely to be completed within the stipulated time as directed by this Hon'ble Tribunal, this Hon'ble Tribunal may kindly consider all the above facts in assessing the situation and allow more time for completion of the works.

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WHEREFORE, it is most respectfully prayed that this Hon'ble Tribunal may be pleased to take the aforementioned facts and circumstances along with the detailed work-wise progress report on record in the interest of justice and equity.

Bengaluru,
Date: 14.05.2020

DEPONENT

Identified by me

Sworn to before me

Advocate
No. of corrections



SWORN TO BEFORE ME

P.N. NAGESHA
14.5.2020
P.N. NAGESHA
B.A., LL.B.
ADVOCATE & NOTARY
GOVT. OF INDIA
Reg. No. 12410
Expiry till 04-01-2022
A-275, 1st Floor, 8th Cross,
Vittal Nagara, GEF Post,
Mysore Road, Bangalore-560026

NOTARY REGISTRATION No. 12410	
Book No. <i>1</i>	Page No. <i>54</i>
Date <i>14.5.2020</i>	Serial No. <i>223</i>

VERIFICATION

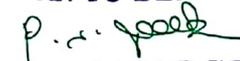
Verified at Bengaluru on this the 14th day of May, 2020 that the contents of the above affidavit are true and correct to my personal knowledge and on the information received and delivered are believed to be true and no material fact has been concealed.



DEPONENT



SWORN TO BEFORE ME


P.N. NAGESHA 14-5-2020
B.A., LL.B.,
ADVOCATE & NOTARY
GOVT. OF INDIA
Reg. No. 12410
Expiry Dt : 04-01-2022
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Mysore Road, Bangalore-560026

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 125 OF 2017

ANNEXURE-1

IN THE MATTER OF :-

Court on its own Motion

... Applicant(s)

:: VERSUS ::

State of Karnataka

... Respondent(s)

Compliance report in respect of the directions issued by this Hon'ble Tribunal on 18.12.2019 in Suo Moto Application No.125/2017 and O.A 217/2017 regarding restoration of SI Bellandur, Varthur and Agara Lake

BWSSB

In view of the COVID-19, the Hon'ble Government of India has declared Nationwide Lock Down since 23.03.2020 onwards. Hence, there had been no progress of work from 24.03.2020 upto 14.04.2020. Further, vide order No. 15.04.2020 Department of Health and Family welfare, Government of India has classified Bengaluru urban under Red hot zone. Under the circumstances, the restrictions were continued till 03.05.2020 and as such though movement of non essential goods vehicles were permitted still mainly the necessary cement and steel for the constructional activities could not be arranged because of shut down of the manufacturing units.

The type of constructional activities for STP requires skilled labours for centering, shuttering, installation of electromechanical equipments etc. Almost all the skilled labours were engaged by the contractor from the states of Jharkhand, Chhattisgarh, Bihar, West Bengal and Odisha. The Government of India in its directions on 29.04.2020 has allowed in situ activity for constructional purposes with guidelines to maintain social distance and other precautionary measures as per stipulations. Due to this, the contractor has actually started mobilizing the work force to the site and had also placed orders for constructional materials. However, physical activities in the site had been started on 02.05.2020, as the steel and cement reached the site on those days.

In the meanwhile Government of India in its order dated 02.05.2020 permitted the movement of migrant workers who want to go to their residences. Due to this most of the migrant workers from other states have moved out of the site and have gone to their native places. On the other hand, Bangalore being in the Red zone, no labourers from any other districts are allowed to enter Bangalore. This has resulted in acute shortage of labour force. Hence, the timelines fixed for the identified works for Bellandur and Varthur lakes may not be achievable. Also, at present the probable date of completion of all the works cannot be proposed till situation with respect to labourers and materials becomes clear.

Under the circumstances, the exact timeline required for completion of the work can only be estimated after substantial easing out of the situation and also after sufficient labour force movement is allowed. Thus it is humbly requested that the Hon'ble NGT may kindly consider all the above facts in assessing the situation and allow more time for completion of the works.

The detailed work wise progress achieved as on 22.03.2020 comparing the same with the NGT committee report is herewith submitted for kind perusal.

Sl. No.	Directions/Recommendations issued by this Hon'ble Tribunal vide Order Dated 18.12.2019	Time line fixed for execution of the action plan by this Hon'ble Tribunal vide order dated 18.12.2019	Compliance / Status of the works		Observations as per Monitoring Committee report dated 06.03.2020	Remarks
			Name of the work/activity/others	Status as on 22.03.2020		
1	In para No.28 (i) Dated 18.12.2019 of the NGT order, it is stated that "Timelines for execution of projects for setting up of STPs and laying of sewerage network may not be extended beyond 30.09.2020. If the works remains incomplete even till 30.09.2020, compensation will be liable to be paid @ Rs. 10 lakh per STP per month which may be liable to be recovered from the erring officers, apart from adverse entries in their service records and other adverse action".	30.09.2020	a. 150 MLD Capacity new Sewage Treatment Plant based on activated sludge process with BNR with Power generation Date of completion 30.07.2020	The overall progress as on 22.03.2020 is 76.90% against the Planned target of 91.14%.	Overall 75.21% progress is achieved against the planned target of 86.38%. The BWSSB states that the pending work will be completed by 30.07.2020	The detailed overall progress report is enclosed in page No. 2 to 4, Annexure-II. The lagging of progress is mainly civil works and installation of plant and machineries. The progress on the work is closely monitored and the work will be completed. Progress Report enclosed in Annexure-II Pg. 2 to 4 Photographs enclosed in Annexure-III pg. 2 to 8 In view of the Covid-19 situation, the timeline for completion of the work will go beyond.

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			b. Construction of 210 MLD capacity ISPS at Koramangala Sports Complex – including O&M for 7 years: Date of completion 29.01.2020	The ISPS is ready for operation. But the sewage will be pumped after completion of the 150 MLD STP i.e. 30.07.2020.	The ISPS is ready for operation. But the sewage will be pumped after completion of the 150 MLD STP i.e. 30.07.2020	Progress Report enclosed in Annexure-II Pg. 6 to 7 Photographs enclosed in Annexure-III pg. 10 to 13.
			c. Laying of 1800 mm dia raising main from 210 MLD ISPS to 150 MLD STP – S2D(a) of length 5.315 Km Date of completion 07.01.2020	Laying of pipelines in the storm water drains (SWD) is very difficult as the location of the work in this drain is at the end of the valley carrying huge quantity of storm water. At present 3830 RMT of pipeline work is completed as against 5315 RMT.	Laying of pipelines in the storm water drains (SWD) is very difficult as the location of the work in this drain is at the end of the valley carrying huge quantity of storm water. At present 3500 RMT of pipeline work is completed as against 5315 RMT.	Progress Report enclosed in Annexure-II Pg. 9 Photographs enclosed in Annexure-III pg. 15 to 18. Due to loss of time during the summer in view of the Covid-19 situation, the work has not progressed much. As the work is to be taken up in the storm

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			Name of the work/activity/others	Status as on 22.03.2020		
						water drain and due to monsoons, this work can be started only after October 2020. Under the circumstances, the timeline for completion of the work will go beyond.
			d. Sarakki – 5.0 MLD STP at Sarakki lake	Completed and commissioned.	Completed and commissioned on 08.11.2019.	Presently the treated water is let into Sarakki Lake. Photographs enclosed in Annexure-III pg. 20 to 21
			e. Chikkabeguru – 5.0 MLD STP Date of completion March-2020	The overall progress as on 22.03.2020 is 80.30% against the Planned target of 100.00%.	The overall progress is 72.00% against the planned target of 92.00%. the work will be completed by 31.03.2020	The work will be completed by July-2020 Progress Report enclosed in Annexure-II Pg. 15 Photographs enclosed in Annexure-III pg. 23 to 25 Inview of the Covid-19 situation, the timeline for completion of the

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			Name of the work/activity/others	Status as on 22.03.2020		
						work will go beyond.
			f. Hulimavu – 10 MLD STP Date of completion March-2020	Completed and commissioned.	Completed and commissioned.	Presently the treated water is let into Hulimavu Lake. Photographs enclosed in Annexure-III pg. 27 to 30
			g. Augmenting sewage from Iblur side and conveying to Bellandur Amanikere STP (Laying of sewer sub main) Date of completion 30.12.2020	As on 22.03.2020 laying of 1357 RMT of pipeline is completed	About 950 mtrs out of 2425 mtrs of 900/600/450 mm dia RCC NP3 pipeline along the alignment is laid. Work is under progress. The work is planned to be completed by 30-06-2020.	Laying of balance 1068 mtrs of pipeline will be completed after ease out of Covid 19 situation. Inview of the Covid-19 situation the timeline for completion of the work will go beyond.
			h. Agaram – 35 MLD STP Date of completion Dec-2019	Completed and commissioned	The STP is put into operation, presently stabilization of process is under progress. The overall progress is 97.24% against the planned target of 100.00%	Presently, the treated water is let into Agaram Lake. Photographs enclosed in Annexure-III pg. 32 to 34
			i. Waste water wet well – 32.5 MLD Capacity near the premises of 90MLD Bellandur	Earth work excavation for wet well portion is in progress.	Work order is issued. It is planned to complete by 19.02.2021.	To comply with NGT orders the period of completion has been reduced from 1 year to 7 months and the work order is issued

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			Amanikhane STP to augment sewage from the adjoining areas of Bellandur Amanikhane STP Date of completion 30.09.2020			accordingly to complete the work before 30.09.2020. Inview of the Covid-19 situation the timeline for completion of the work will go beyond.
			j. A proper mechanism should be developed/placed it identify the blockages in the existing UGDs and to attend them mechanically.	BWSSB has 165 Jetting cum suction machines and 40 de-silting machines to clean the UGD lateral network. Procurement of 10 more machines as planned is completed by February 2020 and the new machines are also put into operation.	BWSSB has 165 Jetting cum suction machines and 40 de-silting machines to clean the UGD lateral network. 10 more machines are under procurement and by February 2020, BWSSB will be in a position clear the manholes once in a year. 6 High Pressure desilting machines and one recycler machine are engaged in cleaning of sub-mains and main sewers.	As planned, additional 10 Jetting cum Suction machines have been procured in February-2020. Maintenance of sewer lines is done regularly based on the complaints and extensive, massive desilting of sewer lines will also be taken periodically to ensure proper flow of sewage.
2	In para No.14 Dated 18.12.2019 of the NGT order, it is stated that We also found that timelines fixed by this Tribunal have been unilaterally extended without any valid justification and no action has been taken against the erring officers on a	30.09.2020	Proposal for upgradation of all existing STPs with facilities to removal of Biological Nutrient Removal at 248 MLD STP at K&C Valley.	The Hon'ble NGT has clearly stated that 248 MLD capacity STPs at K&C Valley have to be made BNR compliant by 30-09-2020. Based on the concept note developed Professors of IISc and in consultation with the consultants M/s CH2M	The operating STPs of 90 MLD STP at Bellandur Amanikere, 60 MLD STP at K&C Valley, 5 MLD STP at Sarakki and under construction STP's of 150 MLD at K&C Valley, 5 MLD at Chikkabegur, 10 MLD Hulimavu and 35 MLD STP at Agaram are with Biological Nutrient Removal process. The working STPs at Cubbon Park and Lalbagh are Tertiary Treatment Plants. For the 248 MLD (KC Valley), the approval of the State	In order to comply with the NGT orders, BWSSB is immediately taking up necessary works for achieving BNR by 30.09.2020, which will be part and parcel of the entire upgradation works.

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	specious plea that it was difficult to fix responsibility. Such approach is hardly compliant with the Rule of Law. We particularly disapprove the timeline for upgradation of STPs with Biological Nutrient Removal (BNR) at 248 MLD STP at K&C Valley. The same must not go beyond 30.09.2020 but preferably be completed before 30.06.2020 although earlier timeline fixed by this Tribunal was 30.06.2019. No substantial work has been done in the last one year on this aspect.			Hill India Pvt. Ltd., appointed for upgradation of 248 MLD STP at K&C Valley, the estimate prepared for immediate action to achieve Biological Nutrient Removal in 248 MLD STP has been approved by Government of Karnataka including approval to take up the works from M/s KRIDL under 4G exemption. Proposal is also approved in Board meeting of BWSSB on 27.01.2020. The work orders for consultancy for upgradation of the 248 MLD STP is issued to the consultants M/s CH2M Hill (India) Pvt. Ltd. Also a letter to proceed with the work has been issued to M/s KRIDL for taking up the works. In this regard M/s.KRIDL have called tenders for procurement of equipments and	Government is obtained and a work order dated 03.03.2020 has been issued in favour of M/s CH2M Hill (India) Pvt. Ltd., on 02.03.2020 for project management consultant services for the work of upgradation/rehabilitation of existing STPs at KC Valley. The works are expected to be completed by 30.09.2020 as reported by Chairman, BWSSB.	The entire upgradation work other than BNR along with Bio-solids handling will be taken up simultaneously by floating tenders. Inview of the covid-19 lockdown almost all the industries manufacturing specialized equipments like blowers, diffusers, screens, DO meters etc are not working. Under the circumstances the tenderers, will not be in a position to ascertain the rates of the materials. The tenderers will not be in a position to quote the tenders. However the 2nd call of the tender has been uploaded with 20-05-2020 as the last date for bidding. Under

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				instruments on 20-04-2020 with 29-04-2020 as the last date for submission of tenders, the bids were opened on 02-05-2020 and no tenderers have participated in the tender. 2 nd call of the tender is uploaded on 11-05-2020.		the circumstances, the timeline for completion of the work will go beyond.
3	In para No.28 (ii) Dated 18.12.2019 of the NGT order, it is stated that Bangaluru Water Supply and Sewerage Board (BWSSB) must ensure that no sewage/effluent is discharged into the lakes and till setting up of STPs, interim remediation must be done forthwith. Any default in this regard will result in requirement to pay compensation of Rs. 5 lakh per month per inlet into the lakes from 01.02.2020.	01.02.2020	Interim remediation.	Further to the discussions in the Monitoring committee meetings, site visits on 04.01.2020 and also in the meetings conducted by the Government Authorities at Chief Secretary and Additional Chief Secretary levels, Hon'ble NGT committee has instructed to take up the aeration works in the diversion channels done by BDA at HAL side, Y-Junction of Agara & Koramangala side channels, Iblur and on either sides of Varthur Lake.	The peripheral diversion channels have been constructed by the BDA in both the lakes and sewage water is flowing through this channel. Entry of sewage water into these lakes have been stopped. Further, the BWSSB have installed aerating systems and has completed by 28.02.2020 at 1) HAL side and Kempapura inlet, 2) Agaram inlet, 3) Koramangala inlet, 4) Iblur inlet coming under Bellandur Lake, 5) Northern and 6) Sothern side of Varthur lake for inline treatment of sewage. Further, in addition the BWSSB is also installing artificial floating islands. It is submitted that during the rainy season, rain water of the catchment area of KC Valley flows through the Bellandur and Varthur lakes. In the past, flooding in the low laying habitat areas have been reported during the monsoon. The State Government (BDA and BBMP) should take appropriate measures during the de-silting period so that no adverse impact on de-silting as well as flooding in habitat areas take place.	In order to comply with the time line of 01.02.2020 fixed in the orders of the NGT, the aerating systems in the 6 locations were installed before 31.01.2020 and same have been observed by the NGT Committee during their inspection of the said location on 21.01.2020. Subsequently, in order to enhance the interim remediation artificial floating islands have also been installed. Same have been observed by the NGT Committee during

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				<p>BWSSB has installed aerating systems in the following 6 locations by 31.01.2020, through M/s KRIDL at the following locations:</p> <ol style="list-style-type: none"> 1) HAL side & Kempapura inlet, 2) Agaram, 3) Koramangala inlet, 4) Iblur inlet coming under Bellandur lake and 5) Northern & 6) Southern side of Varthur lake. <p>Same have been inspected by the NGT Monitoring Committee during their inspections on 21.01.2020. Also, bio-remedial installations of artificial floating islands have been installed for the inline treatment.</p>		<p>their inspection on 25.02.2020</p> <p>NGT committee while reporting by mistake have reported the date of completion as 28-02-2020. Same has been brought to the knowledge of the NGT monitoring committee and they have also accepted to correct the mistake.</p> <p>Photographs enclosed in Annexure-III pg. 36 to 52</p>
4	In para No.28 (iii) Dated 18.12.2019 of the NGT order, it is stated that "BWSSB may further		Disconnections to ensure that no treated effluent is discharged into BWSSB UGD	As per the Hon'ble NGT order BWSSB may further ensure that treated water is not discharged	The BWSSB submits that the excess treated water was allowed to be discharged in the UGD network as per the conditions stipulated in the consent for operation issued to private STPs by KSPCB. After the orders of NGT,	BWSSB has disconnected the UGD connections of buildings having STPs

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	ensure that treated water is not discharged into the UGB network. Action may be taken against persons responsible for having allowed this to be done earlier resulting into loss of Rs. 2 Lakhs per day i.e. Rs. 60 Lakhs per month and more than Rs. 7 Crore per year without any justification what so ever.		network.	<p>into the UGD network. Further, the list provided by KSPCB for 496 buildings having STPs has been inspected by BWSSB engineers and out of 496 buildings 109 buildings UGD connections are disconnected, there is no BWSSB UGD network near 378 buildings, 2 buildings are beyond the 110 village limits of BBMP, 5 buildings addresses are repeated in the list, 1 building address is not traceable and 1 building does not have STP.</p> <p>BWSSB is identifying the sources of discharge of sewage and will disconnect water supply and UGD connections of the defaulting establishments and also send a complaint to KSPCB. If the defaulting establishment is using</p>	<p>the BWSSB in consultants with KSPCB, the connections given for letting treated water to UGDs have been disconnected for 109 units (out of 496 units, in 109 units UGD connections are disconnected; there is no BWSSB UGD network near 378 units; 2 units are beyond the 110 villages limits of BBMP; 5 units addresses are repeated in the list; 1 unit address is not traceable and 1 unit does not have STP). The ACS, UDD, submits that since, treated water was allowed as per the conditions in the order of consent to operate, no action can be taken against the officials of BWSSB in this matter.</p> <p>In response to the above, the Member Secretary, KSPCB, reports that from the list of 109 Residential/Commercial project total quantity of sewage generated is about 11.462 MLD, out of which by utilizing treated sewage for secondary usage viz... toilet flushing, floor washing, vehicle washing and for gardening there is an excess treated sewage of about 4.58 MLD. At present BWSSB is operating 7 sewage treatment plant in Bellandur catchment and 3 more are under stabilization. Total capacity of the 7 operating STP's is 448 MLD and 3 STP's under stabilization is about 50 MLD.</p> <p>It indicates that the volumetric load from discharge of excess treated sewage into BWSSB UGD is 1.03%. This may be considered as small quantity. The Member Secretary submits that their officers/officials are doing regular monitoring and taking actions to prevent the pollution. He has requested that in this background, no action against the officials may be taken. The NGT is</p>	<p>who are letting excess treated water into UGD network. Further, BWSSB has already written to KSPCB authorities informing them that KSPCB to see that private STPs are functioning as per discharge standards.</p>

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				ground water then the complaint has also to be booked with KSPCB for its action. Further, the treated water was allowed as per the conditions stipulated in the order of the consent issued by KSPCB. Under the circumstances, BWSSB request not to take any action against its officials.	requested to take a view in the above facts and circumstances.																													
5	In para No.16 Dated 18.12.2019 of the NGT order, it is stated that We are informed that about 256.7 MLD untreated sewage is entering the lake from five locations which is nothing but a criminal offence which is required to be checked on war footing and violators of law brought to justice, erring officer being appropriately dealt with under the civil, criminal and service law with a view to uphold the Rule of	30.09.2020	To properly design UGD network so as to feed the existing STPs to their full capacity and also to the STPs under construction treated water should be reused.	Details of valley wise works taken up are: 1. HAL SWD (Challaghatta Valley) – Totally 23 works are to be taken up for augmenting this flow – Out of which 10 works completed and 10 MLD flow is increased. After completing balance 13 works balance 38	To stop the sewage entering natural drains at 294 locations are identified where sewage is entering into SWD. The work is under progress. With regards to reuse of the treated water, BWSSB has envisaged the utilization as below: <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Name of the STP</th> <th>Capacity (in MLD)</th> <th>Quantity committed to Minor Irrigation Department (in MLD)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>A</td> <td colspan="4">Existing STPs</td> </tr> <tr> <td>1</td> <td rowspan="3">K & C Valley</td> <td>218</td> <td>218</td> <td></td> </tr> <tr> <td>2</td> <td>30</td> <td>30</td> <td></td> </tr> <tr> <td>3</td> <td>60</td> <td>60</td> <td></td> </tr> <tr> <td>4</td> <td>Bellandur</td> <td>90</td> <td>90</td> <td></td> </tr> </tbody> </table>	Sl. No	Name of the STP	Capacity (in MLD)	Quantity committed to Minor Irrigation Department (in MLD)	Remarks	A	Existing STPs				1	K & C Valley	218	218		2	30	30		3	60	60		4	Bellandur	90	90		The flow in the SWD's were measured in the month of April-2019 and the details of flow are as follows: HAL-48.60 Agaram & Koramangala (Y-Junction)-179.50 Total-228.10 MLD The flow details of STP's at K&C Valley, Bellandur on the day of measurement were, 218 MLD-170 MLD 60 MLD-22 MLD 30 MLD-26MLD
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	Law. There is large scale breach of public duties by concerned Authorities dealing with the subject and earlier observations of this Tribunal have fallen on deaf ears and blatantly flouted.			MLD can be augmented. 2. Koramangala and Agaram Valley Totally 48 works are to be taken up for augmenting this flow – Out of which 30 works and the other linking at Mahindra Showroom is completed and 72.44 MLD flow has increased. After completing balance 18 works balance sewage can be augmented.		Ammanikha ne				90 MLD-30 MLD Total-248 MLD After carrying out major interlinking/new pipeline works on the upstream side, the flow was measured in the 1 st week of March-2020, the details are as follows: HAL-31.4 MLD Agaram &Koramangala (Y-Junction)-114.26 Total-145.66 MLD The flow details of STP's at K&C Valley, Bellandur on the day of measurement were, 218 MLD-180 MLD 60 MLD-51 MLD 30 MLD-30 MLD 90 MLD-70 MLD Total-331 MLD As can be seen from the above, it is clear that the flow in the SWD to an extent of 82.44 MLD has been reduced and same are
						5	Kadabeesan ahalli	50	-	Committed to KIADB.
						6	Sarakki (Recently commissioned)	5	4	
						Total of Existing STPs		453	402	
						B Under Construction STPs				
						7	Agara	35	30	
						8	K & C Valley	150	120	
						9	Hulimavu	10	9	
						10	Chikkabegur	5	4	
						Total of Under Construction STPs		200	163	
						Total		653	565	
						Details of flow after completion of total of 39 works out of 74 works proposed for linking				
						Location	Flow Measurements as on	Flow Measurements as on	Difference	augme

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				<p>3. Iblur Catchment area As on 11.05.2020 out of 2425 mtrs of pipeline, laying of 1357 RMT of pipeline 900/600/450 mm dia RCC NP3 pipeline along the alignment is laid, work is in progress.</p> <p>4. Kempapura Catchment area About 950 mtrs of 300 mm dia RCC NP3 pipeline along the alignment is laid, work is in progress to convey the sewage generated in this area to Bellandur Amanikere STP.</p>	<table border="1"> <tr> <td></td> <td>April-2019 (in MLD)</td> <td>March-2020 (in MLD)</td> <td>anted to STP (in MLD)</td> </tr> <tr> <td>HAL</td> <td>48.60</td> <td>31.40</td> <td>-17.20</td> </tr> <tr> <td>Agaram & Koramangala</td> <td>179.50</td> <td>114.26</td> <td>-65.24</td> </tr> <tr> <td>218 MLD STP</td> <td>170</td> <td>180</td> <td>10</td> </tr> <tr> <td>60 MLD STP</td> <td>22</td> <td>51</td> <td>29</td> </tr> <tr> <td>30 MLD STP</td> <td>26</td> <td>30</td> <td>4</td> </tr> <tr> <td>90 MLD STP</td> <td>30</td> <td>70</td> <td>40</td> </tr> <tr> <td>Total</td> <td>476.10</td> <td>476.66</td> <td></td> </tr> </table>		April-2019 (in MLD)	March-2020 (in MLD)	anted to STP (in MLD)	HAL	48.60	31.40	-17.20	Agaram & Koramangala	179.50	114.26	-65.24	218 MLD STP	170	180	10	60 MLD STP	22	51	29	30 MLD STP	26	30	4	90 MLD STP	30	70	40	Total	476.10	476.66		<p>being augmented to STP's.</p> <p>----- Laying of balance 1068 mtrs of pipeline will be completed after ease out of Covid 19 situation.</p> <p>The work will be completed after ease out of Covid 19 situation.</p> <p>Inview of the Covid-19 situation, the timeline for completion of the work will go beyond.</p>
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Bangalore Development Authority

7	18.12.2019 para No.28 (v) Dated 18.12.2019 of the NGT order, it is stated that "Encroachments which are still continuing be removed by using force wherever necessary. If any injunction has been granted by any		Encroachment from the Ambedkar Colony.	A writ petition no. 50953/2019 is pending before the Hon'ble High Court of Karnataka. The Hon'ble High Court in its interim order dated:	Regarding encroachment in Bellandur Lake (Ambedkar Colony) a Writ Petition No. 50953/2019 is pending before the Hon'ble High Court of Karnataka in which an interim order has been passed on 20.11.2019, Steps are being taken to get the interim order vacated. As regards the encroachments in Varthur Lake, the ADLR,	BDA:- Out of the 228 slum dwellers, 128 have been evicted by Karnataka Slum Development Board as on date and have been allotted flats constructed
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	court which is considered erroneous, higher forum can be moved so that law is upheld.			20.11.2019 granted interim relief has prayed for till the next date. The case had come up for hearing on 13.3.2020. The Hon'ble High Court continued the interim order and the petition will be listed for hearing on 8.4.2020.	Bengaluru, East Taluk, has submitted, a report dated 04.02.2020, stating that in the year, 1875, an area of 445 acres and 14 guntas of land were shown as lake area, Subsequently, in the second settlement done in the year 1958, the area in sy No. 319 remained the same as 445.14 acres. Out of which an area on 5.2 acres was granted on 21.12.1976 to a party and for this land a new sy No. 477 was assigned. As a result in the Sy No. 319 of Amanikere Bellandur of Varthur hobli, the lake area remained as 439.39 acres (survey No. 319). The survey carried out after the NGT order by survey and settlement department the extent of land is 439.34 acres including encroachments (at periphery) within the lake boundary. The NGT may kindly accept the report of the ADLR.	by the Karnataka Slum Development Board. The remaining 100 slum dwellers will be evicted after the vacation of interim relief granted by the Hon'ble High Court. The case was listed for hearing on 8.4.2020. However, this case was further adjourned for hearing on 15.05.2020.								
8	18.12.2019 para No.28 (vi) Dated 18.12.2019 of the NGT order, it is stated that "Action against erring officers which has not yet been taken must be initiated forthwith as already directed. Failures of officers still in service should be duly reflected in their ACRs.		Action against erring officers	Officers who have worked in the prescribed period have been identified and show cause notices have been issued for initiating actions against them by the BBMP, BWSSB and BDA.	The ACS (UDD), of State Government has submitted the list of officers who were found responsible for failure in their duties to maintain the lakes, He submits that notices have been issued for initiating the action against them, The name of officers with departments are listed here under :- 1) BBMP : Period from 20.09.2008 to 3.05.2011	On receipt of replies from the delinquent officers / officials, further proceedings will be initiated.								
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					2	H.P.Mohan Kumar	Assistant Executive Engineer (2.03.2009 to 3.1.2011)	PWD	
					3	H.Chandrappa	Assistant Engineer, K.R.Puram Sub-Division, (2.12.2009 to 11.1.2012)	PWD	
					4	J.C.Prakash Murthy	Assistant Executive Engineer, (after promotion) (2.12.2009 to 7.7.2010)	PWD	

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9	18.12.2019 para No.28 (vii) Dated 18.12.2019 of the NGT order, it is stated that the State PCB itself may lay down standards for prosperous instead of waiting for notification by MoEF&CC.		Issue of notification by MoEF & CC and by the State Government.	Bureau of Indian Standards has already issued draft notification on Phosphorus limit in Soaps and detergents awaiting copy. Meanwhile a letter is addressed to the Department of Ecology and Environment Government of Karnataka advising them to limit the phosphorous content as approved in the Board Meeting.	KSPCB reports that Bureau of Indian Standards has already issued notification on Phosphorus limit in Soaps and detergents awaiting copy. KSPCB recommended to issue notification to State Government limiting Phosphorus in Soap and Detergents. State yet to issue the order.	KSPCB is pursuing the matter with State Government. It will be released shortly.
10	18.12.2019 para No.28 (viii) Dated 18.12.2019 of the NGT order, it is stated that "the State of Karnataka may either resolved the issue of fencing with the Defence establishment or put such establishment to notice to place their objections before this tribunal within one month of such notice after which the State of Karnataka will be at liberty		Construction of diversion channel from "Y" junction and fencing of the lake are in the disputed land.		The defence authorities have given the permission to construct the diversion channel. As regards the fencing in the defence area, Committee has been told that this work would be taken up by the defence itself. Presently there is no threat of encroachment at this point. But the work of fencing has to be done.	BDA:- The diversion channel in the defence area has been completed. The defence authority vide their letter No. 16600/Tfr/MOU/Q3L, Dated: 05.01.2020 addressed to ACS, UDD has informed as follows: "A fencing project for 465 Acres of Defence

	<p>to proceed with the fencing and such Defence establishment will stand restrained from interfering unless otherwise directed by this tribunal or any other authority.</p>					<p>land which includes the portion of Bellandur lake defence land has already been projected and the same is likely to be constructed in 2020. Hence, it is submitted that fencing work may please be undertaken in the balance portion of the lake other than 167 Acres and 20 Guntas which lies in defence land as the same is already under watch and ward duties of the army and no encroachment / dumping of waste is allowed on the subject matter".</p> <p>BDA has completed fencing of Bellandur lake except the above reaches of the said lake which lies in the defence area.</p>
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11	18.12.2019 para 28 (ix) Compensation already assessed be recovered by adopting coercive measures such as disconnection of electricity and water supplies		Recovery of 19.85 Crores from 376 defaulting units where STP is not functioning / standard norms are not met.	Board has identified 61 defaulting units who have not installed STPs and assessed an amount of Rs 271.50 Crores. Issuing Closure Orders for the defaulting units who have not paid Environmental Compensation (EC) as a coercive measures is under process. Board has identified 376	An amount of Rs. 75 lakhs have been collected from the 14 units. Further, a Writ Petition No. 4284/2020 has been filed before the Hon'ble High Court of Karnataka by M/s Share wood Residents Association; and interim direction (26.02.2020) has been issued by the Hon'ble High Court as under:- ➤ By way of ad-interim relief, we restrain the second respondent from initiating any proceedings to recover the amounts mentioned in Annexures-F1 and F2. ➤ However, notwithstanding pendency of this petition it will be always open for the second respondent (KSPCB) to issue show cause notices	KSPCB:- The process to be followed is issue of Notice of proposed Directions under Sec 33(A) of Water Act followed by personal hearing and then issue of closure orders. The process is initiated and shortly, the closure orders will be issued for such units.
				defaulting units and assessed an amount of Rs 19.85 cores. Out of 376, units 14 units have paid an Environmental Compensation (EC) amount of Rs 75 lakhs (Rs 5 lakhs by each & M/s HSBC data Processing India Pvt Ltd have paid Rs.10 lakhs)	in terms of Annexures-F1 and F2. ➤ Needless to add that before passing final orders on the notices at Annexures-A1 and A2 as well as G1 and G2 and show cause notices issued in terms of paragraph 9 above, and opportunity of being heard shall be granted to the petitioners. Further, in another Writ Petition No. 3303/2020, the Hon'ble High Cour has issued an interim order (12.02.2020) directing the KSPCB to issue show cause notice to the petitioner to be heard for a liability of Rs. 7 Crores. Meanwhile, the electricity supply to the premises of the petitioner shall not be disconnected.	Further, 9 units have paid an Environmental compensation of Rs 45 Lakhs 1. M/s Golf Link Software Pvt Ltd, SY No 13/2, Challaghatat village, off intermediate ring Road Bangalore. 2. Mohan Enterprises, Krishna Maganumm, Sy NO 65/3, Doresanipaly Bangalore. 3. Mohan Enterprises, Kalyni Vista SY No 165/1, Doresanipalya Bangalore.

				<ol style="list-style-type: none"> 1. M/s Happiest Minds, Ganapa Towers, No. 51/3, Hosur Main Road, Madiwal, Bengaluru - 560 076 2. M/s Prism Properties, Prism Sovereign Apartment, Sy No. 106/1 & 107, Kundalahalli Village, K.R Puram Hobli, Bengaluru East Taluk 3. M/s Nandi Gaardens Apartment Owners Association, Nandi Gardens, J.P Nagar 9th phase, Aalahalli, Anjanapura Post, Bengaluru. 4. M/s Sumadhura Silver Ripples Owners Welfare Association at Sy No. 25/1A, 25/2, 28, 30/2, Nallurahalli Village, KR Puram Hobli, Bengaluru - 5600 066. 5. M/s Chitrakut Environs Apartment Owners Welfare Association, at Sy No. 184, 7th Cross, Veerabhadra Nagar, Talacauvery Layout, Basavanagar, Bengaluru - 560 037. 	<p>The NGT may kindly take note of it to issue further direction in the subject matter.</p>	<ol style="list-style-type: none"> 4. M/s. Royal citadel apartment owners association No 157/6, Begur Village, Bangalore 5. Mohan Enterprises, Kalyani Magnum Sy No 165/2, Doresanipaly Bangalore. 6. Keys Hotel, No 7, Hosur Main Road, Bangalore. 7. M/s. GV properties Pvt Ltd, Embassy Point SY No 10/2a to 2b, CHallaghatta Village, Bangalore. 8. Umbal Properties Pvt Ltd, Hilton Residencies SY No 5/1, Challaghatta Village, Bangalore. 9. M/s Aricent Technologies Ltd, SY No 18/1, ORR, Panathur Post Kadubeesanahalli, Bangalore. <p>Further, in writ petition No. 4540/2020, for 6 Petitioners, the Hon'ble High Court has issued interim order (27.02.2020) directing the KSPCB to issue Show cause notice to the petitioner</p>
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				<p>6. M/s SJR Builders by name SJR Luxuria, at Sy No. 100/P/1, 101/1 & 103, Arekere Village, Begur Hobli, Bengaluru.</p> <p>7. M/s Ferns Icon & Developers Ltd, Ferns Icon Apartment, at Sy No. 28, 34/3, 36/2, 36/3, 36/4 & 36/5, Doddanekundi Village, Bengaluru East Taluk.</p> <p>8. M/s Island Star Mall Developers Pvt Ltd., at No. 40/41, Lower Ground, Whitefield Main Road, Mahadevapura Post, Bengaluru.</p> <p>9. M/s DSR spring Beauty Apartment Owners Association, at Sy No. 124/1, Kundalahalli, AECS Layout, ITPL Main road, Bengaluru.</p> <p>10. M/s Intel Technology India Pvt Ltd, No. -23-56P, Outer Ring Road, Devarabeesanahalli, Varthur Hobli, Bengaluru.</p> <p>11. M/s HSBC data Processing India Pvt Ltd, No. 148/1, Futura, Bannerughatta Road, Bengaluru.</p> <p>12. M/s Maruthi Infotech Centre, Sy No. 11/1 & 12/1, Challaghatta Village, Amarjyothi Layout, Intermediate ring road, Domlur, Bengaluru.</p> <p>13. Samhi JV Business Hotels Pvt Ltd., (Formerly Supreme Build Cap Pvt Ltd.) Sy No. 43,44/1, 44/2, Devarabisanahalli, Varthur Hobli, Bemngaluru.</p> <p>14. Keys Hotel, No. 7 Hosur Main Road, Singasandra Village, Bengaluru.</p>		<p>1. Brigade Harmony Apartment owners Associations, Sy NO 250, Ramagondanahalli village, whitefiled Bangalore.</p> <p>2. Druvika Mogra Apartment welfare association No 3333, Whitefiled, Mahadevapura, Bangalore.</p> <p>3. AOC- DNR atmosphere owners condominium owners and residents welfare association, 231, Varthur Main road, Whitefiled Bangalore.</p> <p>4. Durga Rainbow Flat owners welfare association, No 8/1, 9/1, 9/2, 9.3 ORR, Mahadevapura Bangalore.</p> <p>5. Nagarjuna Maple heights apartments Condominium at 182-185 Narayanapura, ORR, Mahadevapura Bangalore.</p>

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				Issuing Closure Orders for the defaulting units who have not paid Environmental Compensation (EC) is under progress.		<p>6. Nester Raga owners associations Sy No 152,153, Marathahalli ORR mahadevapura Bangalore.</p> <p>An interim direction 26.2.2020 has been issued from Hon'ble High Court as under :-</p> <p>➤ We direct that, if any orders are passed on the show cause notices, Annexure-A1 to A6 no action on the basis of such order shall be taken for a period of 15 days from the date on which the order are served upon the petitioners. Till the next date, no action shall be taken for recovery of the amount on the basis of the notices at annexure F1 to F6.</p> <p>➤ It will be open for the second respondent to issue show cause notices in terms of</p>

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						<p>Annexure F-1 to F-6 and to pass orders after giving an opportunity of being heard to the petitioners. If final orders are passed on the basis of the said show cause notices, the same shall not be implemented in any manner for a period of 15 days from the date on which the final orders are served upon the respective petitioners.</p> <p>In view of the Hon'ble High Court order, KSPCB is calling the petitioners for Personal hearing before initiating coercive action for recovery of Environmental Compensation. This process is held up due to COVID-19.</p> <p>It is humbly brought to the notice of NGT</p>

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12	<p>18.12.2019 para No. 28 (x)</p> <p>Steps be taken expeditiously for de-silting, de-weeding. Analysis of sludge and silt may be carried out before its disposal based on the result of such analysis, the mode of disposal and protocol be determined in accordance with laid down principles under the relevant Rules</p>		a) De-silting of Bellandur and Varthur lakes.		<p>Tenders for both the lakes have been invited and the same are in process for issue of work order.</p> <p>Even after continuous persuasion by the committee, quarries for dumping the silt from both the lakes have not been identified so far by the Deputy Commissioner, Bengaluru Urban / BDA.</p> <p>It is stated here that the Minor Irrigation Department is laying a pipeline for lifting secondary treated sewage water from KC STP to fill 69 tanks in Anekal Taluk of Bengaluru Urban District along the boundary of Bellanduru lake of a length of 4.865 km at the depth of 1.2 meter from the present surface. Out of this about 1.6 km falls in BDA occupied lake. Area and remaining 3.265 km falls in disputed defence area. The Karnataka Lake Conservation and Development Authority has accorded permission for laying the pipeline vide letter dated: 02.03.2019. the approval from the defence authorities has not been yet obtained. The construction work is under progress. It is recommended that there shall not be any mud road / pakka road formation over the pipelines now being laid. Also, the pipeline shall not hinder the flow of water or fragment the wetlands at the inlet of Bellanduru lake. It should also take into consideration the rainy water flow during the monsoon. All actions should be taken to prevent the flooding in</p>	<p>BDA:-Tenders for de-silting of both the lakes have been opened and tenders are being finalized.</p> <p>Parallely, de-silting work in Bellandur and Varthur lake has been started on 23.03.2020. The state was brought under lockdown because of Covid-19 and work was therefore temporarily suspended. Relaxation for construction industries has since been allowed by the State Government and the work of de-silting Bellandur and Varthur lake, has been resumed on 04.05.2020 and the work is in full swing.</p> <p>However, the scope of de-silting work depends</p>

					<p>the habitat area. They should redesign it accordingly.</p> <p>Further, BWSSB has also laid / laying UGD of a length of 2.5 km (1000 mm diameter) in the Bellandur lake. An approval in this regard has been obtained from the Lake Development Authority vide letter dated: 10.12.2015 to supply the sewage water to STPs at KC valley.</p>	<p>on the outcome of the analysis of soil samples being tested by KSPCB and the resultant protocol to be decided upon for disposal of the excavated sludge/silt. BDA will revisit the estimate for de-silting on the basis of these outcomes before awarding the de-silting work.</p> <p>Further as per the directions of the Monitoring committee headed by Hon'ble Justice N. Santhosh Hegde, the scope of the de-silting work will also be limited to the following:-</p> <p>1) De-silting / de-weeding the lake</p>
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			b) Sludge and silt analysis, protocol development and mode of disposal.		<p>The silt / sludge samples at 5 locations (3 sub samples, at top, middle and bottom in each location) in Bellandur lake and 4 locations (top soil and at 2 feet depth) in Varthur lake were collected and got analysed for heavy metals from CPCB. Further, more samples have been collected from Varthur lake for re-verification of the results as given by the CPCB. The results are awaited.</p> <p>The recommendations of CPCB in the matter are as under:-</p> <ul style="list-style-type: none"> The results indicated that the sediments of Bellandur Lake (three out of five locations) has heavy metal values above response level and required to be disposed accordingly. At Varthur Lake, at all locations (5 No) the values reported for heavy metals are lesser than response levels. The disposal methods of sediments may be further evaluated based on compost quality as per Solid Waste Management Rules 2016 and Screening level values for Heavy metals. 	<p>2) Transportation of the excavated sludge / silt to the quarry as per the protocol.</p> <p>3) Formation of wet landsand development of bio diversity parks on the lines recommended by the Monitoring Committee.</p> <p>In the meanwhile, to begin with, de-silting work has commenced, pending receipt of soil</p>

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					<p>•The Guidelines for evaluation of MSW Landfills as per Solid Waste Management Rules, 2016 may be the most suitable option and technology for disposal of sediments. The Central Public Health and Environmental Engineering Organization Manual may also be referred for guidance.</p> <p>The matter was discussed at length in the meeting of the Committee on 29.02.2020. The view of CPCB seems to be reasonable. However, after discussion, views of the KSPCB were called for and the Member Secretary has submitted his views on 04.03.2020 as under:-</p> <ol style="list-style-type: none"> 1) Since there are heavy metals found which are more than the prescribed limits for the usage of the silt for the Agriculture purposes, the sludge / silt cannot be used for the agricultural purpose as a manure, as there could be chances of getting the heavy metals into the food chain. 2) There is a need to rule out the possibility of the existence of heavy metals / any other toxic substances, other than heavy metals. The list of such toxicity of the materials with threshold limits is prescribed in the Schedule II (rule 3 (1) (17) (ii)) of Hazardous and Other Waste (Management & Trans boundary Movement) Rules, 2016. 	<p>test results and finalisation of protocol, by excavating a trench in the centre of both the lakes and depositing the excavated material within the lake bed along the boundaries of the lakes. The excavated muck so deposited will be transported subsequently after firming up the protocol on the basis of soil test results.</p> <p>Photographs of the desilting work in Bellandur and Varthur lakes are enclosed in the Annexure</p>

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					<p>3) Also as recommended by the TAC held on 27.01.2020, it is advisable to do the monitoring of the sludge at different depths and locations by making grid to find out heavy metals and other parameters as per schedule II of Hazardous and other waste (Management & Trans boundary Movement) Rules, 2016 and to submit the report to Karnataka State Pollution Control Board to decide about the methodology of disposal.</p> <p>The BDA submits that the NEERI requires 5 months for analyzing the sludge and silt samples for 79 parameters after receipt of advance of Rs. 65.25 Lakhs. This may delay the de-silting work.</p> <p>In view of the conflicting opinions, the NGT may kindly direct the KSPCB to get the already collected samples analysed for 79 parameters from a third party recognized source to determine the mode of disposal and protocol.</p>	

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13	18.12.2019 para 28(xi) The state PCB may develop a robust water quality monitoring program for monitoring of water quality of drains leading to the lakes and also undertake water quality monitoring at atleast 5 locations for each lake.		Water quality monitoring in drains at 5 locations in each lakes	The Board has been collecting the samples at regular intervals.	Samples are collected and being analyzed. However, presently the sewage water is diverted through the diversion cannels in both the lakes and no water is entering into the lakes.	KSPCB:- Sample of lake water is being collected at least 2 points in each lake as the water has receded after diverting of the sewage water from the lake. Results are submitted already.
14	18.12.2019 para 28 (xii) Steps may be taken to explore development of wetlands and biodiversity parks apart from other remedial action for reducing the pollution load on the recipient water bodies.		Development of wetlands and biodiversity parks.		The BDA has suggested an area of 52.24 acres (East of bund 5.8 acres; near Sun city 13.85 acres; near Y-junction Mantri side 5.87 acres; near Y-junction North West corner 11.77 acres and Ambedkar nagar and nearby area 14.87 acres) in Bellanduru lake; 16.6 acres (near main let 6.9 acres; Siddapura West side 2.46 acres and near Balagere 7.24 acres) in Varthur lake for biodiversity parks. The suggested areas are not the periphery of the lakes. In such areas (biodiversity parks), silt of appropriate quantity from the lakes may be used for raising the appropriate heights. The biodiversity parks may be raised with the help of an Expert Committee in the field. The biodiversity parks	BDA:-A proposal has been submitted to the NGT Monitoring Committee regarding the development of wetlands and bio diversity parks by the BDA. The formation of wet lands and development of bio diversity parks on the lines recommended by the Monitoring Committee will be taken up under the main

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					will act as carbon sink, lung space and habitat to avian and other fauna and flora. The committee suggest that no other structures should be allowed in the lake areas than as suggested by the NGT in para 28 (xii).	contract being awarded for the de-silting work.
15	18.12.2019 para 28 (xiii) C & D waste processing facility be commissioned expeditiously and steps be taken to ensure that the timeline proposed is adhered to.		Construction of waste processing units to process the C & D / solid waste generated in the city		BBMP has submitted that a work order has been issued to M/s. Rubble Revival Private Ltd., to design, finance, build, operate and transfer 750 MTPD construction and demolition waste processing facility and transferred the land measuring 10 acres at survey number 50 of Kannur village to the company on 20.02.2020. the plant is expected to operate in twelve months time.	BBMP: In view of physical guarding of Bellandur, Varthur and Agara lakes the C&D / Solid waste dumping has been stopped. As regards to Construction and Demolition waste processing at present one private agency M/s Rock Crystals has established a 1000 MT capacity processing plant at Chikkajala at its own cost and the plant has just commenced its

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						<p>operation currently receiving 150 MT TO 200 MT daily for processing. The work order has been issued to M/S Rubble Revival Private Ltd. to Design, Finance, Build, Operate, and transfer 750 MTPD construction and demolition waste processing facility and transferred the land measuring 10 Acres at Survey Number 50 of Kannur Village is handed over to the company on</p>

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						20-02-2020 The Site handing over letter dated: 20-02-2020 is enclosed as Annexure-8 The plant is expected to operate in twelve months time. With this the combined capacity would be 1750 Tonnes Per Day.
16	18.12.2019 para 28 (xiv) Real time water quality system be commissioned by 31.01.2020 as proposed.		Installation of Real time water quality system by 30.01.2020	The Board has already installed the Real Time Water Quality Monitoring systems at 3 locations.	Real time water quality systems have been installed at 3 locations.	The BWSSB has already installed the Real Time Water Quality Monitoring systems at 3 locations
17	18.12.2019 para 28 (xv). The issue of removing 1.5 km road laid upon the lake bed. Within the boundary of		Removing of 1.5 Km road laid upon the lake bed in Varthur lake.	Minor Irrigation: The original alignment was passing through the present main road and bund of the Varthur lake. While executing the work,	The Bangalore Development Authority has proposed biodiversity parks as per para 28 (xii) of the NGT order dated 18.12.2019 (para 12 above). With this proposal the areas about 16.6 acres which falls outside the pipeline but within the outer lake boundary will not be available for water impounding. Hence, there would not	As per para 19(20) of the order dated 06-12-2018 action has been initiated, by the government. Notices have been issued to

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	Varthur lake, by dumping of C & D debris be finalized as per directions of Justice Hegde Committee in terms of para 26 above.			<p>the local public objected to the alignment as it was very inconvenient to the public and traffic. White field NGO's lead by R.K. Mishra objected to the cutting of white topped main road which was laid very recently by BBMP under "TENDER SURE".</p> <p>Hence, a joint inspection on 24-01-2017 was done at the site by BBMP Commissioner, Minor Irrigation Secretary, Chief Engineer, Superintending Engineer, Executive Engineer along with R.K. Mishra and representatives of contractor. After elaborate discussion the final decision was taken to fix the pipeline alignment along the Periphery of Varthur lake (Proceedings copy date 24-1-2017 is enclosed).</p>	<p>be necessity of vents and anchoring as suggested by Minor Irrigation Department.</p> <p>Since the act of laying pipeline by the Minor Irrigation Department was without authority of Law and no-approval of competent authority, this Committee is of the opinion that suitable fine be levied on the Minor Irrigation Department by the NGT.</p> <p>Further, no action has been taken as per para 19 (20) of the order dated 06.12.2018 by the state Government.</p>	<p>the concerned officials vide EIC office letter no: 489 dated: 04-03-2020.</p> <p>This Project envisages improving the groundwater table in drought affected region of kolar and Chikkaballapura districts by rejuvenation of bore wells and open wells which is the only way to bring the parched lands back into the main stream of agricultural activities thereby indirectly improving the ecosystem, and providing the water for agricultural use in the drought prone area. This project is</p>

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				<p>As per the proceedings, alignment was approved by CE, MI (S), Bangalore.</p> <p>The pipe line was laid along the periphery of the tank bed. But after the completion of pipe laying, The Tahsildar, K.R. Puram undertook surveying of the west side of the tank area, as a result of which the tank water spread area was increased by approximately 10 Acres. The increased water spread as identified by the Tahsildar is not linear and also not parallel to the pipeline and the land is in the form of pockets between chainage 883.30m to 1733.30 m i.e. for a length of 850 mtrs.</p>		being perceived as a boon to the water starved areas of Kolar and Chikkaballapura as seen from the reactions of the farmers and people representatives of the area. Hence, it is humbly requested not to consider levy of any fine.
18	06.12.2018 para No.19(4) of the NGT order, it is	Ongoing	Chanalization and concretization of Rajakaluves	The concretization of SWD is avoided in all big Rajakaluves	The BBMP submits that concretization of SWD is avoided in all big Rajakaluves having width of more than 4.00 mtrs. However, due	The concretization of SWD is avoided in all big

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	observed that "No further channelization and concretization of Rajakaluves			having width of more than 4.00 mtrs. However, due to development/construction of buildings by side of Rajakaluves, the retaining walls are unable to withstand the exterior pressure. At these points after technical verification 'U' shaped drain is being constructed, with intermediate pervious section / holes in the form of circular openings for enabling recharge of ground water. Where width of the land which is available for Rajakaluve is less than 4.0 m channelization of	to development/construction of buildings by side of Rajakaluves, the retaining walls are unable to withstand the exterior pressure. At these points after technical verification 'U' shaped drain is being constructed, with intermediate pervious section / holes in the form of circular openings for enabling recharge of ground water. Where width of the land which is available for Rajakaluve is less than 4.0 m channelization of storm water drain is being avoided in the outskirts of the city. About 389.00 km has been completed with pukka retaining was against the 842 km. This year 75 km is proposed and remaining would be completed in subsequent years. The laying of "U" shaped drains construction is not convincing.	Rajakaluves having width of more than 4.00 mtrs. However, due to development/construction of buildings by side of Rajakaluves, the retaining walls are unable to withstand the exterior pressure. At these points after technical verification 'U' shaped drain is being constructed, with intermediate pervious section / holes in the form of circular openings for enabling recharge of ground water.

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				storm water drain is being avoided in the outskirts of the city and natural flow of the Rajakaluves is allowed, especially the downstream flow of Vrushabhavathi Valley, Challaghatta Valley, Hebbal Valley and Kormangala Valley.		Where width of the land which is available for Rajakaluve is less than 4.0 m channelization of storm water drain is being avoided in the outskirts of the city and natural flow of the Rajakaluves is allowed, especially the downstream flow of Vrushabhavathi Valley, Challaghatta Valley, Hebbal Valley and Kormangala Valley.
19	06.12.2018 para No.19(6) of the NGT order, it is observed that	Ongoing	a) Survey of buffer zone of	In compliance with the order, the Tashildar (East)	a) The BBMP submit that survey works has been completed and as a result 21	

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	(a)“The authorities must conduct a survey in the buffer zone of the lake to identify the encroachments and appropriate exercise should be undertaken to remove them		30 meter around the lake	conducted the survey of the lake and thereafter the Joint Commissioner, Mahadevapura Zone and Executive Engineer, Mahadevapura Zone with the assistance of Additional Director Land Records (East) have marked a 30 mtr buffer zone in Bellandur and Varthur Lake. The photographs showing the fixing of boundary of buffer zone at Bellandur as Annexure-1 and Varthur as Annexure-2 . The Assistant Executive Engineer Marathahalli-sub division has identified 21 numbers of structures within 30mtr buffer zone	number of structures have been identified in the 30 meter buffer zone of Bellandur lake and four structures in Varthur lake. Notices have been issued under section 308 of Karnataka Municipal Corporation act, 1976 to the encrochers.	

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				<p>of Bellandur lake and issued notices to the owners calling for the documents under Section 308 of Karnataka Municipal Corporation Act 1976. The statement showing the details of owner is enclosed as Annexure-3</p> <p>The Assistant Executive Engineer Whitefield-sub division has identified 04 numbers of structures within 30mtr buffer zone of Varthur lake and issued notices to the owners calling for the documents under Section 308 of Karnataka Municipal Corporation Act 1976 the statement showing the details of owners is enclosed as Annexure-4</p>		

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			b) Removal of Encroachment	b) As regard to encroachments removal on the Rajkaluves as on 12-02-2020, 1890 cases of Encroachments are removed and 736 cases are pending out of which in about 369 cases, survey work is in progress and removal of encroachments on 367 cases are in progress.	b) The BBMP submit that as on 12-02-2020, (on the Rajakaluves), 1890 cases of Encroachments are removed and 736 cases are pending out of which in about 369 cases, survey work is in progress and removal of encroachments on 367 cases are in progress. The claims of BBMP have not been verified by the committee due to time constraint.	
20	06.12.2018 para No.19 (7) of the NGT order, it is observed that (a) The Commission recommends that CCTVS should be installed		a) Installation of CCTV's in buffer zone.	As regards to installation of CCTV and street lights by BBMP at Bellandur Lake, BBMP has installed 54 No. of 360 degree CCTV cameras and 200	a) At Bellandur Lake 54 No. of 360 degree CCTV cameras and 200 No. LED street lights have been installed at appropriate locations. Four Numbers of Watch tower are yet to be installed but work is in progress.	

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	at appropriate locations for ensuring that no C&D waste is dumped in the buffer zone area of the lake.			<p>No. LED street lights at appropriate locations of lake boundary to ensure that no C&D waste is dumped and to monitor the construction in buffer zone area.</p> <p>Regarding the work of erecting 4 Nos of Watch tower at Bellandur lake area, 2 Nos of watch towers are completed and construction of remaining 2 Nos are in progress, Revised date of completion of watch tower will be by 15th April 2020.</p> <p>BBMP is spending Rs198.00Lakhs to install CCTV, street Light and watch towers at Bellandur lake.</p>	As regard the Varthur lake 32 numbers of CCTV'S and 150 LED street lights have been installed. The watch towers have not been installed.	

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				<p>As regards Varthur lake, BBMP has installed 50 Nos 360 degree wireless cameras and 200 Nos of LED street lights at appropriate locations of lake boundary to ensure that no C&D waste is dumped and to monitor the construction in buffer zone area.</p> <p>Regarding the work of erecting 4 Nos of Watch tower at Varthur lake area, 3 Nos of watch towers are completed and construction of remaining 1 No. are in progress, Revised date of completion of watch tower will be by 15th April 2020</p> <p>BBMP is spending Rs198.00Lakhs to install CCTV, street Light and watch towers at Varthur lake.</p>		

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				The photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur Varthur lakes is enclosed Annexure-5		
	(b) Security Guards should be deployed at the most vulnerable locations to keep vigilance on illegal dumping of debris and to prevent encroachment activities.	Ongoing	b) Deployment of Security guards/ Marshals	Physical guarding of lake and buffer zone at Bellandur and Agara Lake has been done by deploying 21 Marshals on 24 hours duties. Exclusive mahindra bolero jeeps has been provided for effective patrolling of lake boundary. The Marshals were deployed with effect from 01 March 2018.	21 Marshals are in each lake (Bellanduru and Varthur) have been deployed with Mahindra vehicles.	

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				<p>The C&D Waste/Solid waste dumping has been controlled after physical surveillance by marshals at Bellandur. The total expenditure incurred so far to Marshalls over the past 19 months is Rs.1,29,63,882/-. The photographs showing the deployment of marshals at Bellandur Lake is enclosed as Annexure-6</p> <p>Physical guarding of lake and buffer zone at Varthur Lake has been done by deploying 21 Marshals on 24</p>		

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				hours duties. The Marshals were deployed with effect from 16 Nov 2019. Exclusive mahindra bolero jeeps have been provided for effective patrolling of lake boundary. The total expenditure of Marshalls for 12 months is Rs.79,54,463.00. The photographs showing the deployment of marshals at Varthur Lake is enclosed as Annexure-7		
	c)In case anyone is found to be dumping C&D waste or debris into the lake or its buffer zone, a penalty of	On going	C) Levy of Rs.5.00 Lakhs for each offense.	In view of physical guarding of Bellandur, Varthur and Agara lakes the C&D / Solid waste dumping has been stopped	c) No information has been submitted by BBMP	

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	Rs.5.00 Lakhs be imposed for each offence in terms of the Order passed by this Hon'ble Tribunal on 19.04.2017.			As regards to Construction and Demolition waste processing at present one private agency M/s Rock Crystals has established a 1000 MT capacity processing plant at Chikkajala at its own cost and the plant has just commenced its operation currently receiving 150 MT TO 200 MT daily for processing. The work order has been issued to M/S Rubble Revival Private Ltd. to Design, Finance, Build, Operate, and transfer 750 MTPD construction and demolition waste processing facility and transferred the land measuring 10 Acres at Survey Number 50 of Kannur Village is handed over to the company on 20-02-2020. The Site		

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				handing over letter dated: 20-02-2020 is enclosed as Annexure-8 The plant is expected to operate in twelve months time. With this the combined capacity would be 1750 Tonnes Per Day.		
22	06.12.2018 para No.19 (8) of the NGT order, it is observed that "No new facility commercial or non-commercial purpose, to be permitted within the territorial jurisdiction of Municipal Corporations of catchment area of the lake "which generates sewage, until the commissioning of the STPs	On going	No commercial or non-commercial purpose to be permitted within the territorial jurisdiction of catchment are of lake	Maintenance of buffers in Storm Water Drains is based on the order of Hon'ble Supreme Court dated. 05-03- 2019 with respect to Civil Appeal No. 5016/2016 and other connected cases. The Government of Karnataka vide its letter No. UDD 536 Bembuswa 2017, dated.	The BBMP submits that no new facility or expansion of existing facility permitted within the territorial jurisdiction of Municipal Corporation of catchment area of the lake until the commissioning of STP's as per Govt. Notification No. FEE 316 EPC 2015, Bengaluru, Dated:19-01-2016 such structures which have not installed STPs in their premises, occupancy certificates for such buildings are not been issued.	

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	except public toilets. authorities to any project or facility within the buffer zone.			16-03-2019 has issued directions to follow the orders of the Hon'ble Supreme Court (Annexure -9) As per the order of the Hon'ble Supreme Court and directions of the Government, the Commissioner BBMP vide Office Order No. Addl.Dir/TP/PR/108 4/2018-19,Dt.19-03-2019 has ordered to follow the buffer as per the Zoning Regulation 2015 i.e., 30.00 mts for the lakes, 50.00 mts, 25.00 mts and 15.00 mts from the Centre of Primary Drain, Secondary Drain and Territory Drain respectively, while giving permissions for Development / Re-development. (Annexure - 10).	No new facility or expansion of existing facility within the buffer zone as per zoning regulations 2015 of Rajakaluves/SWDs are permitted.	

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				As per the Govt. notification no. FEE 316 EPC 2015, Bengaluru, Dated. 19.01.2016, all residential group housing projects / apartments with 20 units and above or having a total built up area of 2000 sq.mts, for residential building, 2000 sq.mts of commercial building and 5000 sq.mts. of educational buildings, developments are permitted only after production of Consent for Establishment from KSPCB and the Occupancy Certificate is issued to occupy the buildings only after the installation of STP's and duly obtaining Consent for Operation of STP's from KSPCB (Annexure – 11)		

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23	06.12.2018 para No.19 (10) of the NGT order, it is observed that structures, between 30-75 meters of Rajakaluves, which have already been constructed prior to 7.5.2015 (Forward Foundation Judgment) but are uninhabited not to be occupied without the prior permission of the Hon'ble Tribunal and in any event not until commissioning of the STP's in order to prevent generation of more sewage.	On going	Restrictions in the buffer of Rajakaluves.	<ul style="list-style-type: none"> No new facility or expansion of existing facility permitted within the territorial jurisdiction of Municipal Corporation of catchment area of the lake until the commissioning of STPs as per Govt. Notification No. FEE 316 EPC 2015, Bengaluru, Dated. 19.01.2016. Such structures which have not installed STPs in their premises, occupancy certificates for such buildings are not been issued. 	<p>As per the order of the Hon'ble Supreme Court dated: 05.03.2019 in Civil Appel No.5016/2016 and directions of the Government, the Commissioner BBMP Vide Office order No. Addl.Dir/TP/PR/1084/2018- 19, dated:19-03-2019 has ordered to follow the buffer zoning regulation 2015 i.e., 30.00 meters for the lakes, 50.00 meters and 15.00 meters from the centre of primary drain, secondary drain and tertiary drain respectively, while given permissions for development/re-development.</p> <p>For the built up areas. The Government Order No.FEE 316 EPC 2015, Bengaluru, Dated: 19-01-2016 dated has been followed.</p>	

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				<ul style="list-style-type: none"> No new facility or expansion of existing facility within the buffer zone as per zoning regulations 2015 of rajakaluves / SWDs are permitted. 		
24	06.12.2018 para No.19 (11) of the NGT order, it is observed that "Structures between 30-75meters of Rajakaluves, which are under construction, be restrained from constructing further without the prior permission of the Hon'ble Tribunal and in any event not until the commissioning of the STPS."	On going	Restrained from constructing of ongoing structures.	No structures are permitted to be constructed within the buffer zones of rajakaluves as per zoning regulations 2015.	No specific submission has been made by the BBMP. Except stating that no structures are permitted within the buffer zones as per the zoning regulations.	

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25	06.12.2018 para No.19 (16) of the NGT order, it is observed that post removal of waste from the Lake and from the Rajakaluves, the State ought to prepare a detailed project report with respect to disposal of the same.	On going	Post removal of waste from the lakes	<p>A detailed project report is under preparation to dispose off the silt removed from storm water drain and lakes in a scientific manner in to the abandoned quarries as per Solid Waste Management Rule 2016, so that the quarry land is reclaimed and also such reclaimed land can be later used for afforestation and / or play grounds or parks.</p> <p>Identification of specific quarry out of available quarries at Marenahalli, Bagalur, Hullalli will be decided in respect of disposal of silt from Bellandur and Varthur lake, keeping in mind the size of landfill requirement by minimizing transportation is being done by Bangalore Development Authority, are part of the DPR.</p>	The activity has to be done once the de- silting process is over is over by the BDA	The Deputy Commissioner, Bangalore Urban has identified the quarry at Vitsandra and Mylasandra villages in Bangalore South, which is 25kms away from the lake area. The quarry has been handed over to BDA for depositing the silt/sludge. The treatment of the quarry for depositing the sludge will be taken up after finalizing the protocol by KSPCB and CPCB.

KSPCB

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1	In para No.28 (iii) Dated 18.12.2019 of the NGT order, it is stated that "BWSSB may further ensure that treated water is not discharged into the UGB network. Action may be taken against persons responsible for having allowed this to be done earlier resulting into loss of Rs. 2 Lakhs per day i.e. Rs. 60 Lakhs per month and more than Rs. 7 Crore per year without any justification whatsoever.		Disconnections to ensure that no treated effluent is discharged into BWSSB UGD network.	<p>The subject of permitting private STPs to discharge excess treated sewage into storm water drains was discussed in the Board meeting held on 06.12.2019 and after detailed deliberations resolved as under:</p> <p>i) The excess treated sewage water from the private STPs shall be reduced to minimum by encouraging all alternative units outside the premises of the apartment owing the STPs.</p> <p>ii) The unused/ excess treated sewage from STPs will be allowed to be let out in the storm water drains if they are meeting the standards after due check by KSPCB and due permission from BBMP. Thereafter, BWSSB will take necessary steps regarding the matter.</p> <p>iii) STPs not meeting the standards will be continued to be levied penalty as per Hon'ble NGT orders and they shall let out excess treated water in the UGD of BWSSB till they meet the standards.</p> <p>Further, the above subject and the Board decisions was again discussed in the Board meeting held on 13.01.2020 and</p>	<p>The BWSSB submits that the excess treated water was allowed to be discharged in the UGD network as per the conditions stipulated in the consent for operation issued to private STPs by KSPCB. After the orders of NGT, the BWSSB in consultants with KSPCB, the connections given for letting treated water to UGDs have been disconnected for 109 units (out of 496 units, in 109 units UGD connections are disconnected; there is no BWSSB UGD network near 378 units; 2 units are beyond the 110 villages limits of BBMP; 5 units addresses are repeated in the list; 1 unit address is not traceable and 1 unit does not have STP). The ACS, UDD, submits that since, treated water was allowed as per the conditions in the order of consent to operate, no action can be taken against the officials of BWSSB in this matter.</p> <p>In response to the above, the Member Secretary, KSPCB, reports that from the list of 109 Residential/Commercial project total quantity of sewage generated is about 11.462 MLD, out of which by utilizing treated sewage for secondary usage viz... toilet flushing, floor washing, and vehicle washing and for gardening there is an</p>	<p>The volumetric load from discharge of excess treated sewage into BWSSB UGD is 1.03% and which doesn't have any impact on the operation expenses of the STP's.</p> <p>Further, a letter is also addressed to the IIT, Chennai for the suitability to use in the construction purpose by adopting the sensor based monitoring system and the same was also approved in the TAC (Technical Advisory Committee meeting held on 17.1.2020).</p> <p>Board is exploring the possibilities of filling up of the dried lakes from excess treated sewage from the nearby apartments through app based technology after confirmation of the treated sewage to the Board Standards.</p>

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				also the work entrusted by the Board to IISc, Bangalore to study & submit the report on feasibility of sensor based monitoring systems for the private STPs to ascertain the conformity of standards prescribed by the Board.	<p>excess treated sewage of about 4.58 MLD. At present BWSSB is operating 7 sewage treatment plant in Bellandur catchment and 3 more are under stabilization. Total capacity of the 7 operating STP's is 448 MLD and 3 STP's under stabilization is about 50 MLD.</p> <p>It indicates that the volumetric load from discharge of excess treated sewage into BWSSB UGD is 1.03%. This may be considered as small quantity. The Member Secretary submits that their officers/officials are doing regular monitoring and taking actions to prevent the pollution. He has requested that in this background, no action against the officials may be taken. The NGT is requested to take a view in the above facts and circumstances.</p>	
2	In para No.28 (iv) Dated 18.12.2019 of the NGT order, it is stated that "Sources of discharge of sewage becontrolled/regulated and electricity and water supplies to the defaulting establishments be stopped for		Units not have in STPs and discharging sewage directly in UGDs/SWDs and others	The process to be followed is issue of Notice of proposed Directions under Sec 33(A) of Water Act followed by personnel hearing and then issue of closure orders. The process is initiated and shortly the closure orders will be issued for such units.	KSPCB reports that there are 61 units identified which are not having STPs. Rs.271.5 Crores are estimated to be recovered. No money has been paid by the units till date. The closure orders under section 33(a) of Water Act are under process of issuing show cause notices to the concerned.	The Personnel hearings are kept on hold due lock down imposed in view of the Covid-19 pandemic.

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	enforcement of law till remedial steps are taken for compliance.					
3	In para No.28 (vii) Dated 18.12.2019 of the NGT order, it is stated that the State PCB itself may lay down standards for prosperous instead of waiting for notification by MoEF&CC.		To issue notification from State	Bureau of Indian Standards has already issued draft notification on Phosphorus limit in Soaps and detergents awaiting copy. Meanwhile a letter is addressed to the Department of Ecology and Environment Government of Karnataka advising them to limit the phosphorous content as approved in the Board Meeting.	KSPCB reports that Bureau of Indian Standards has already issued notification on Phosphorus limit in Soaps and detergents awaiting copy. KSPCB recommended to issue notification to State Government limiting Phosphorus in Soap and Detergents. State yet to issue the order.	KSPCB is pursuing the matter with State Government. It will be released shortly.
4	18.12.2019 para 28 (ix) Compensation already assessed be recovered by adopting coercive measures such as disconnection of electricity and water supplies		To recover the compensation by adopting coercive measures	Board has identified 61 defaulting units who have not installed STPs and assessed an amount of Rs 271.50 Crores. Issuing Closure Orders for the defaulting units who have not paid Environmental Compensation (EC) as coercive measures is under process. Board has identified 376 defaulting units and assessed an amount of Rs 19.85 cores. Out of 376, units 22 units have paid an Environmental Compensation(EC) amount of Rs 115 lakhs (Rs 5 lakhs by each & M/s HSBC data Processing India	KSPCB reports that there are 61 units identified which are not having STPs. Rs.271.5 Crores are estimated to be recovered. No money has been paid by the units till date. The closure orders under section 33(a) of Water Act are under process of issuing show cause notices to the concerned. Amount of Rs75 Lakhs have been collected from 14 units. Further a writ petition No 4284/2020 has been filed before the Hon'ble High Court of Karnataka by M/s. Share wood Residents Association : an	The process to be followed is issue of Notice of proposed Directions under Sec 33(A) of Water Act followed by personnel hearing and then issue of closure orders. The process is initiated and shortly, the closure orders will be issued for such units. Further,12 units have paid an Environmental compensation of Rs 60 Lakhs 1. Gopalan Enterprises (india) Pvt Ltd, No:6,87/1B,88,90/1,90/2,143/1B,Benaganahalli Old madras Road,Bengaluru-560036.

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			Name of the work/activity/others	Status		
				<p>Pvt Ltd have paid Rs.10 lakhs).</p> <ol style="list-style-type: none"> 1. M/s Happiest Minds, Ganapa Towers, No. 51/3, Hosur Main Road, Madiwal, Bengaluru - 560 076 2. M/s Prism Properties, Prism Sovereign Apartment, Sy No. 106/1 & 107, Kundalahalli Village, K.R Puram Hobli, Bengaluru East Taluk 3. M/s Nandi Gaardens Apartment Owners Association, Nandi Gardens, J.P Nagar 9th phase, Aalahalli, Anjanapura Post, Bengaluru. 4. M/s Sumadhura Silver Ripples Owners Welfare Association at Sy No. 25/1A, 25/2, 28, 30/2, Nallurahalli Village, KR Puram Hobli, Bengaluru - 5600 066. 5. M/s Chitrakut Environs Apartment Owners Welfare Association, at Sy No. 184, 7th Cross, Veerabhadra Nagar, Talacauvery Layout, Basavanagar, Bengaluru - 560 037. 6. M/s SJR Builders by name SJR Luxuria, at Sy No. 100/P/1, 101/1 & 103, Arekere Village, Begur Hobli, Bengaluru. 7. M/s Ferns Icon & Developers Ltd, Ferns Icon Apartment, at Sy No. 28, 34/3, 36/2, 36/3, 36/4 & 36/5, Doddanekundi Village, Bengaluru East Taluk. 8. M/s Island Star Mall Developers Pvt Ltd., at No. 40/41, Lower Ground, Whitefield Main Road, Mahadevapura Post, Bengaluru. 9. M/s DSR spring Beauty Apartment Owners Association, at Sy No. 124/1, Kundalahalli, AECS Layout, ITPL Main road, Bengaluru. 10. M/s Intel Technology India Pvt Ltd, No. -23-56P, Outer Ring Road, Devarabeesanahalli, Varthur Hobli, Bengaluru. 11. M/s HSBC data Processing India Pvt Ltd, No. 148/1, Futura, Bannerughatta Road, Bengaluru. 12. M/s Maruthi Infotech Centre, Sy No. 11/1 & 12/1, Challaghatta Village, Amariyothi Layout, Intermediate ring road, Domlur, Bengaluru. 13. Samhi JV Business Hotels Pvt Ltd., (Formerly Supreme Build Cap Pvt Ltd.) Sy No. 43,44/1, 44/2, Devarabisanahalli, Varthur Hobli, Bemngaluru. 14. Keys Hotel, No. 7 Hosur Main Road, Singasandra Village, Bengaluru. 15. M/s Golf Link Software Pvt Ltd, SY No 13/2, Challaghatat village, off intermediate ring Road Bangalore. 	<p>interim direction 26.2.2020has been issued from Hon'ble High Court as under :-</p> <ul style="list-style-type: none"> ➤ By way of add-interim relief, we restrain the second respondent from initiating any proceedings to recover the amount mentioned in Annexure-F1 and F2. ➤ However, notwithstanding pendency of this petition it will be always open for the second respondent (KSPCB) to issue Show cause notice in terms of Annexure F1 & F2. ➤ Needless to add that before passing final orders on the notices at Annexure A1& A2 as well as G1 & G2 and Show cause notices issued in terms of Paragraphs 9 above an opportunity has being heard shall be granted to the petitioners. <p>Further, in another writ petition No. 3303/2020, the Hon'ble High Court has issued interim order (12.02.2020) directing the KSPCB to issue Show cause notice to the petitioner to be heard for a liability of Rs. 7 Crores. Meanwhile, the electricity supply to the premises of the</p>	<ol style="list-style-type: none"> 2. St.Marks Hotel, No.4/1, St.Marks Road, Bengaluru-560001. 3. Maruthi Infotech Centre, Sy. No. 11/1 & 12/1, Challagatta Village, Amariyothi Layout, Intermediate Ring Road, Domlur, bangalore. 4. Accenture Service Limited, C/o, RMZ Eco Space Campus-2A Block. No.17/2 to 17/4 to 25/B, 43/1 to 50, Bellandur Village, Bengaluru. 5. Accenture Service Limited, C/o, RMZ Eco Space Campus-2B Block. No.17/2 to 17/4 to 25/B, 43/1 to 50, Bellandur Village, Bengaluru. 6. AMR Tech Park, 1, 1A, 2A, No.23/24, Hongasandra, Bommanhalli Hosur Main Road, Bangalore-560068. 7. AMR Tech Park, IV A/B No.23/24, Hongasandra, Bommanhalli Hosur Main Road, Bangalore-560068. 8. New Horizon Educational & Cultural Trust, Sy.No. 14 (New ,48,48,90) 39, 40, 41 & 42, Kadubeesanahalli Village, Varthur Hobli, Bengaluru East Taluk, Bengaluru Urban District. 9. Techpark Hotels Pvt. Ltd.(Novotel & IBIS), Sy.No. 41/1 & 41/2, Devarabisanahalli, Varthur Hobli, Bengaluru. 10. Ushodaya Luxuria Owners Association, Sy.No.29/11, IAS Layout, Kasavanahalli, Central jail Road, Bengaluru. 11. Gopalan Millenium Towers, Sy. No. 133, Kundalahalli Village, K.R. Puram Hobli, Bengaluru. 12. Soul Space Projects Limited, (Soul Space Arena), Sy No. 36/5, Doddenakundi VillageMahadevapura Post, Outer Ring Road,Bangalore East Taluk <p>Further, in writ petition No. 4540/2020, for 6 Number Petitioners, the Hon'ble High Court has issued interim order (27.02.2020) directing the</p>

Sl. No.	Directions/Recommendations issued by this Hon'ble Tribunal vide Order Dated 18.12.2019	Time line fixed for execution of the action plan by this Hon'ble Tribunal vide order dated 18.12.2019	Compliance / Status of the works		Observations as per monitoring committee report dated 06.03.2020	Remarks
			Name of the work/activity/others	Status		
				<p>16. Mohan Enterprises, Krishna Maganumm, Sy NO 65/3, Doresanipaly Bangalore.</p> <p>17. Mohan Enterprises, Kalyani Vista SY No 165/1, Doresanipalya Bangalore.</p> <p>18. M/s. Royal citadel apartment owners association No 157/6, Begur Village, Bangalore</p> <p>19. Mohan Enterprises, Kalyani Magnum Sy No 165/2, Doresanipaly Bangalore.</p> <p>20. M/s. GV properties Pvt Ltd, Embassy Point SY No 10/2a to 2b, CHallaghata Village, Bangalore.</p> <p>21. Umbal Properties Pvt Ltd, Hilton Residencies SY No 5/1, Challaghata Village, Banglaore.</p> <p>22. M/s Aricent Technologies Ltd, SY No 18/1, ORR, Panathur Post Kadubeesanahalli, Bangalore.</p> <p>Issuing Closure Orders for the defaulting units who have not paid Environmental Compensation (EC) is under progress.</p>	<p>Petitioner shall not be disconnected. In the NGT may kindly take note of it to issue further directions in the subject matter.</p>	<p>KSPCB to issue Show cause notice to the petitioner</p> <p>1. Brigade Harmony Apartment owners Associations, Sy NO 250, Ramagondanahalli village, whitefiled Bangalore.</p> <p>2. Druvika Mogra Apartment welfare association No 3333, Whitefiled, Mahadevapura, Bangalore.</p> <p>3. AOC- DNR atmosphere owners condominium owners and residents welfare association, 231, Varthur Main road, Whitefiled Bangalore.</p> <p>4. Durga Rainbow Flat owners welfare association, No 8/1, 9/1, 9/2, 9.3 ORR, Mahadevapura Bangalore.</p> <p>5. Nagarjuna Maple heights apartments Condominium at 182-185 Narayanapura, ORR, Mahadevapura Bangalore.</p> <p>6. Nester Raga owners associations Sy No 152,153, Marathahalli ORR mahadevapura Bangalore.</p> <p>An interim direction 26.2.2020 has been issued from Hon'ble High Court as under :-</p> <p>➤ We direct that, if any orders are passed on the show cause notices, Annexure-A1 to A6 no action on the basis of such order shall be taken for a period of 15 days from the date on which the order are served upon the petitioners. Till the next date, no action shall be taken for recovery of the</p>

Sl. No.	Directions/Recommendations issued by this Hon'ble Tribunal vide Order Dated 18.12.2019	Time line fixed for execution of the action plan by this Hon'ble Tribunal vide order dated 18.12.2019	Compliance / Status of the works		Observations as per monitoring committee report dated 06.03.2020	Remarks
			Name of the work/activity/others	Status		
						<p>amount on the basis of the notices at annexure F1 to F6.</p> <p>➤ It will be open for the second respondent to issue show cause notices in terms of Annexure F-1 to F-6 and to pass orders after giving an opportunity of being heard to the petitioners. If final orders are passed on the basis of the said show cause notices, the same shall not be implemented in any manner for a period of 15 days from the date on which the final orders are served upon the respective petitioners.</p> <p>In view of the Hon'ble High Court order, KSPCB is calling the petitioners for Personal hearing before initiating coercive action for recovery of Environmental Compensation. This process is held up due to COVID-19 It is humbly brought to the notice of NGT</p>
6	<p>18.12.2019 para 28(xi)</p> <p>The state PCB may develop a robust water quality monitoring program for monitoring of water quality of</p>		To collect the samples at 5 location of each lake	The Board has been collecting the samples at regular intervals.	Samples are collected and being analyzed. However, presently the sewage water is diverted through the diversion cannel in both the lakes and no water is entering into the lakes	Sample of lake water is being collected at least from 2 points in each lake as the water has receded after diverting the entry of sewage water into the lake. Results are submitted already.

Sl. No.	Directions/Recommendations issued by this Hon'ble Tribunal vide Order Dated 18.12.2019	Time line fixed for execution of the action plan by this Hon'ble Tribunal vide order dated 18.12.2019	Compliance / Status of the works		Observations as per monitoring committee report dated 06.03.2020	Remarks
			Name of the work/activity/others	Status		
	drains leading to the lakes and also undertake water quality monitoring atleast 5 locations for each lake.					
7	18.12.2019 para 28 (xiv) Real time water quality system be commissioned by 31.01.2020 as proposed.		To establish the water quality monitoring stations	The Board has already installed the Real Time Water Quality Monitoring systems at 3 locations.	Real Time Water Quality Monitoring systems at 3 locations	

Southern Side Diversion Channel near Defence land at Bellandur Lake













BELLANDUR LAKE NORTHERN SIDE DIVERSION CHANNEL NEAR HAL COMPOUND





BELLANDUR LAKE SOUTHRN SIDE DIVERSION CHANNEL NEAR SUN CITY APARTMENT





VARTHUR LAKE NORTHERN SIDE DIVERSION CHANNEL NEAR RAMAGONDANAHALLI KODI





VARTHUR LAKE SOUTHERN SIDE DIVERSION CHANNEL NEAR VARTHUR KODI





VARTHUR LAKE SOUTHERN SIDE DIVERSION CHANNEL NEAR VARTHUR KODI



VARTHUR LAKE SOUTHERN SIDE DIVERSION CHANNEL NEAR BALAGERE



VARTHUR LAKE SOUTHERN SIDE DIVERSION CHANNEL NEAR BALAGERE





VARTHUR LAKE SOUTHERN SIDE DIVERSION CHANNEL NEAR BALAGERE





Proposed Bio Diversity Park area at Bellandur Lake



Perimeter ⓘ

874 m ▼

Bellandur lake

Area

47,672 m² ▼



Perimeter ⓘ

1.04 km ▾

Bellandur lake

Area

56,096 m² ▾



Near Y-junction (Manthri side)



Perimeter ⓘ

893 m ▾

Bellandur lake

Area

23,799 m² ▾



Perimeter ⓘ

2.72 km ▾

Bellandur lake

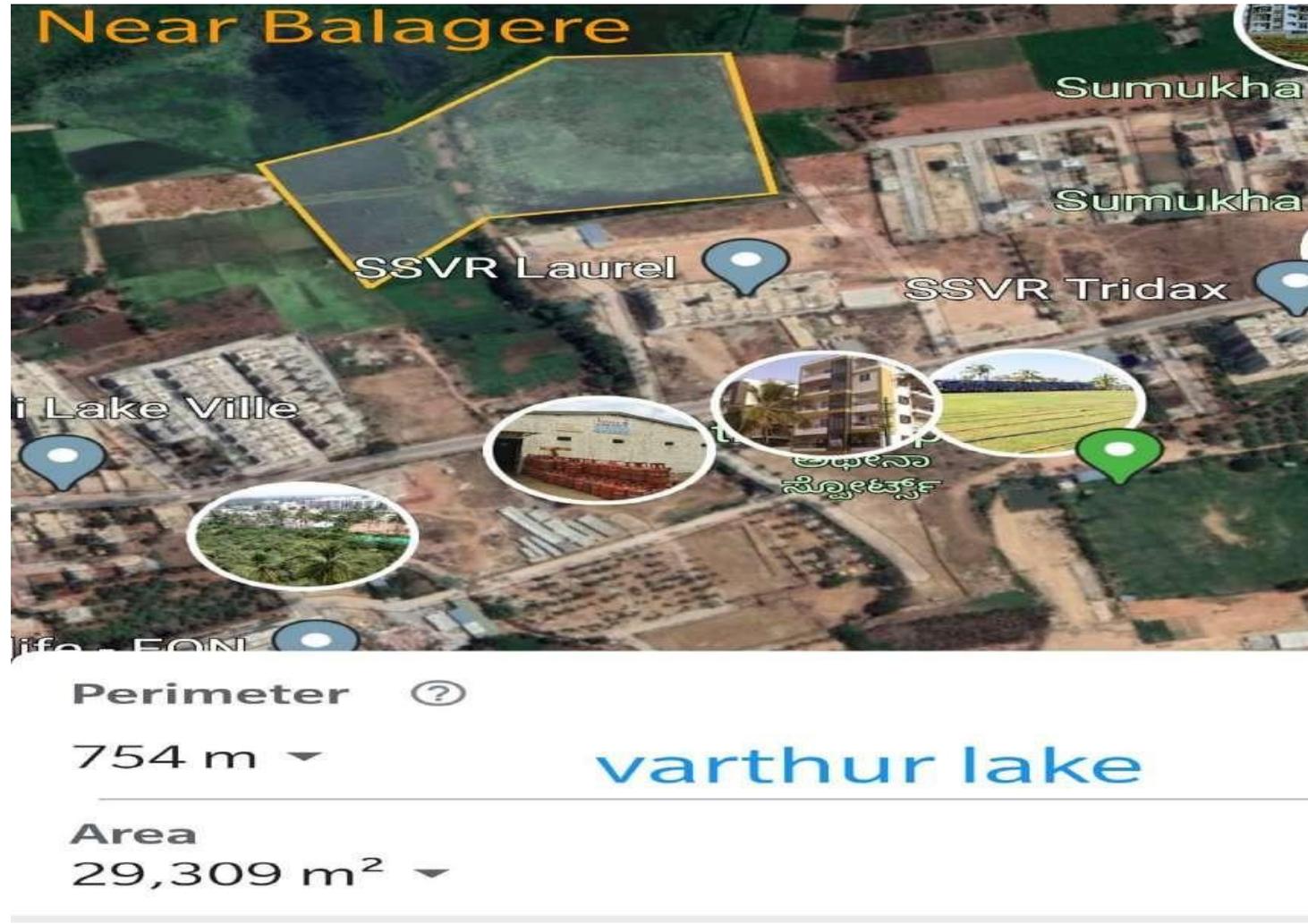


Area

23,688 m² ▾



Proposed Bio Diversity Park area at Varthur Lake







Perimeter ⓘ

889 m ▼

varthur lake

Area

27,977 m² ▼

De-silting work at Bellandur Lake











De-silting work at Varthur Lake







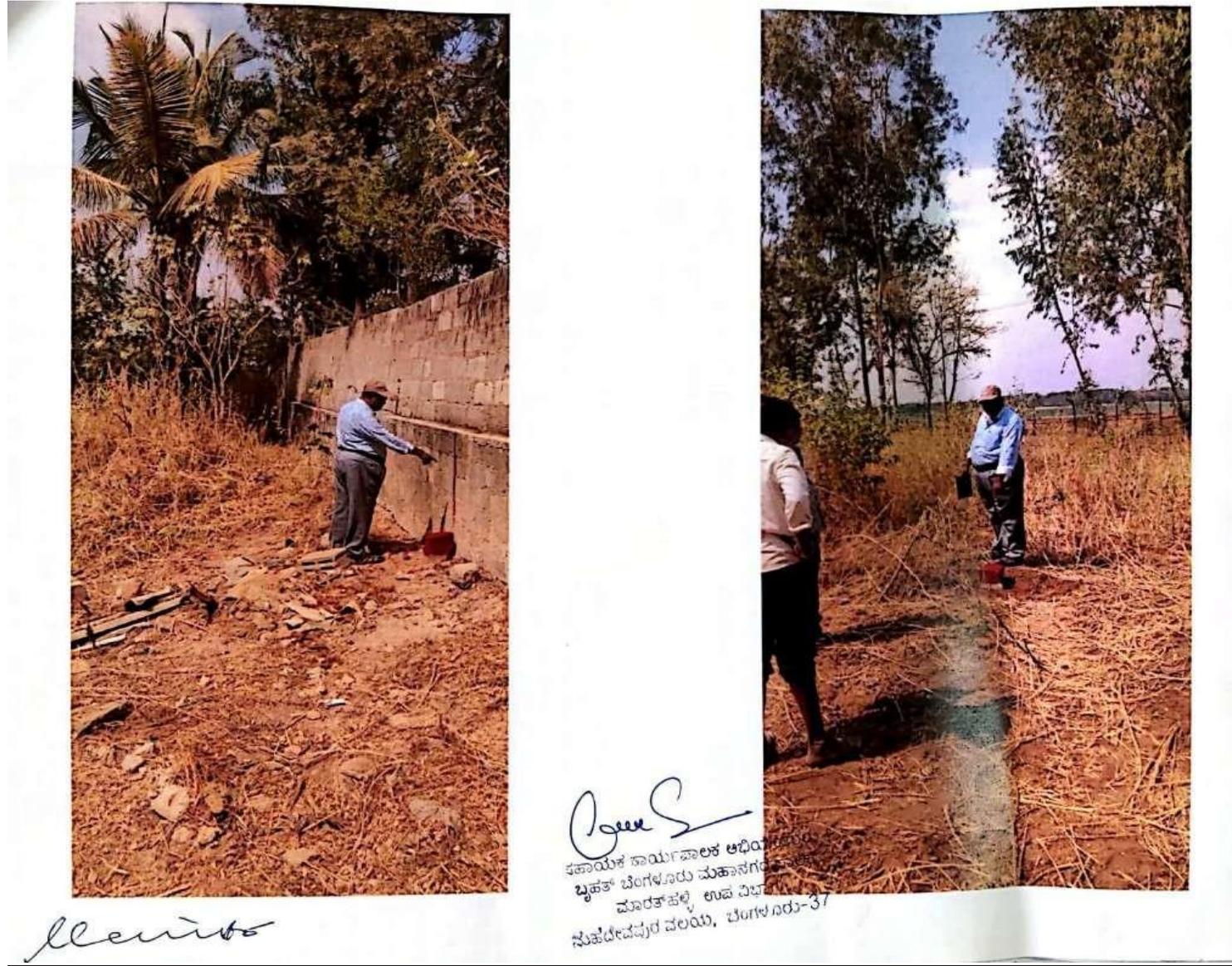








Photographs showing Constructed Buildings within the Buffer Zone of Bellandur Lake

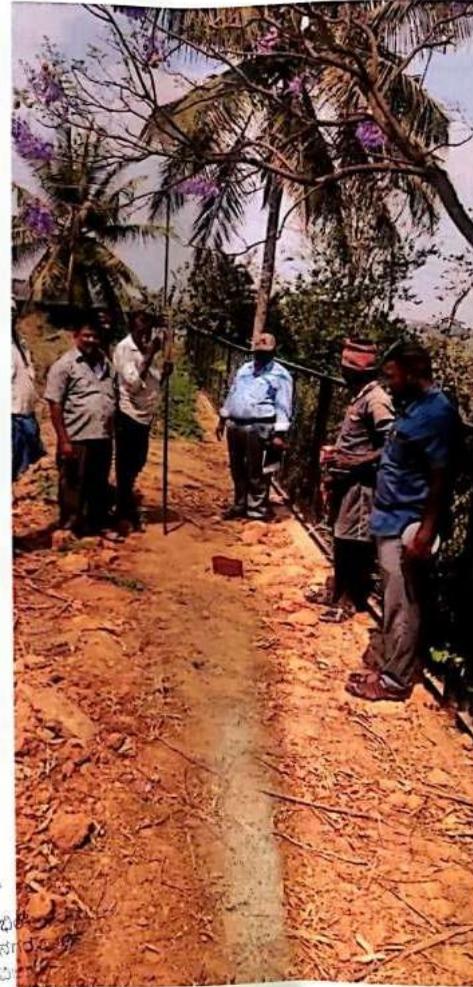


ANNEXURE-1

Photographs showing Constructed Buildings within the Buffer Zone of Bellandur Lake



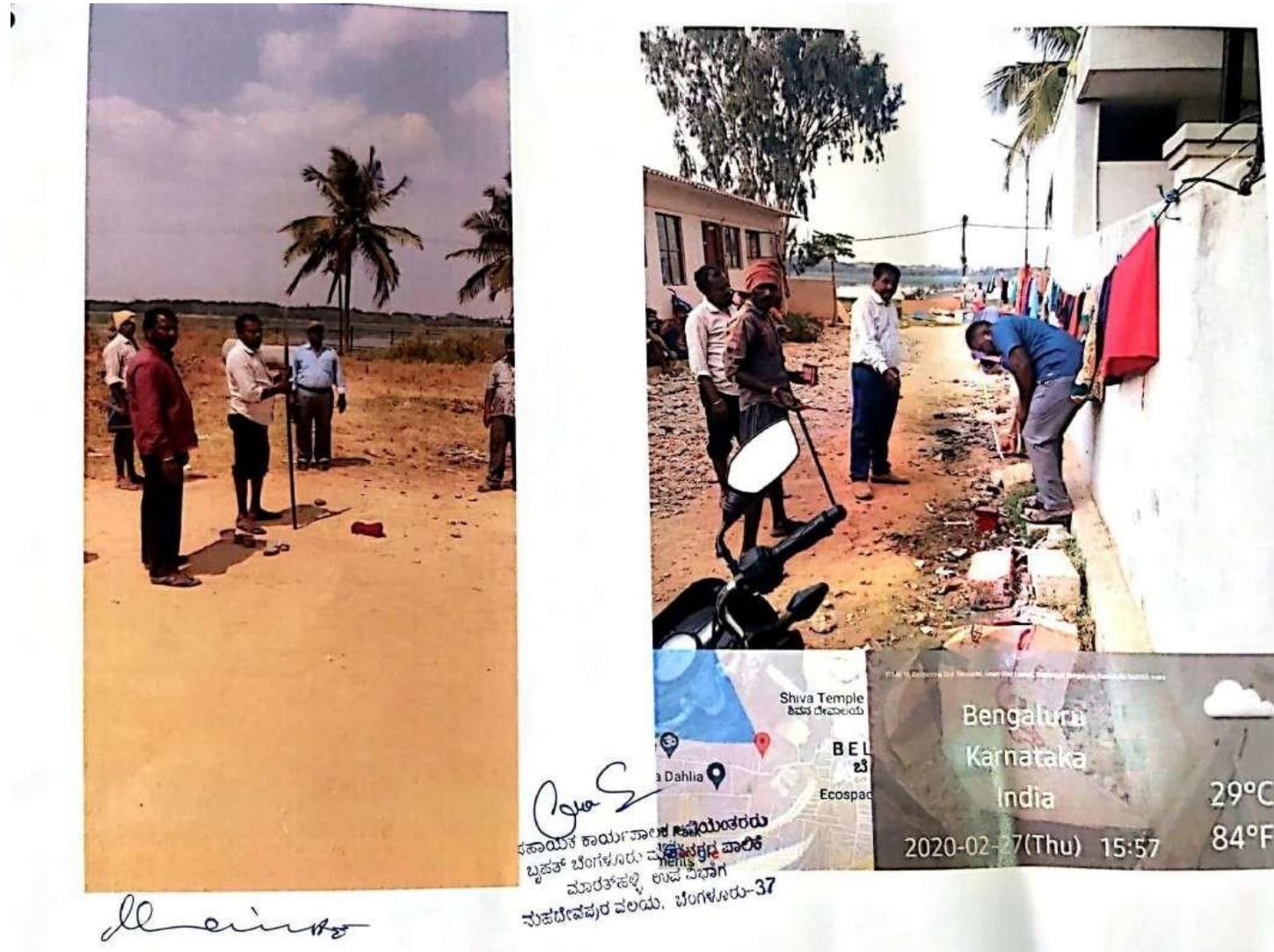
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ವಿಜಯಲಕ್ಷ್ಮಿ ಕಾರ್ಯಾಲಯ ಅಧೀನ
ಬೃಹತ್ ನಗರೀಯ ಮಹಾನಗರ
ಮಂತ್ರಾಲಯ, ಅಂತರ
ಸುತರಸವು, ಬೆಂಗಳೂರು-೫೬

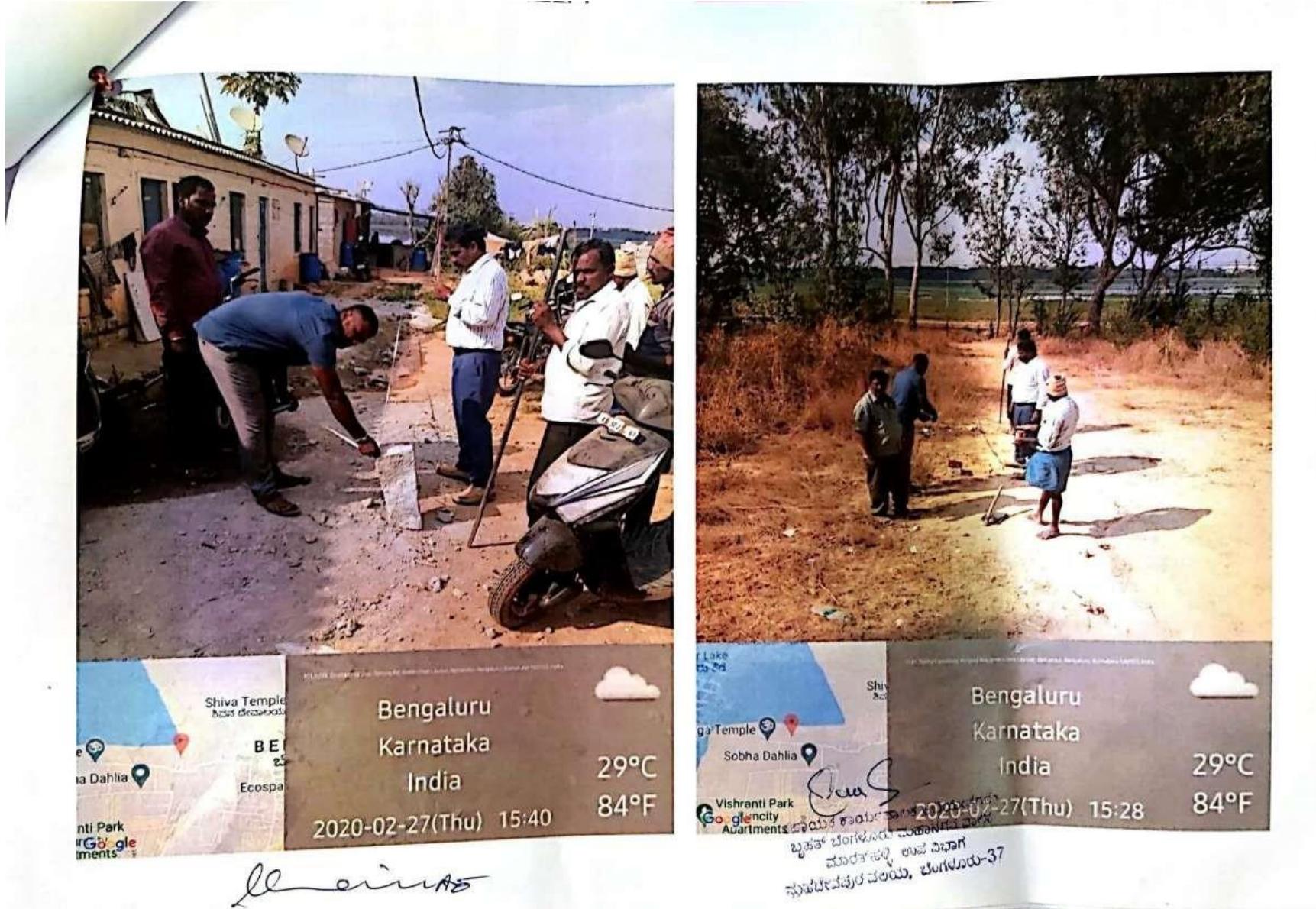
ANNEXURE-1

Photographs showing Constructed Buildings within the Buffer Zone of Bellandur Lake



ANNEXURE-1

Photographs showing Constructed Buildings within the Buffer Zone of Bellandur Lake



ANNEXURE-2

Photographs showing Constructed Buildings within the Buffer Zone of Varthur Lake at Ward No.149 Vathur



ANNEXURE-2

Photographs showing Constructed Buildings within the Buffer Zone of Varthur Lake at Ward No.149 Vathur



ANNEXURE-3

Details of structures and owners located within 30m buffer of Bellandur lake and action initiated under section 308 of KMC act as per the direction of , NGT
Order No-41/2019.6-12-2018 and 18-12-2019

Sl no	Name of owners	Address of structures	nature of structure	whether notice served or not
1	Sri.Prasanna Shetty S/o Late. Nadayya shetty	Khat no.1235/101/3, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
2	Sri.Babu reddy	Survy no.101, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
3	Sri.Venu gopal	Survy no.101/4, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
4	Sri.Ankappa reddy	Survy no.101/12, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
5	Sri.Nanjunda reddy	Survy no.101/4, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
6	Sri.Venkatesh reddy	Survy no.101, Doddamma temple road, Bellandur road, Ward no.150, Bangalore	Residential structures	served
7	Sri.Jayaram reddy	Survy no.102/1, Kataha no.2025/102/1, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
8	Smt. Praveena	Survy no.102 Bellandur Village , Ward no.150, Bangalore	Residential structures	served
9	Sri.Prem kumar	Survy no.102, Doddamma temple road, Bellandur Village, Ward no.150, Bangalore	Residential structures	served

ANNEXURE-3

10	Sri.B.W.Ramayya Reddy	No.518/504/102/1, Doddamma temple road, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
11	Sri.Vasanth Reddy	Survy No.101, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
12	Sri.Venkataswamy Reddy	Survy No.101, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
13	Smt.Jayalakshmi	Survy No.101, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
14	Sri.Chandra shekar Reddy	Survy No.101, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
15	Sri.Somashekar Reddy	Survy No.101, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
16	Sri.Narayanappa S/O Kakappa	No.0720, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
17	Sri.Muniyappa S/O Chikka muniyappa	No.728, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
18	Sri.Muniyappa S/O Puttappa	No.721, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
19	Smt.Venkata Giriamma	No.207, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
20	Sri.sadashiva reddy B.P	No.30/9, 11th cross, Bellandur Village, Ward no.150, Bangalore	Residential structures	served
21	Sri.M.Rajendra	Survy No.30/7, Bellandur Village, Ward no.150, Bangalore	Residential structures	served

Asst. Executive Engineer
Marathahally Sub-Division
BBMP, Bangalore


Executive Engineer
Mahadevapura Division
Bruhat Bengaluru Mahanagara Palike

ANNEXURE-4

**Details of structures and owners located within 30m buffer of Varthur lake and action initiated under section 308 of KMC act as per the direction of ,
NGT Order No-41/2019.6-12-2018 and 18-12-2019**

Sl no	Name	Address	Details	nature of structure	whether notice served or not
1	Sri. Subramani & Ravi Yalappa,	Varthur Village, Vathur Hobli, Bangalore east Taluk, Bangalore	30/1 Varthur	Residential structures	served
2	Sri. Jayaram,	Varthur Village, Vathur Hobli, Bangalore east Taluk, Bangalore	28/16 Varthur	Residential structures	served
3	Sri Mahesh & Umesh,	Varthur Village, Vathur Hobli, Bangalore east Taluk, Bangalore	23 Varthur	Residential structures	served
4	M/s Ankit Interior Solutions,	Varthur Village, Vathur Hobli, Bangalore east Taluk, Bangalore	13 Varthur	Residential structures	served

Asst. Executive Engineer
Whitefield Sub-Division
BBMP, Bangalore


 Executive Engineer
 Mahadevpura Division
 Bruhat Bengaluru Mahanagara Palike

ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Varthur Lake CCTV Camera Installations Work



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Varthur Lake Street Lights Installations Work



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Varthur Lake Street Lights Installations Work



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Bellandur lake Street Lights & CCTV Camera



ANNEXURE-5

Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Bellandur Lake Marshel Wacth Tower



ANNEXURE-5

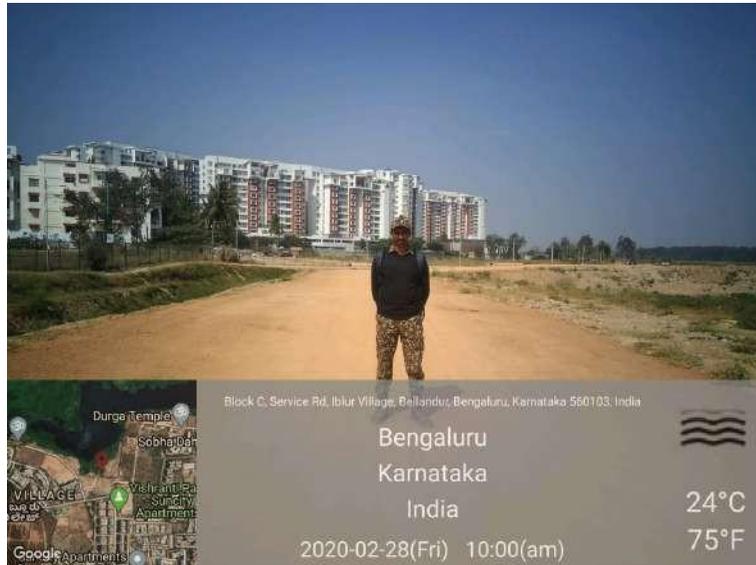
Photographs showing the installation of CCTV, LED street lights and watch towers at Bellandur & Varthur lakes

Varthur Lake Wacth Tonwer & Offices Premises



ANNEXURE-6

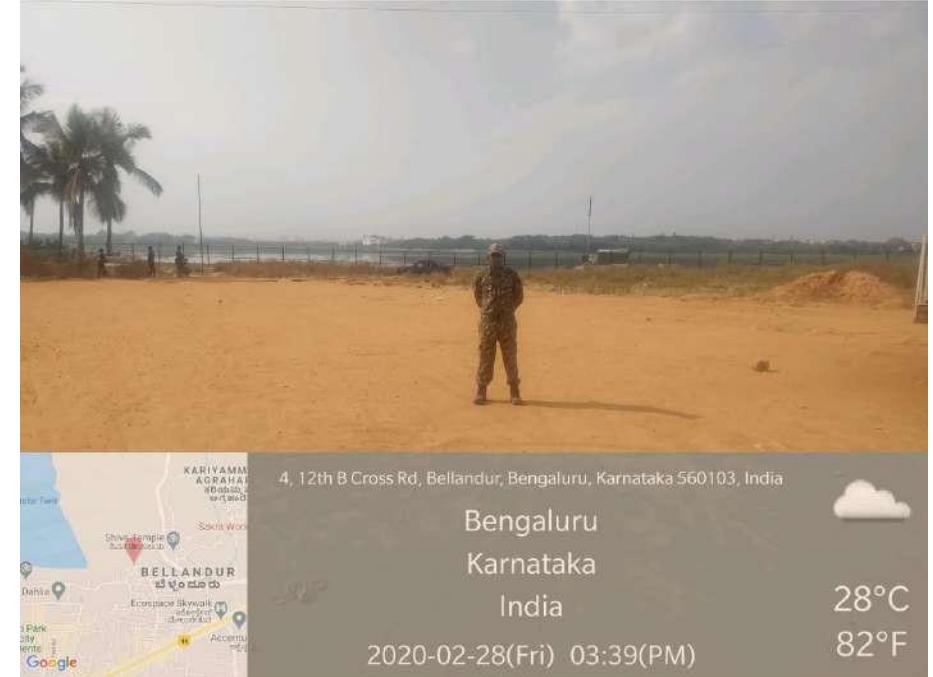
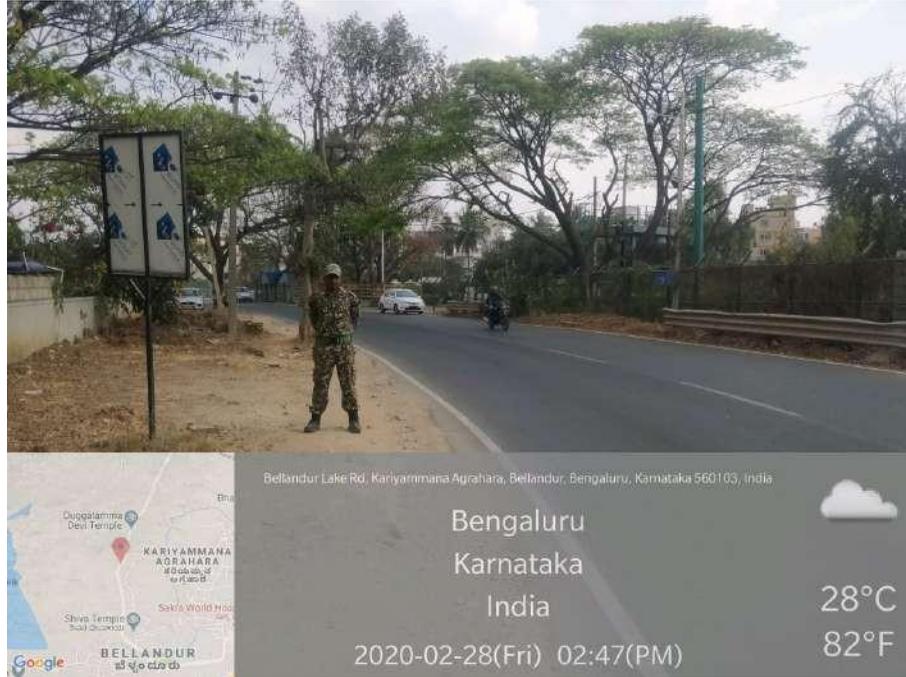
DEPLOYMENT OF MARSHALS AT BELLANDUR LAKE



ANNEXURE-

6

DEPLOYMENT OF MARSHALS AT BELLANDUR LAKE

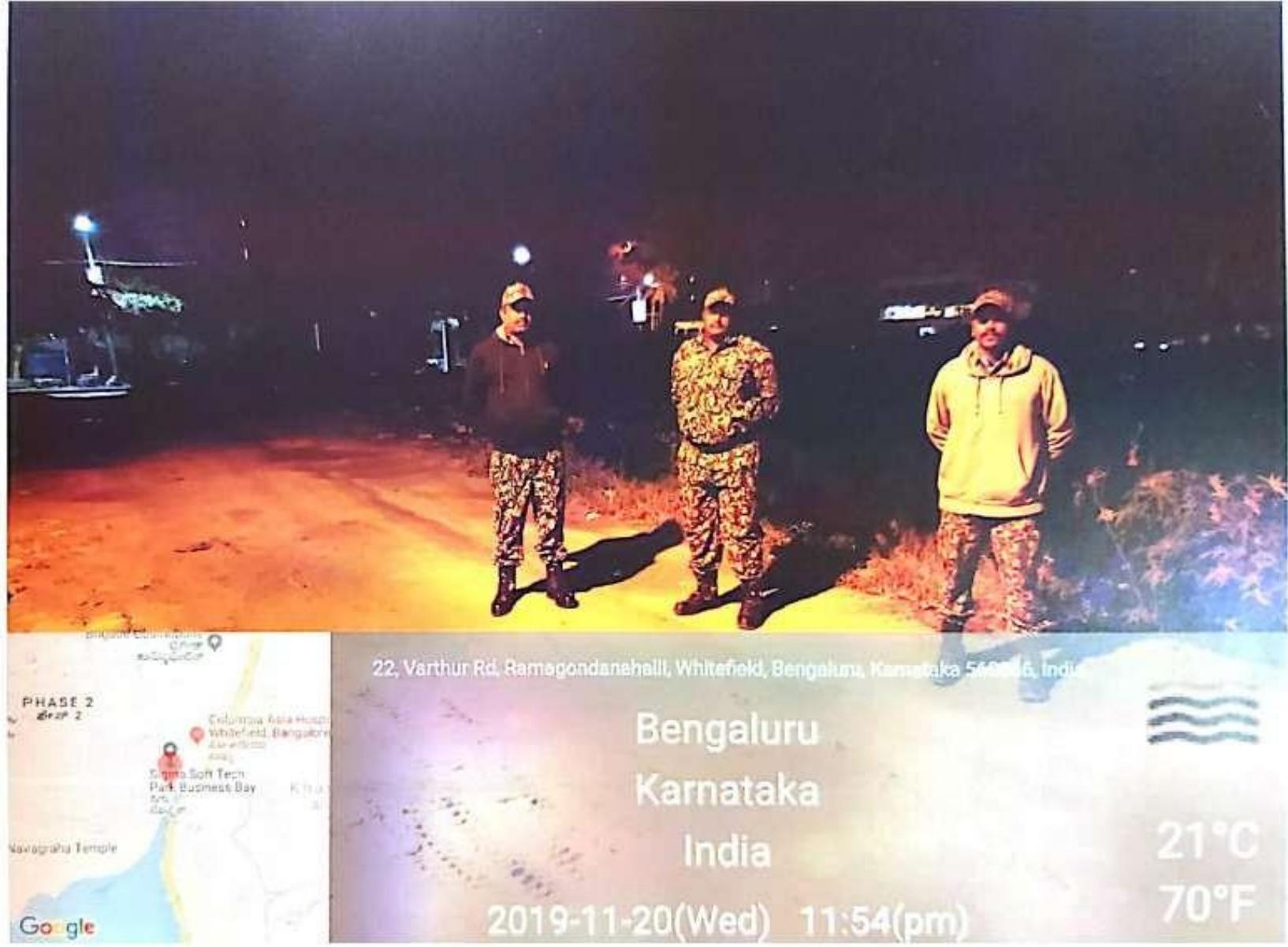


ANNEXURE-7

MARSHAL DEPLOYED AT VARTHUR LAKE



ANNEXURE-7



ANNEXURE-7

MARSHAL DEPLOYED AT VARTHUR LAKE



Idgha Rd, Devasthanagalu, Varthur, Karnataka 560067, India

Varthur
Karnataka
India



26°C

79°F

2019-11-21(Thu) 06:05(pm)



Idgha Rd, Devasthanagalu, Varthur, Karnataka 560067, India

Varthur
Karnataka
India



26°C

79°F

2019-11-21(Thu) 06:43(pm)

ANNEXURE-8



Bruhat Bengaluru Mahanagara Palike

O/a. Executive Engineer-2, SWM-1, 2nd Floor, Dasappa Hospital Building, N.R. Road, Bengaluru - 560 002.
Off No: 080-22975546, e-mail: geswmbbmp@gmail.com

No: EE-2/ SWM-1/ PR/ 648 / 2019-20

Date: 20.02.2020

Site Handing over letter

To:

M/s Rubble Revival Private Ltd.,
(M/s Rock Crystal)
No: E-127, Manyatha Residency,
Nagawara Ring Road,
Bengaluru - 560 045.

Sub: Design, Finance, Build, Operate & Transfer 750 MTPD Construction and Demolition waste processing facility operation & maintenance for 20 years at Sy. No 50, Kannur Village, Biderahalli Hobli, Bengaluru East Taluk, Bengaluru (Abandoned Quarry area).

Ref: 1. Handing over letter No: BMTG/ Central Office/ No/ Commercial/ Estate/ 508/ 4787/ 2013-14, Dated: 09.01.2014.
2. Government order No: UDD 517 MNY 2018, Bengaluru, Dated: 08.03.2019.
3. LOA letter No: EE-2/ SWM-1/ PR/ 288/ 2019-20, Dated: 24.04.2019.
4. Special Commissioner, SWM office letter No: JC/ SWM/ PR/ 50/ 2019-20, Dated: 25.04.2019.
5. Concession Agreement No: EE-2/ SWM-1/ AGR/ 01/ 2019-20, Dated: 11.11.2019.
6. The Tahsildar Bengaluru East letter no: LND (B) C.R 456/2012-13, Dated: 27.12.2019.

By virtue of having executed the Concession agreement with you vide ref (5) above and to discharge obligations under the Concession agreement, 10 Acres of land (Abandoned Quarry area) at Sy. No 50, Kannur Village is handed over to you along with the survey report and sketch for facilitating the establishment of C & D waste processing plant on "as is where is" basis. The same was jointly inspected on 20.02.2020.

Day 20/02/2020

[Signature]
Assistant Executive Engineer
Solid Waste Management-1

Copy Submitted to:

1. The Learned Commissioner for kind information.
2. The Special Commissioner, SWM for kind information.
3. The Deputy Commissioner of Police, L & O, Bengaluru North East for Kind information.
4. The Joint Commissioner, SWM for kind information.
5. The Chief Engineer, SWM-1 for kind information.
6. The Superintendent Engineer, SWM-1 for kind information.
7. The Executive Engineer, SWM-1 for kind information.
8. The Station House Officer, Bagalur Police station, Bengaluru for Kind information.
9. Office copy.

ANNEXURE-9

Government of Karnataka

No. NaAaE 536 BemBhuSwa 2017

Karnataka Government Secretariat,
Vikasa Soudha, 4th Floor,
Bengaluru, Dated: 16.03.2019.

From:

Addl. Chief Secretary to Government,
Urban Development Department,
Vikasa Soudha,
Bengaluru.

To,

- 1) The Commissioner, Bengaluru Development Authority.
- 2) The Commissioner, Bruhat Bengaluru Mahanagara Palike, Bengaluru.

Sirs,

Sub: Regarding the Civil Appeal No. 5016/2016 and
other connected cases filed before the Hon'ble
Supreme Court.

With reference to the above subject, the copy of the order dated 05.03.2019 passed by the Hon'ble Supreme Court in Civil Appeal No. 5016/2016 and other connected cases. In the said Judgment the Civil Appeal No. 5016/2016 and 8002-03/2016 have been dismissed and the direction issued by the Hon'ble National Green Tribunal Board in Original Suit No. 222/2014 dated 04.05.2016 has cancelled except the Respondent-9 & 10. Therefore, I have been directed to send the Judgment of the Hon'ble Supreme Court along with this letter for further action.

Yours faithfully,
Sd/-

(K.S. JAGADEESHAREDDY)
Under Secretary to Government,
Urban Development Dept.

ANNEXURE-10

EMBLEM
BRUHAT BENGALURU MAHANAGARA PALIKE
Office of the Commissioner, Narasimharaja Square, Bengaluru-560 002

No.HeNiNaYo/PR/1084/2018-19

Dated: 19/03/2019

OFFICE ORDER

Sub: Regarding reservation of buffer zone to the Tanks And Rajakaluves while issuing License, Preliminary Certificate and Possession Certificate for construction of building in the ambit of Pulike.

- Ref: 1) Order dated 05-03-2019 passed by the Hon'ble Supreme Court in Civil Appeal No. 5016/2017, 4923-4924/2017 and other connected Civil Appeals.
2) Order dated 04-05-2017 passed to the Original Suit No. 222/2014 of the Hon'ble National Green Tribunal Bench.

The General Condition and direction No. (1) in the order dated 04-05-2016 of Original Suit No. 222/2014 by the Hon'ble National Green Tribunal and the Civil Appeal No. 4923-4924/2017 and other connected Civil Appeals have been questioned before the Hon'ble Supreme Court in the Civil Appeal No. 5016/2016. The relevant portion of the order dated 05-03-2019 passed by the Hon'ble Supreme Court in the said Civil Appeals, is as hereunder.

"62. In the light of the above discussion, we pass the following order.

- (i) Civil Appeal No. 5016 of 2016 and Civil Appeal Nos. 8002-8003 of 2016 filed by the appellants/respondent nos. 9 and 10 are hereby dismissed. The impugned judgment and order in so far as appellants/respondent Nos.9 and 10 are concerned is sustained.
- (ii) All the other appeals are hereby allowed and the diction/condition No. (1) in the order dated 4.5.2016 is hereby set aside except the direction issued against respondent Nos. 9 and 10".

The General Conditions or directions at Sl.No. 1, the buffer zone prescribed in the Rules for Tank and Rajakaluvus of the NGT Order to

220
the Original Suit No. 222/2014 (Forward Foundation & Ors. V/s. State of Karnataka & Ors) dated 04-05-2016, have been re-fixed and ordered.

As per the order dated 05-03-2019 issued by the Hon'ble Supreme Court in Civil Appeal No. 5016/2016 and other Civil Appeals, the buffer zone prescribed to the tanks and Rajakaluves by the National Green Tribunal has been set aside. Therefore, the approval for the plan to be granted as per the buffer zone prescribed to the Tanks and Rajakaluveys as per the Master Plan 2015,

Therefore, in future while issuing the License for construction of building in the ambit of Palike and the approval for the revised plan for the buildings already granted, Preliminary and Possession Certificates, it is instructed to verify and issue necessary License/ Preliminary Certificate / Possession Certificate as per the buffer zone prescribed for the tanks and Rajakaluves (Primary, Secondary and Territory category) in the existing Rules.

Enclosure:

Government letter No. NaAaE 536 BemBhuSwa
2017, dated 16-03-2019.

Sd/-
Commissioner,
Bruhat Bengaluru Mahanagara Palike.

Copy for information and suitable action:

- 1) The Special Commissioner (Projects).
- 2) The Addl. Commissioner (Administration).
- 3) The Special Commissioner (Finance).
- 4) Head Office Legal Cell.
- 5) The Addl./ Joint Commissioner (East Zone/ West Zone/ South Zone/ Mahadevapura Zone/ Yalahanka Zone/ Dasarahalli Zone/ Bommanahalli Zone/ Rajarajeshwari Zone).
- 6) The Engineer-in-Chief.
- 7) Addl. Director (Town Planning).
- 8) The Chief Engineer (Lake) SWD/ Road Infrastructure.
- 9) The Chief Engineer (East Zone/ West Zone/ South Zone/ Mahadevapura Zone/ Yalahanka Zone/ Dasarahalli Zone/ Bommanahalli Zone/ Rajarajeshwari Zone).
- 10) The Joint Director (Town Planning) / North /South/ Squad.
- 11) The Joint Commissioner (Revenue).
- 12) The Asst. Director (Town Planning) (East Zone/ West Zone/ South Zone/ Mahadevapura Zone/ Yalahanka Zone/ Dasarahalli Zone/ Bommanahalli Zone/ Rajarajeshwari Zone).
- 13) All Zonal Sub-divisional AEEs
- 14) IT Advisor to publish in the website.
- 15) Office Copy.

ANNEXURE-11

ANNEXURE - 11
2208


ಕರ್ನಾಟಕ ರಾಜ್ಯಪತ್ರ
ಅಧಿಕೃತವಾಗಿ ಪ್ರಕಟವಲಾದುದು
ಬೆಂಗಳೂರು ರಾಜ್ಯ ಪತ್ರ

ಪರ್ತು - III	ಬೆಂಗಳೂರು, ಬುಧವಾರ, ಫೆಬ್ರವರಿ 20, 2018 (ಪುಷ್ಯಾ 30, ಶಕಾ ವರ್ಷ 1937)	ಪಂ. 002
Part - III	Bengaluru, Wednesday, January 20, 2018 (Pushya 30, Shaka Varsha 1937)	No. 113

**FOREST, ECOLOGY & ENVIRONMENT SECRETARIAT
NOTIFICATION**

No. FEE 116 EPC 2015, Bengaluru, dated: 19.01.2016

Whereas, Tanks/Lakes both in Urban and rural areas were serving as source of drinking water to people, animals and birds and helped in increasing the fertility of the lands through controlling soil erosion which in turn enhanced the agricultural production. Tanks served as habitat for aquatic fauna, boosting fish production and most importantly increasing the ground water table. Lakes are considered as lung spaces of cities and help moderate vagaries of climate and maintenance of ambient temperatures. Construction activities, destruction of tanks and wetland systems have added to the deterioration of urban environment.

Whereas, siltation, pollution, encroachment of Raja Kaluvas, construction of apartments and entry of untreated sewage into the tanks, have resulted in deterioration to the level of hyper eutrophication state in many Tanks / Lakes in the urban areas. The services that the tanks were rendering earlier are vanished in Bengaluru and other urban areas. Such tanks/Lakes are continuing posing threat in many ways and causing environment and health hazards.

Whereas, the foam and ignition phenomena observed in the Bellandur Amrit Lake and Varthur Lake in Bengaluru in the recent past are the manifestations of severity of the problem.

Whereas, the inspection and monitoring by the Central Pollution Control Board and the Karnataka State Pollution Control Board reveals that the following are the chief causes for deterioration of water quality in the said lakes.

1. Increasing discharge of untreated wastewater containing abnormal quantity of organic matter, phosphorus, oil & grease, chemicals from detergents & cleaners etc. over a long period and its settlement as sediment.
2. Oil and grease from industrial activity, sewage and garbage have accumulated in sewer lines and in some parts of Lake. Due to heavy rains, the oil & grease accumulated in the sewer lines and storm water drains, etc. have been flushed to the surface of the lake.

Whereas, the State Government in exercise of powers conferred under 18 (1) (a) of the Water (Prevention and Control of Pollution) Act 1974 have issued direction to the Karnataka State Pollution Control Board vide the Notification No. FEE 22 EPC 2009 (P-1), dated: 04.08.2010 to exempt the residential and commercial construction of less than 20,000 Square meter built up area from the consent mechanism within the sewerage areas wherein permission from Bangalore Water Supply and Sewerage Board (BWS&SB) / BDMF / Municipalities / Corporations is obtained to discharge sewage in sewer lines and charges paid to these authorities.

Whereas, the Central Pollution Control Board Vide No.A-19014/41/2005-MGN/1242, dated: 22.05.2015 have under section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act 1974 directed the Karnataka State Pollution Control Board to ensure that all apartments with more than 50 units shall treat sewage in their own STPs and reuse the treated sewage within its premises.

Whereas, the Karnataka State Pollution Control Board has a mandate to comply with the directions issued by the Central Pollution Control Board under Section 18 (1) (b) of the Water (Prevention and Control of Pollution) Act, 1974.

Whereas, the Karnataka State Pollution Control Board vide letter No.FCB/CNP/10/GEN/15/277, dated: 13.10.2015 have submitted the proposal to the Government for issue of direction under Section 5 of the Environment (Protection) Act, 1986 to the concerned

- 2 -
2209

Managing Authority i.e. Bangalore Development Authority (BDA) and Bruhahh Bengaluru Mahanagara Palike (BMP) to insist for installation of STPs in Residential Apartments with 50 units and above irrespective of existence of sewer line and for treatment of sewage to urban reuse standards and to reuse the same within their premises.

Whereas, it is opined that establishment of sewage treatment plants in Group Housing Projects, Commercial Establishments and such other institutions help in prevention of pollution of water bodies apart from reducing the fresh water demand in such establishments as Bangalore is facing shortage of fresh water supply by BWS&SB.

Wherefore, in order to ensure treatment of sewage generated in the Group Housing Projects, Commercial Establishments and such other institutions and to ensure reuse of treated water for non-potable purposes apart from ensuring prevention of pollution of lakes and other water bodies, the State Government hereby issue direction under section 5 of the Environment (Protection) Act, 1986 in exercise of the powers delegated to the State Government vide Notification No.S.O.152 (2), dated: 10.02.1988 to the Authorities listed in the Table-1 below as mentioned against each of such authorities.

Table - 1

Sl. No.	Designation of the Authority issued with the direction under section 5 of Environment (Protection) Act, 1986	Direction under section 5 of Environment (Protection) Act, 1986
1	2	3
1.	The Commissioner, Bruhahh Bengaluru Mahanagara Palike (BMP), N.R.Square, Bengaluru-560002.	Shall approve plan for construction of buildings and development of layout in respect of activities listed in Table-2 of this notification only after production of copy of Consent for Establishment (CPE) issued under the Water (Prevention and Control of Pollution) Act, 1974 by the Karnataka State Pollution Control Board for establishment of sewage treatment plant of appropriate capacity.
2.	The Commissioner, Bangalore Development Authority (BDA), 1, Chovvurah Road, Kamata Park West, Bengaluru - 560020.	
3.	The Commissioner, the Bangalore Metropolitan Region Development Authority (BMRDA), No.1, Ali Asfar Road, Bengaluru-560052.	
4.	The Commissioner of all the City Corporations in the State	
5.	The Chairman, Bangalore Water Supply and Sewerage Board (BWS&SB), Cauvery Bhavan, Bengaluru - 560009	Shall provide water connection to the activities covered under this direction in Table-2 only after production of copy of Consent for Establishment (CPE) issued under the Water (Prevention and Control of Pollution) Act, 1974 by the Karnataka State Pollution Control Board for establishment of sewage treatment plant of appropriate capacity.
6.	Director of Municipal Administration, V.V.Main Tower, Dr. B.R.Ambedkar Veedhi, Bengaluru-560001.	Shall ensure that the urban local bodies in the State coming under the jurisdiction of DMA approve plan for construction of buildings and development of layout in respect of activities listed in Table-2 of this notification only after production of copy of Consent for Establishment (CPE) issued under the Water (Prevention and Control of Pollution) Act, 1974 by the Karnataka State Pollution Control Board for establishment of sewage treatment plant of appropriate capacity.
7.	The Managing Director, Karnataka Urban Water Supply and Sewerage Board, No.6, Jalahavani 1 st Stage, 1 st Phase, STM Layout, Benneerghatta Road, Bengaluru - 560029	Shall provide water connection to the activities covered under this direction in Table -2, only after production of copy of Consent for Establishment (CPE) issued under the Water (Prevention and Control of Pollution) Act, 1974 by the Karnataka State Pollution Control Board for establishment of sewage treatment plant of appropriate capacity.

ಫ್ಯಾಕ್ಸ್/Fax : 080-25586321

ಈಮೇಲ್/E-mail : ho@kspcb.gov.in

ವೆಬ್‌ಸೈಟ್/Website : http://kspcb.gov.in



25581383, 25589112

25588151, 25588270

25588142, 25586520

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ Karnataka State Pollution Control Board

“ಪರಿಸರ ಭವನ”, 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ, ಭಾರತ
“Parisara Bhavana”, 1st to 5th Floor, # 49, Church Street, Bengaluru - 560 001, Karnataka, INDIA

ಸಂಖ್ಯೆ : ಕರಾಮಾನಿಮಂ/226 ನೇ ಮಂ.ಸ/ನಿ.ಕೋ/2019/4892

ದಿನಾಂಕ: 10 DEC 2019

ಜ್ಞಾಪನಾ ಪತ್ರ

ವಿಷಯ : ದಿನಾಂಕ : 06.12.2019 ರಂದು ನಡೆದ 226 ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ
ನಿಯಂತ್ರಣ ವಿಶೇಷ ಮಂಡಳಿ ಸಭೆಯ ನಡವಳಿ.

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ದಿನಾಂಕ: 06.12.2019 ರಂದು ನಡೆದ 226ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ ಸಭೆಯ ನಡವಳಿಯ ಉದ್ಧರಣವನ್ನು (Extract) ಈ ಕೆಳಗೆ ಪುನರ್‌ರೂಪಿಸಲಾಗಿದೆ. ಇದರ ಬಗ್ಗೆ 07 ದಿನಗಳೊಳಗೆ ಸೂಕ್ತ ಕ್ರಮ ಜರುಗಿಸಿ ವರದಿ ಮಾಡಲು ಸೂಚಿಸಲಾಗಿದೆ.

ಈ ವಿಷಯದ ಬಗ್ಗೆ ತೆಗೆದುಕೊಂಡ ಹಿಂಪಾಲನ ಕ್ರಮದ ಪ್ರತಿಯನ್ನು (ಪತ್ರಗಳು/ ಮುಚ್ಚುವ ಆದೇಶ/ ನಿರ್ದೇಶನಗಳು/ಜ್ಞಾಪನಾ ಪತ್ರ/ಸುತ್ತೋಲೆಗಳು) ನಿಗಮಿತ ಕೋಶಕ್ಕೆ ಕಳುಹಿಸತಕ್ಕದ್ದು.

226:03: Policy decision regarding discharge of treated sewage effluent from outlet of STPs of other private STPs into storm water drain.

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The Member Secretary presented the subject and explained that, the Board is issuing Consent To Establish (CTE) and Consent To Operate (CTO) for all Industries, Infrastructure projects wherever there is generation of domestic sewage or trade effluent or both by stipulating standards.

Earlier, the Board was issuing consents by stipulating BOD-20 mg/l & SS- 30 mg/l for treated sewage. Further, the Board had issued memorandum vide No. 2814 dated 17.11.2007 for recycle and reuse of treated sewage after conforming to the following parameters;

Sl. No.	Parameter	Parameter's limit
1	pH	6.0 - 9.0
2	BOD (mg/l)	Lesser than or Equal to 10
3	Turbidity, NTU	Lesser than or Equal to 2
4	E-Coli	None
5	Resi. Cl ₂ (mg/l)	Greater than 1

The CPCB had issued a direction under section 18(1) (b) of the Environmental (Protection) Act, 1986 on 21.4.2015 in respect of treatment and utilisation of treated sewage for the seven parameters shown below and the same is being stipulated by the Board.

Sl. No.	Parameter	Parameter's limit
1	pH	6.5 - 9.0
2	BOD (mg/l)[3 days @ 27 ⁰ C]	Not more than 10
3	COD (mg/l)	Not more than 50
4	TSS (mg/l)	Not more than 20
5	NH ₄ -N (mg/l)	Not more than 5
6	N-Total (mg/l)	Not more than 10
7	Fecal Coli form (MPN/100 ml)	Less than 10

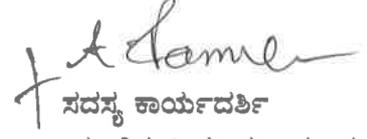
It is informed that, in the background of the meetings held under the Chairmanship of Chief Secretary, Government of Karnataka regarding co-ordination of all stake holders from Bengaluru Infrastructure Development held on 29.07.2019 & 13.08.2019 and the letter of the Chairman, BWSSB regarding according permission of KSPCB to discharge excess treated sewage effluent from the outlet of private STPs after meeting the stipulated standards of the Board into the storm water drains, the subject is placed for deliberation.

The members deliberated on the existing mechanism to monitor operation of sewage treatment plants and ensure treatment of sewage effluent to the stipulated standards, efficiency of STPs, recycling and reuse of treated sewage within the premises and its limitations, operational capacities of BWSSB STPs, the impact on the water bodies due to discharge of excess treated sewage into storm water drains.

The Board after detailed deliberation resolved as under;

- 1) The excess treated water from the private STPs shall be reduced to minimum by encouraging all alternative use outside the premises of the Apartments owning the STPs like construction purpose in the neighborhood, public parks, avenue plantation, etc.

- 2) The unused/excess water from the STPs will be allowed to be let out in the storm water drains if they are meeting the standards after due check by the KSPCB and with due permission from BBMP. Thereafter, BWSSB will take necessary steps regarding the matter.
- 3) The STPs not meeting the standards will be continued to be levied penalty as per Hon'ble NGT orders and they shall let out the excess water in the UGD of BWSSB till they meet the standards.



ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ

ಇವರಿಗೆ,

ಹಿರಿಯ ಪರಿಸರ ಅಧಿಕಾರಿ, ಮೂಲಭೂತ ಸೌಕರ್ಯಗಳ ಕೋಶ, ಕರಾಮಾನಿಮಂ



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ Karnataka State Pollution Control Board

"ಪರಿಸರ ಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
"Parisara Bhavan", 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

ಸಂಖ್ಯೆ: ಕರಾಮಾನಿಮಂ/227ನೇ ಮಂ.ಸ/ನಿ.ಕೋ/2020/6114
ಜ್ಞಾಪನಾ ಪತ್ರ

ದಿನಾಂಕ : 25 FEB 2020

ವಿಷಯ: ದಿನಾಂಕ: 13.1.2020ರಂದು ನಡೆದ 227ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ
ನಿಯಂತ್ರಣ ಮಂಡಳಿ ಸಭೆಯ ನಡವಳಿ.

ದಿನಾಂಕ: 13.1.2020 ರಂದು ನಡೆದ 227ನೇ ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ ಸಭೆಯ ನಡವಳಿಯ ಉದ್ಧರಣವನ್ನು (Extract) ಈ ಕೆಳಗೆ ಪುನರೂಪಿಸಲಾಗಿದೆ. ಇದರ ಬಗ್ಗೆ 07 ದಿನಗಳೊಳಗೆ ಸೂಕ್ತ ಕ್ರಮ ಜರುಗಿಸಿ ವರದಿ ಮಾಡಲು ಸೂಚಿಸಲಾಗಿದೆ.

ಈ ವಿಷಯದ ಬಗ್ಗೆ ತೆಗೆದುಕೊಂಡ ಹಿಂಪಾಲನ ಕ್ರಮದ ಪ್ರತಿಯನ್ನು (ಪತ್ರಗಳು/ಮುಚ್ಚುವ ಆದೇಶ/ ನಿರ್ದೇಶನಗಳು/ಜ್ಞಾಪನಾ ಪತ್ರ/ಸುತ್ತೋಲೆಗಳು) ನಿಗಮಿತ ಕೋಶಕ್ಕೆ ಕಳುಹಿಸತಕ್ಕದ್ದು.

ವಿಷಯಸಂಖ್ಯೆ	ವಿಷಯ
227:20	<p>Notification regarding reduction of Phosphorus contents in Soaps & Detergents as per the directions of Hon'ble NGT order dated.6.12.2018 & 11.12.2019 in respect of OA No. 125/2017 - reg.</p> <p>*****</p> <p>The Member Secretary presented the subject and informed that, with regard to reduction of Phosphate in soaps and detergents, the Hon'ble NGT in its order dated: 6.12.2018 in respect of Original Application No. 125 of directed as follows;</p> <p><i>"Less Phosphorous means less weeds in the water body. One of the major source of Phosphate are soaps and detergents. In several countries stringent limits have been specified for Phosphate in soaps and detergents as it leads to eutrophication of water bodies. MoEF &CC in conjunction with other ministries need to prescribe limits for Phosphorus in soaps and detergents by progressively reducing it to 2.2% of permissible phosphorous content. The STPs that are being set up and those which have already been set up must provide for treating/removing Phosphorous and Nitrogen nutrients.</i></p> <p>Further, the Hon'ble NGT in its order dated: 11.12.2019 with regard to reduction of Phosphorus in soaps and detergents directed as follows:</p> <p><i>"The State PCB itself may lay down such standards for Phosphorus instead of waiting for notification by MoEF & CC.</i></p>

The MoEF &CC, New Delhi in its letter dated: 9.12.2019 had stated that based on the recent updates received from Bureau of Indian Standards (BIS), a statutory body for prescribing standards for products, it had filed an affidavit before Hon'ble NGT, Principal Bench in respect of OA No.125/2017 wherein they have stated as follows;

The Technical Committee of BIS responsible for formulation of standards on detergents has revised the standards of detergents by incorporating restrictions of limit of Phosphate (maximum) based builder in detergents. The limit of Phosphate in revised standards of detergents is as follows:

Detergent Standard	Limit of Total Phosphate, % by mass maximum			
	IS-4955 Household laundry detergent powders	Grade-1 2.5%	Grade-2 2.5%	Grade-3 2.5%
IS-4956 Synthetic detergent for industrial purpose	Type-1 2.5%	Type-2 5 %	Type-3 5 %	
IS-8180 Household laundry detergent bars	Grade-1 5 %	Grade-2 8 %	Grade-3 5 %	Grade-4 5 %
IS-9458 Synthetic detergent for washing Woolen & Silk fabrics	Nil			

Further, a recommendary class vis-à-vis use of alternate biodegradable non-phosphate based builder and co-enzyme in place of Phosphate builder has been incorporated in the above standards. The above standards are currently under the process of printing and are likely to be printed by December-2019 as informed by BIS.

The Board is yet to receive notification issued by BIS with regard to reduction of Phosphorus in soaps and detergents.

The Additional Solicitor-General of India who represented the Board and also the state of Karnataka in this case in the Hon'ble NGT, New Delhi in her letter dated:19.12.2019 stated as follows;

"The standards prescribed by MoEF & CC for limits of Phosphorus in soaps and detergents was regarded as much too high by the Hon'ble NGT which was of the view that given the emergent situation, Bangalore requires far most stringent standards. The Pollution Control Board, therefore must immediately prescribe more stringent standards under the Water Act, 1974 and put these into practice".

With regard to latest directions of the Hon'ble NGT dated; 11.12.2019 and views of Additional Solicitor General of India letter dated: 19.12.2019 in respect of notification on reduction of Phosphorus in soaps and detergents under the provisions of Water Act, 1974, has been examined. There is no specific provision for limiting concentrations in the product. Section 17 of the Water Act provides for functions of the Board and under;

17. (1) Subject to the provisions of this Act, the functions of a State Board. shall be-

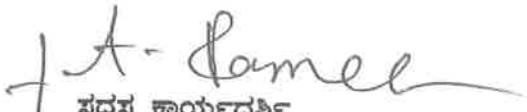
(a) To plan a comprehensive programme for the prevention, control or abatement of Pollution of streams and wells in the State and to secure the execution thereof;

Since, one of the sources of pollution of Bellandur lake is due to discharge of untreated sewage into the lake containing high amount of Phosphorus in soaps and detergents, which is cause for foam formation, the reduction of Phosphorus content in soaps and detergents may reduce the Pollution of Bellandur lake. Hence, as per sec 17(1)(b) of Water Act,1974, the Board may advise the State Government on regulating the content of Phosphorus in soaps and detergents to reduce the pollution of water bodies.

However, the statutory body for prescribing standards for products is BIS (Bureau of Indian Standards) considering PAN INDIA notification, which is already in the process of issuing notification regarding the reduction of phosphate content in soaps and detergents. The products of soaps and detergents are being manufactured within Karnataka and also outside Karnataka. The regulation of phosphate content in soaps and detergents manufactured outside Karnataka and imported products is very difficult. Hence, the PAN INDIA notification by the concerned authority is advisable.

The Board deliberated at length on the issue considering the directions of Hon'ble NGT directions and legal provisions with respect to prescribing stringent standards for phosphate in soaps and detergents and advancement made by MoEF&CC and BIS on this issue.

The Board after detailed deliberations resolved to recommend to the State Government to ban/prescribe stringent limit of 2.2% of phosphate in soaps and detergents as provided under Section 17(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974.


ಸದಸ್ಯ ಕಾರ್ಯದರ್ಶಿ
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ


ಇವರಿಗೆ,

ಹಿರಿಯ ಪರಿಸರ ಅಧಿಕಾರಿ, ಮೂಲಭೂತಸೌಕರ್ಯ, ಕರಾಮಾನಿಮಂ.

Environmental Management & Policy Research Institute

Department of Forest, Ecology and Environment, Government of Karnataka



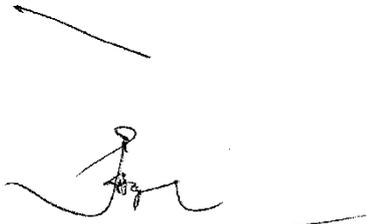
"HASIRUBHAVANA", DORESANIPALYA FOREST CAMPUS, VINAYAKANAGAR CIRCLE, J. P. NAGAR 5TH PHASE, BANGALORE 560 078
TEL 080-2649 0747 /46 • FAX 080-2649 0745 • EMAIL EMPRI.BLR@GMAIL.COM • WEBSITE: WWW.KARNATAKA.GOV.IN/EMPRI

EMPRI/CR-21/LAB/2018-19/1780

Date:

INVOICE				
ORIGINAL/DUPLICATE /TRIPPLICATE				
GST NO.: 29AABCE1730F1Z0				
PAN NO.: AAATE5404C				
To, The Member Secretary, Karnataka State Pollution Control Board, "Parisara Bhavan", #49, 4 th & 5 th Floor, Church Street, Bangalore-560001.		INVOICE NO.	:	EMPRI/LAB/19-20/05
		DATE	:	13.03.2020
Analysis charges				
Sl. No.	Parameters	Cost per Sample in Rs.	Samples Number	Total cost per Sample (Rs.)
1.	pH	110	17	1870
2.	BOD mg/L	1050	17	17850
3.	COD mg/L	620	17	10540
4.	TSS mg/L	180	17	3060
5.	NH ₄ N mg/L	350	17	5950
6.	N-Total mg/L	1320	17	22440
7	Fecal Coliform (MPN/100 mL)	620	17	10540
Total amount				72,250
(Rupees Seventy two thousand two hundred and fifty only)				

Encls: 17 Analysis Reports


DIRECTOR
EMPRI

NOTE: Payment shall be made through Demand Draft in favour of Director General, EMPRI or through RTGS /NEFT to the State Bank of India, for the Account number: 38107677924, IFSC code: SBIN0015643, (EMPRI, J.P Nagar IV phase, Bangalore).

Environmental Management & Policy Research Institute

Department of Forest, Ecology and Environment, Government of Karnataka

"HASIRUBHAVANA", DORESANIPALYA FOREST CAMPUS, VINAYAKANAGAR CIRCLE, J. P. NAGAR 5TH PHASE, BANGALORE 560 078
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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Y junction (Koramangala Egipura & Agara), Bengaluru, Before Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis :03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/232	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample 1	Methods followed for analysis
	Lab Code	232	
1.	pH at 25°C	7.4	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	100	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	41.2	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	18.7	BIS-3025 (44):2003
5.	Ammonia mg/L as N	39.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	79.9	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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Date: 13-03-2020

Place: Bangalore

(Purchaser)

Signature EMPRI.....

Name of Dr. K. H. Mysaba Kumar

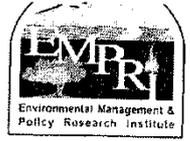
Designation: Director

Encl: Essential certificate for claiming customs duty exemption

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

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Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/233	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.2	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	112	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	68.8	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	4.6	BIS-3025 (44):2003
5.	Ammonia mg/L as N	42	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	70.0	APHA, 3500-K,B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Ambedkar Colony side, Near Yamlur Village, Bengaluru, Before Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/234	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters Lab Code	Sample 234	Methods followed for analysis
1.	pH at 25°C	7.4	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	88	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	51.6	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	10.4	BIS-3025 (44):2003
5.	Ammonia mg/L as N	40.6	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	79.6	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

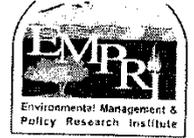
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EMPRI/IMS/FORM/29

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Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/235	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.2	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	47.6	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	51.6	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	12.5	BIS-3025 (44):2003
5.	Ammonia mg/L as N	39.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	66.5	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

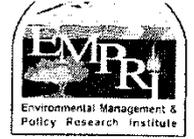
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Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
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Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/236	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.6	APHA, 4500-H+B,22nd Ed.,2012
2.	Total Suspended Solids, mg/l at 105°C	90.8	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	82.5	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	9.7	BIS-3025 (44):2003
5.	Ammonia mg/L as N	40.6	APHA, 4500-NH ₃ ,C 22nd Ed., 2012
6.	Total Nitrogen mg/L	48.5	APHA, 3500-K,B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- outlet of STP
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Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/237	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
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Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code	237	
1.	pH at 25°C	7.5	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	88	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	106.6	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	11.7	BIS-3025 (44):2003
5.	Ammonia mg/L as N	42	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	45.3	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Agara BWSSB STP, Agara village, Bengaluru
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Outlet of STP
Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/238	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.2	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	58	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	48.1	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	3.8	BIS-3025 (44):2003
5.	Ammonia mg/L as N	28	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	60.3	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	<2	BIS-1622:1981

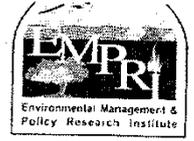
Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Agara BWSSB STP, Agara village, Bengaluru.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- outlet of STP
Sampling Date: 03/03/2020	Submission Date: 03/03/2020
Date of Analysis : 03/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/239	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.9	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	65	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	34.4	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	7.1	BIS-3025 (44):2003
5.	Ammonia mg/L as N	25.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	53.0	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Y junction (Koramangala Egipura & Agara), Bengaluru, Before Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/240	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.6	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	242	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	134.6	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	31.5	BIS-3025 (44):2003
5.	Ammonia mg/L as N	39.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	67.4	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Y junction (Koramangala Egipura & Agara), Bengaluru, After Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/241	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.6	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	271	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	150.5	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	29.5	BIS-3025 (44):2003
5.	Ammonia mg/L as N	42.0	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	67.7	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Ambedkar Colony side, Near Yamlur Village, Bengaluru, Before Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis :06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/242	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters Lab Code	Sample 242	Methods followed for analysis
1.	pH at 25°C	7.9	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	38	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	67.3	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	11.8	BIS-3025 (44):2003
5.	Ammonia mg/L as N	36.4	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	63.1	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Ambedkar Colony side, Near Yamalur Village, Bengaluru, After Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/243	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	7.8	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	37.9	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	51.5	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	9.8	BIS-3025 (44):2003
5.	Ammonia mg/L as N	36.4	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	5.7	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

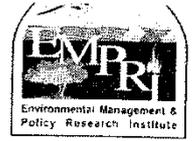
Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Drain at Iblur village side, Near Doddamma Temple, Bengaluru, Before Establishing Defused Aeration System by BWSSB.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Drain water
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/244	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code		
1.	pH at 25°C	244 7.7	APHA, 4500-H+B, 22nd Ed., 2012
2.	Total Suspended Solids, mg/l at 105°C	93.3	APHA, 2540-D, 22nd Ed., 2012
3.	COD in mg/l	91.1	APHA, 5220 B, 22nd Ed., 2012
4.	BOD mg/L at 27°C 3 days	22.7	BIS-3025 (44):2003
5.	Ammonia mg/L as N	39.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6.	Total Nitrogen mg/L	4.3	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7.	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site : Drain at Iblur village side, Near Doddamma Temple, Bengaluru, After Establishing Defused Aeration System by BWSSB..
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- outlet of STP
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/245	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No	Parameters	Sample	Methods followed for analysis
	Lab Code	245	
1	pH at 25°C	7.8	APHA, 4500-H+B, 22nd Ed., 2012
2	Total Suspended Solids, mg/l at 105°C	113	APHA, 2540-D, 22nd Ed., 2012
3	COD in mg/l	138.6	APHA, 5220 B, 22nd Ed., 2012
4	BOD mg/L at 27°C 3 days	18.7	BIS-3025 (44):2003
5	Ammonia mg/L as N	37.8	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6	Total Nitrogen mg/L	73.7	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

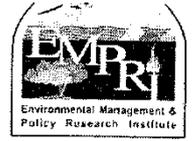
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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: M/s Corporate Leisure & Property Development Pvt Ltd, "Suncity Gloria".Sy.No18/3A1,18/3B, 18/C1, Doddakanneli village, Varthuru Hobli, Bengaluru.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Treated Sewage
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/246	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code	246	
1	pH at 25°C	7.6	APHA, 4500-H+B,22nd Ed.,2012
2	Total Suspended Solids, mg/l at 105°C	11	APHA, 2540-D, 22nd Ed., 2012
3	COD in mg/l	39.6	APHA, 5220 B, 22nd Ed., 2012
4	BOD mg/L at 27°C 3 days	9.8	BIS-3025 (44):2003
5	Ammonia mg/L as N	19.6	APHA, 4500-NH ₃ ,C 22nd Ed., 2012
6	Total Nitrogen mg/L	53.5	APHA, 3500-K,B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Name of the Customer : Karnataka State pollution Control **Sampling site:** M/s Sneha Developers, (Sai Shahas Apartments)

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Board (KSPCB)	Sy.No18/1C,1B, Doddakanneli village, Varthuru Hobli, Bengaluru.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- Treated Sewage
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis :06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/247	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample	Methods followed for analysis
	Lab Code	247	
1	pH at 25°C	7.8	APHA, 4500-H+B,22nd Ed.,2012
2	Total Suspended Solids, mg/l at 105°C	9.4	APHA, 2540-D, 22nd Ed., 2012
3	COD in mg/l	35.6	APHA, 5220 B, 22nd Ed., 2012
4	BOD mg/L at 27°C 3 days	7.9	BIS-3025 (44):2003
5	Ammonia mg/L as N	5.6	APHA, 4500-NH ₃ ,C 22nd Ed., 2012
6	Total Nitrogen mg/L	17.2	APHA, 3500-K,B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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Department of Forest, Ecology and Environment, Government of Karnataka



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ANALYSIS RESULT FORM

EMPRI/IMS/FORM/29

Name of the Customer : Karnataka State pollution Control Board (KSPCB)	Sampling site: Agara BWSSB STP, Agara village, Bengaluru.
Contact: Mrithunjay B Basankopp, Deputy Environmental Officer, KSPCB	Matrix- outlet of STP
Sampling Date: 05/03/2020	Submission Date: 06/03/2020
Date of Analysis : 06/03/2020 to 12/03/2020	Reporting Date: 13.03.2020
Lab Code: WL/03/20/248	Sampling Method : Grab
Remarks:	Sample collected by- KSPCB STAFF
	Report No.: WL/RT/03/20/14
	No. of pages: 01

Sl No.	Parameters	Sample 1	Methods followed for analysis
	Lab Code	248	
1	pH at 25°C	7.5	APHA, 4500-H+B, 22nd Ed., 2012
2	Total Suspended Solids, mg/l at 105°C	11.2	APHA, 2540-D, 22nd Ed., 2012
3	COD in mg/l	15.8	APHA, 5220 B, 22nd Ed., 2012
4	BOD mg/L at 27°C 3 days	3.9	BIS-3025 (44):2003
5	Ammonia mg/L as N	11.2	APHA, 4500-NH ₃ , C 22nd Ed., 2012
6	Total Nitrogen mg/L	23.4	APHA, 3500-K, B, 4500-NO ₃ , 4500-NO ₂ , 22 nd ED., 2012
7	Fecal coliform(MPN/100ml)	≥1600	BIS-1622:1981

Compiled by: Lab Chemist/Lab Head	Reviewed by: Project Development Officer/QAM	Approved by: Director/Management Representative

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**Petitioner Details: WP
4540/2020**

**Respondent Details: WP
4540/2020**

SL.No	Petitioner	Address	SL.No	Respondent	Address
1	BRIGADE HARMONY APARTMENT OWNERS ASSOCIATION	SY NO. 250, RAMAGONDANAHALLI VILLAGE, VARTHUR KO WHITEFIELD, BANGALORE 560066 REPRESENTED BY AUTHORIZED SIGNATOR AMIT KUMBLE PRABHU	1	THE STATE OF KARNATAKA	VIDHANA SODHA, AMBEDKAR VEEDHIL, BANGALORE-560001 REPRESENTED BY ITS CHIEF SECRETARY
2	DHRUVIKA MOGRA APARTMENT WELFARE ASSOCIATION	333 WHITEFIELD MAIN F HOODI CIRCLE, MAHADEVAPURA BANGALORE 560048 REPRESENTED BY ITS AUTHORIZED SIGNATOR SENTHIL	2	THE KARNATAKA STATE POLLUTION CONTROL BOARD	PARISARA BHAVAN, 49, 4TH AND 5TH FLOOR, CHURCH STREET, BANGALORE-56001 REPRESENTED BY ITS SENIOR ENVIRONMENT OFFICER (BANGALORE EAST ZONAL OFFICE)
3	AOC DNR ATMOSPHERE OWNERS CONDOMINIUM OWNERS AND RESIDENTS WELFARE ASSOCIATION	DNR ATMOSPHERE, 231 VARTHUR MAIN ROAD, RAMAGONDANAHALLI, WHITEFIELD BANGALORE 560066 REPRESENTED BY AUTHORIZED SIGNATOR VENUGOPAL MENON	3	BANGALORE DEVELOPMENT AUTHORITY	KUMARA PARK WEST, T.CHOWDAIAH ROAD, BANGALURU-560020 REPRESENTED BY ITS CHAIRMAN
4	DURGA RAINBOW FLAT OWNERS WELFARE ASSOCIATION	NO.8/1, 9/1, 9/2, 9/3, OUT RING ROAD, MAHADEVAPURA, BANGALORE-560048 REPRESENTED BY ITS SECRETARY MR. BHAVI SHAH	4	BANGALORE WATER SUPPLY AND SEWERAGE BOARD (BWSSB)	2ND FLOOR, CAUVERY BHAVAN, KEMPEGOWDA ROAD, BANGALURU-560009 REPRESENTED BY ITS CHAIRMAN

SL.No	Petitioner	Address	SL.No	Respondent	Address
5	NAGARJUNA MAPLE HEIGHTS APARTMENTS CONDOMINIUM	182 AND 185, NARAYANAPURA, K.R.P MARATHHALL RING RO. MAHADEVAPURA BANGALORE-560016 REPRESENTED BY ITS AUTHORIZED SIGNATOR SRINIVAS KUMAR	5	BANGALORE ELECTROCITY SUPPLY CO LTD (BESCOM)	CORPORATE OFFICE BESCOM K.R.CIRLCE, BANGALORE- 560001 REPRESENTED BY ITS CHAIRMAN
6	NESTER RAGA OWNERS ASSOCIATION	NESTER RAGA, SY NO 152/153, K.R.PURAM, MARATHALLI OUTER RI ROAD, MAHADEVAPUR/ BANGALORE-560048 REPRESENTED BY ITS AUTHORIZED SIGNATOR MR.V.S.SHIVARAMAKRI:	6	DEPARTMENT OF ELECTRICAL INSPECTORATE	GOVERNMENT OF KARNATAKA NIRMAN BHAVAN, 2ND FLOOR, PO NO 5148, DR.RAJKUMAR ROAD, RAJAJINAGAR, BENGALURU- 560010 REPRESENTED BY ITS CHIEF ELECTRICAL INSPECTOR.

Judge Name	Case No/Year	Date of Order	Daily Order
CHIEF JUSTICE AND HEMANT CHANDANGOUDAR	WP 4540/2020	27/02/2020	Heard the learned counsel appearing for the petitioners.

Issue notice to the respondents returnable on 7th April 2020. The learned AGA takes notice for the first and sixth respondents and Sri Gururaj Joshi, learned counsel takes notice for the second respondent. In addition to the regular service, it will be open for the petitioners to serve notice to the Standing Counsel, if any, for the remaining respondents.

In the meanwhile, office objections shall be rectified within a period of two weeks from today.

Annexures-A1 to A6 are the show cause notices (notices of proposed directions – NPD). Even Annexures-H1 to H6 are also show cause notices. Therefore, the writ petition need not be entertained against the said show cause notices.

As far as Annexures-F1 to F6 are concerned, prima facie, it appears that without issuing show cause notices, directly a demand for payment of environmental compensation has been made. Therefore, the challenge in the petition will remain confined only to the notices at Annexures-F1 to F6.

It is pointed out that the petitioners are the Associations of Apartment owners and there are large numbers of residential tenements in the said apartments occupied for residential

Judge Name	Case No/Year	Date of Order	Daily Order
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purposes. Therefore, though we are not entertaining the petition as regards Annexures-A1 to A6 and Annexures-H1 to H6, we direct that if any orders are passed on the said show cause notices, no action on the basis of such orders shall be taken for a period of fifteen days from the date on which the orders are served upon the petitioners. Till the next date, no action shall be taken for recovery of the amount on the basis of the notices at Annexures-F1 to F6.

It will be open for the second respondent to issue show cause notices in terms of Annexures – F1 to F6 and to pass orders after giving an opportunity of being heard to the petitioners. If final orders are passed on the basis of the said show cause notices, the same shall not be implemented in any manner for a period of fifteen days from the date on which the final orders are served upon the respective petitioners.

Close

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ಈಮೇಲ್ / Email : ho@kspcb.gov.in

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080-25581383, 25589112
080-25589113, 25589114

ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
Karnataka State Pollution Control Board

“ಪರಿಸರ ಭವನ”, 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
“Parisara Bhavan”, 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

NO.KSPCB/AWC/REUSE&RECHARGE/2019-20 / 4490

19 NOV 2019
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To

Prof Chanakya,
Center for Sustainable Technologies,
Indian Institute of Science,
Bengaluru – 560 012.

Dear Professor,

Sub: Request to design a recharge pit for using treated sewage in Bengaluru – Reg.

Ref: 1) Meeting held under the Chairmanship of ACS – Forest Ecology and Environment and Chairman on 7.11.2019.

With reference to the above, it is to bring to your notice that a Meeting was convened by the ACS – Forest Ecology and Environment & Chairman of KSPCB, on 7.11.2019 along with the Chairman of BWSSB, Special Commissioner of BBMP, CREDAI Executives, few Major Builders and Dr. Lakshminarayan, Dr. Himanshu Khuntia and Ms Seema Sukhani represented IISc as you were travelling.

Approximately 700 MLD of excess treated sewage is available in Bengaluru. Many independent STPs are letting this excess treated sewage into the UGD system of BWSSB and open drains. As per ISI 1172, only 30% can be used back for flushing, 8% can be Considered for the gardening. They are forced to discharge into the Storm Water drains or UGDs. For treating every 1 MLD of sewage approximately 1500 Kg/Day of Carbon di oxide gases are generated.

It was decided after deliberations that the Excess treated sewage from the Star Hotels and Bigger IT Buildings with more than 200 KLD effluents generation, be allowed to let into the recharge pits. The location of the pits will be identified by the Marshals (Ex Army) in association with BBMP.

Quality of Treated Sewage: Sensors can be introduced and Synced to the KSPCB portal to get the Realtimequality check. An alerts can also be sent to the Regional Officer and the Occupier of the Premises when ever the stipulated standards are not confirming through SMS Gateway.

In this regard, You are requested to help with the following information:

- 1) Few Key Parameters that can be monitored through Sensors. Can conductivity be the Parameters? If so, can a correlation be drawn between the Conductivity and the BOD?
- 2) A simple design of a recharge pit, which can be made in the foot paths, Government buildings, lands etc., On a trial basis to start with, we shall insist the Star Hotels and IT Buildings with more than 200 KLD to transport the treated sewage to the recharge pits, subject to BOD less than 10 Mg/lit.
- 3) Will the microbial content in the treated sewage have any effect on the under ground water table, is used in the recharge pits.

Thanking You Very Much, while appreciating your continued support towards the sustainable development.

Yours Faithfully


Member Secretary

Encl: The Proceedings of the meeting held on 7.11.2019.

19/11/19



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Karnataka State Pollution Control Board

“ಪರಿಸರ ಭವನ”, 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
“Parisara Bhavan”, 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

NO.KSPCB/AWC/REUSE&RECHARGE/2019-20 / 5921

12 FEB 2020
110
ರವಾನೀಸಲಾಸಿದ

To

Dr. Ligy Philip,
Professor,
Environmental and Water Resources Division,
Departmentn of Civil Engineering,
Indian Institure of Technology,
Chennai – 600 036.
(ligy@iitm.ac.in)

Dear Professor,

Greetings from the team KSPCB

Sub: Request for technical opinion on feasibility of reuse of treated sewage for the Construction and other tertiary uses – Reg.

Ref: 1) The GO issued by the Govt. of Karnataka banning usage of fresh water for the tertiary purposes dt. 14.8.2003.

With reference to the above, it is to bring to your notice that GO is issued by the Government of Karnataka as shown vide ref.1. The copy of the same is enclosed herewith. This visionary GO was issued in 2003, to prevent usage of fresh water for the construction, gardening, vehicles washing etc., Bengaluru has the pride in also insisting in setting up of decentralized STPs at the Residential Apartments, Commercial Complexes, IT Parks etc., with a dual plumbing system for the usage of treated sewage. However, many of them are treating the sewage but is being used only partly and the balance is discharged into the UGD system which further increases the load on the BWSSB STPs and the few others into the storm water drain, at the areas where UGD system is not available.

The Proposal: It is proposed to implement the GO with directions

- 1) To use only the treated sewage for the construction purposes, gardening, vehicle washing, RMC making, construction of roads, white topping etc.
- 2) It is also proposed to use the excess treated sewage available for the underground recharge by setting up series of recharge pits.

Request from IIT, Chennai:

- 1) Since usage of the treated water for the construction purposes, involves issues related to safety of the buildings, roads, bridges etc. in attaining proper designed crushing strength, hardness, efficient curing and mainly any possibility of corrosion to the steel. There could be many more issues than the few listed above. It is requested to give your technical opinion on the feasibility to insist for the usage of treated sewage for such activities.
- 2) Further the Opinion on the Health hazards with respect to the people coming in contact during gardening vehicle washing and related tertiary issues. If there could be contagious diseases due to the presence of bacteria, if proper disinfection is not done.
- 3) As it is also proposed to use the treated sewage for the recharge of underground pits. It is requested for your opinion on the same, if it's safe to use for recharge, as the water may slowly enter the underground water table and could find a way back for public usage including human consumption through bore wells. You are also requested to suggest guide lines and design of such recharge pits.

Thanking You Very Much

Yours Faithfully



Senior Environmental Officer



ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ

Karnataka State Pollution Control Board

“ಪರಿಸರ ಭವನ”, 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ. 49, ಚರ್ಚ್ ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ ರಾಜ್ಯ, ಭಾರತ
“Parisara Bhavan”, 1st to 5th Floor, # 49, Church Street, Bangalore - 560 001, Karnataka State, India

No.PCB/SEO-INFRA/NGT/GOK/ Phosphorus/2019-20/ 6224

Date:

28 FEB 2020

To:

Principal Secretary,
Department of Forest, Ecology and Environment,
7th Floor,
MS Buildings,
Dr. Ambedkar Veedhi.
Bangalore 560001

Sir,

Sub: Notification on Limiting of Phosphorous content in the Soaps, detergents, washing bars, washing powers etc., - reg

Ref: 1. Hon'ble NGT order dated 6.12.2018.
2. Hon'ble NGT principal bench order wrt OA 125/2017 dated 11.12.2019.
3. MoEF & CC letter dated 9.12.2019.



The Hon'ble National Green Tribunal (NGT), in its order with respect to OA 125/2017, has issued on reduction of the phosphorus content in Soaps and Detergent, which reads as follows:

“Less Phosphorous means less weeds in the water body. One of the major source of Phosphate are soaps and detergents. In several countries stringent limits have been specified for Phosphate in soaps and detergents as it leads to eutrophication of water bodies. MoEF & CC in conjunction with other ministries need to prescribe limits for Phosphorus in soaps and detergents by progressively reducing it to 2.2% of permissible phosphorous content”.

Board, vide letter cited under ref(2), addressed to Ministry of Environment, Forest and Climate Change with request to finalize the standards for limiting the phosphorus consent in Soaps, detergents, washing bars, washing powders and to issue notification in this regard. MOEF, in their letter vide ref (2) stated that they have filed an affidavit before the Hon'ble NGT (PB) in OA No. 125/2017 dated 28.12.2017. Where, they have requested Bureau of Indian Standards (BIS) to expedite the finalization of standards and its notification.

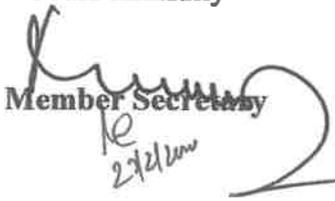
Further, Hon'ble NGT principal bench in its order wrt OA 125/2017 dated 11.12.2019 with regard to reduction in Phosphorus in Soaps, detergents, washing bars, washing powders and directed as follows:”

"The State Pollution Control Board itself may lay down such standards for Phosphors instead of waiting for notification by MOEF & CC.

The subject was deliberated before the 227 Board Meeting held on 13.1.2020 and after detailed deliberation it was resolved to recommend to the State Government to ban / prescribe stringent limit of 2.2% of phosphate in Soaps, detergents, washing bars, washing powders under Section 17(1)(b) of Water (prevention & Control Pollution) Act, 1974. (Copy of the Board Meeting Proceedings is enclosed for your kind reference)

In view of the above, it is requested to your goodselves to make notification banning/limiting Phosphorus content in the Soaps, detergents, washing bars, washing powders etc., for the State of Karnataka.

Yours faithfully


Member Secretary

re
27/2/20



REGIONAL LABORATORY
CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest & Climate Change)
REGIONAL DIRECTORATE (SOUTH), BENGALURU



Recognised under E(P) Act, 1986
(Legal 42(3)/87, dated 6th March, 2017)

TC 7739

CPCB/RLB/AR/4-4/W/File/33/19-20/1714

13/2/20

TEST REPORT

Name of customer: Dr.M.Madhusudan, Sci E CPCB, Bengaluru.	Sampling location: Bellandur Lake, Bengaluru
Nature of sample: Sediment sample	Sampling type: Grab
Date of sampling: 18.01.2020	Date of receipt: 11.02.2020.
Date of commencement and completion of analysis: 11.02.2020 - 12.02.2020	Date of report issue: 12.02.2020
Code no. of sample: WW/02/2020/454-459	Req. slip no. / Date: 90/W,11.02.2020
No. of pages: 01/06	Report issue no.: HM/02/90/2020
Remarks:	

S.No.	Sampling Point → ↓ Metal, mg/kg	Bellandur lake Near BWSSB pipeline service road, Bengaluru.			Near Y-Junction next to the drain carrying sewage, Bellandur lake, Bengaluru.			Detection limit	Reference Method
		1- Top	1A- Middle	1B- Bottom	2- Top	2A- Middle	2B- Bottom		
1	Copper	28	BDL	BDL	80	68	26	0.1	APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	BDL	BDL	BDL	BDL	0.1	
3	Total chromium	20	BDL	BDL	46	22	BDL	0.1	
4	Iron	11688	20480	22800	19312	11806	8244	0.1	
5	Manganese	94	124	112	110	96	58	0.1	
6	Nickel	BDL	BDL	BDL	BDL	BDL	BDL	0.1	
7	Lead	BDL	BDL	BDL	38	BDL	BDL	0.1	
8	Zinc	130	32	BDL	242	126	72	0.1	

S. Karthikeyan
Authorised Signatory
(S.Karthikeyan)
Scientist 'C'

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- Compliance/non-compliance opinion not sought by customer
- Samples will be stored for a period of 15 days from the date of issue of test report.
- Parameters marked * are not under NABL scope.
- The above results pertain only to sample tested

Regional Directorate (South), Nisarga Bhawan, A-Block, 1st & 2nd floors, Thimmalah Road, 7th D main, Shivanagar,
Bengaluru - 560079.
(Telephone: 080-23233739, 2322539, FAX: 080-23234059) (E-Mail: cpcbso@yahoo.com, zobangalore.cpcb@nic.in)



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REGIONAL LABORATORY
CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest & Climate Change)
REGIONAL DIRECTORATE (SOUTH), BENGALURU



TC 7739

TEST REPORT

Name of customer: Dr.M.Madhusudanan, Sci E CPCB, Bengaluru.	Sampling location: Bellandur Lake, Bengaluru
Nature of sample: Lake sediment sample	Sampling type: Grab
Date of sampling: 18.01.2020	Date of receipt: 11.02.2020.
Date of commencement and completion of analysis: 11.02.2020 - 12.02.2020	Date of report issue: 12.02.2020
Code no. of sample: WW/02/2020/460-465	Req. slip no. / Date: 90/W,11.02.2020
No. of pages: 02/06	Report issue no.: HM/02/90/2020
Remarks:	

S.No.	Sampling Point → Metal, mg/kg	Kateramma temple, Bellandur lake, Bengaluru			Middle of the Bellandur Lake, Bengaluru.			Detection limit	Reference Method
		3- Top	3A- Middle	3B- Bottom	4- Top	4A- Middle	4B- Bottom		
1	Copper	250	466	BDL	688	286	BDL	0.1	APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	BDL	80	BDL	BDL	0.1	
3	Total chromium	104	272	46	196	80	BDL	0.1	
4	Iron	23208	27588	27100	35480	24200	3166	0.1	
5	Manganese	144	286	230	212	234	BDL	0.1	
6	Nickel	BDL	86	BDL	58	BDL	BDL	0.1	
7	Lead	88	34	BDL	92	30	BDL	0.1	
8	Zinc	640	1410	BDL	1576	666	BDL	0.1	

S. Karthikeyan
Authorised Signatory
(S.Karthikeyan)
Scientist 'C'

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Bengaluru – 560079.

(Telephone: 080-23233739, 23222539, FAX: 080-23234059) (E-Mail: cpcbszo@yahoo.com, zobangalore.cpcb@nic.in)



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CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest & Climate Change)
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Nature of sample: Lake sediment sample	Sampling type: Grab
Date of sampling: 18.01.2020	Date of receipt: 11.02.2020.
Date of commencement and completion of analysis: 11.02.2020 - 12.02.2020	Date of report issue: 12.02.2020
Code no. of sample: WW/02/2020/466 - 468	Req. slip no. / Date: 90/W, 11.02.2020
No. of pages: 03/06	Report issue no.: HM/02/90/2020
Remarks:	

S.No.	Sampling point → Metal, mg/kg	Bellandur Lake Near Kodi, Bellandur lake, Bengaluru.			Detection limit	Reference Method
		5- Top	5A- Middle	5B - Bottom		
1	Copper	290	312	BDL	0.1	APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	BDL	0.1	
3	Total chromium	132	118	74	0.1	
4	Iron	25460	23680	62780	0.1	
5	Manganese	174	314	226	0.1	
6	Nickel	56	72	28	0.1	
7	Lead	48	78	BDL	0.1	
8	Zinc	908	790	68	0.1	

S. Karthikeyan
Authorised Signatory
(S.Karthikeyan)
Scientist 'C'

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Bengaluru - 560079.

(Telephone: 080-23233739, 23222539, FAX: 080-23234059) (E-Mail: cpcbso@yahoo.com, zobangalore.cpcb@nic.in)



Act, 1986
42(3)/97, Legal 6th March 1997

TC 7739

TEST REPORT

Customer: Dr. M. Madhusudan	Sampling location: Varthur lake . Bengaluru
CPCB, Bengaluru.	
Sample: Lake sediment sample	Sampling type: Grab
Date of sample: 11.02.2020	Date of : 11.02.2020
Date of commencement and completion of analysis: 11.02.2020 - 01.02.202	Date of report issue: 12.02.2020
Code sample: WW/02/2020/469-4	Req. slip no. / Date: 90/W,11.02.2020
No. of pages: 04/0	Report issue no.: HM/02/90/2020
Remarks:	

Point Sl No.	Sampling Metal, mg/kg	Sample No 1		Sample No 2		Detection limit	Reference Method
		1 Top Soil Varthur Lake	1a Underground Water (2 feet) Varthur Lake	2 Top Soil Varthur Lake	2a Below ground level (2 feet) Varthur Lake		
1	Copper	BDL	BDL	BDL	0.1		APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	BDL	0.1		
3	Total chromium	BDL	54	38	0.1		
4	Iron	1771	10214	44460	30180	0.1	
5	Manganese	48	226	98	192	0.1	
6	Nickel	BDL	BDL	20	BDL	0.1	
7	Lead	BDL	80 L	BD	56	0.1	
8	Zinc	52	90	BDL	24	0.1	

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Authorised Signatory
(S.Karthikeyan)
Scientist 'C'

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REGIONAL LABORATORY
CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest & Climate Change)
REGIONAL DIRECTORATE (SOUTH), BENGALURU



Recognised under E(P) Act, 1986
(Legal 42(3)/87, dated 6th March, 2017)

TC 7739

TEST REPORT

Name of customer: Dr. M. Madhusudanan, Sei E CPCB, Bengaluru.	Sampling location: Varthur lake ,Bengaluru
Nature of sample: Lake sediment sample	Sampling type: Grab
Date of sampling: 18.01.2020	Date of receipt: 11.02.2020.
Date of commencement and completion of analysis: 11.02.2020 - 12.02.2020	Date of report issue: 12.02.2020
Code no. of sample: WW/02/2020/473 - 476	Req. slip no. / Date: 90/W.11.02.2020
No. of pages: 05/06	Report issue no.: HM/02/90/2020
Remarks:	

Sl No.	Sampling point → ↓ Metal, mg/kg	Sample No 3		Sample No 4		Detection limit	Reference Method
		3 Top Soil Varthur Lake	3a Below ground level (2 feet) Varthur Lake	4 Top Soil Varthur Lake	4a Below ground level (2 feet) Varthur Lake		
1	Copper	BDL	BDL	BDL	BDL	0.1	APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	BDL	BDL	0.1	
3	Total chromium	44	38	BDL	62	0.1	
4	Iron	29420	29720	8814	34460	0.1	
5	Manganese	154	200	40	866	0.1	
6	Nickel	BDL	BDL	BDL	BDL	0.1	
7	Lead	BDL	BDL	BDL	264	0.1	
8	Zinc	68	28	42	48	0.1	

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REGIONAL LABORATORY
CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment, Forest & Climate Change)
REGIONAL DIRECTORATE (SOUTH), BENGALURU



TC 7739

TEST REPORT

Name of customer: Dr. M. Madhusudanan, Sci E CPCB, Bengaluru.	Sampling location: Varthur lake .Bengaluru
Nature of sample: Lake sediment sample	Sampling type: Grab
Date of sampling: 18.01.2020	Date of receipt: 11.02.2020.
Date of commencement and completion of analysis: 11.02.2020 - 12.02.2020	Date of report issue: 12.02.2020
Code no. of sample: WW/02/2020/477 - 478	Req. slip no. / Date: 90/W,11.02.2020
No. of pages: 06/06	Report issue no.: HM/02/90/2020
Remarks:	

S.No.	Metal, mg/kg ↓	Sampling point →	Blank	Detection limit	Reference Method
		Sample No 4 4b Below ground level (5 feet) Varthur Lake			
1	Copper	BDL	BDL	0.1	APHA 3120-B 23 rd Edition 2017
2	Cadmium	BDL	BDL	0.1	
3	Total chromium	BDL	BDL	0.1	
4	Iron	6440	512	0.1	
5	Manganese	52	BDL	0.1	
6	Nickel	BDL	BDL	0.1	
7	Lead	BDL	BDL	0.1	
8	Zinc	BDL	BDL	0.1	

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---End of report---

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No.DH: Biotech: SADH (PN): AHO: 1&2:2019-20

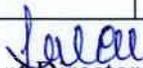
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 6b
4. Sample number : 1337

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm ¹) not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	1.21
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.34
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.03
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.28
10	C.N. ratio	<20	4:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	28960.7
	Manganese (mg/kg)	-	208.60
	Copper (mg/kg), Max	300.00	93.30
	Zinc (mg/kg), Max	1000.00	69.15
	Lead (mg/kg), Max	100.00	39.40
	Cadmium (mg/kg), Max	5.0	3.35
	Chromium (mg/kg), Max	50.0	20.80
	Nickel (mg/kg), Max	50.0	85.10
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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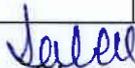
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 6a
4. Sample number : 1336

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	6.33
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.25
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.01
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.05
10	C.N. ratio	<20	25:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	27751.2
	Manganese (mg/kg)	-	160.85
	Copper (mg/kg), Max	300.00	56.95
	Zinc (mg/kg), Max	1000.00	57.30
	Lead (mg/kg), Max	100.00	30.95
	Cadmium (mg/kg), Max	5.0	3.05
	Chromium (mg/kg), Max	50.0	17.75
	Nickel (mg/kg), Max	50.0	74.30
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 6
4. Sample number : 1335

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	11.57
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.85
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.22
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.13
10	C.N. ratio	<20	14:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	25733.1
	Manganese (mg/kg)	-	223.20
	Copper (mg/kg), Max	300.00	78.65
	Zinc (mg/kg), Max	1000.00	89.95
	Lead (mg/kg), Max	100.00	41.35
	Cadmium (mg/kg), Max	5.0	7.75
	Chromium (mg/kg), Max	50.0	24.40
	Nickel (mg/kg), Max	50.0	70.95
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 5b
4. Sample number : 1334

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	7.78
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.45
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.07
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.25
10	C.N. ratio	<20	17:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	31961
	Manganese (mg/kg)	-	307.05
	Copper (mg/kg), Max	300.00	70.15
	Zinc (mg/kg), Max	1000.00	72.85
	Lead (mg/kg), Max	100.00	45.30
	Cadmium (mg/kg), Max	5.0	3.85
	Chromium (mg/kg), Max	50.0	24.01
	Nickel (mg/kg), Max	50.0	93.40
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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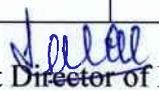
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 5a
4. Sample number : 1333

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	10.60
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.61
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.44
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.09
10	C.N. ratio	<20	17:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	27528
	Manganese (mg/kg)	-	267.65
	Copper (mg/kg), Max	300.00	72.35
	Zinc (mg/kg), Max	1000.00	80.80
	Lead (mg/kg), Max	100.00	39.40
	Cadmium (mg/kg), Max	5.0	4.55
	Chromium (mg/kg), Max	50.0	22.65
	Nickel (mg/kg), Max	50.0	80.85
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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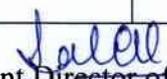
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 5
4. Sample number : 1332

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	11.98
7	Total Nitrogen (as N) % by weight, minimum.	1.0	1.25
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.27
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.15
10	C.N. ratio	<20	10:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	23935.1
	Manganese (mg/kg)	-	146.05
	Copper (mg/kg), Max	300.00	87.30
	Zinc (mg/kg), Max	1000.00	95.95
	Lead (mg/kg), Max	100.00	39.35
	Cadmium (mg/kg), Max	5.0	10.45
	Chromium (mg/kg), Max	50.0	20.80
	Nickel (mg/kg), Max	50.0	72.30
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 4b
4. Sample number : 1331

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	17.34
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.65
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.09
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.17
10	C.N. ratio	<20	27:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	23147.7
	Manganese (mg/kg)	-	144.60
	Copper (mg/kg), Max	300.00	42.60
	Zinc (mg/kg), Max	1000.00	57.60
	Lead (mg/kg), Max	100.00	25.95
	Cadmium (mg/kg), Max	5.0	2.95
	Chromium (mg/kg), Max	50.0	16.80
	Nickel (mg/kg), Max	50.0	53.25
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 4a
4. Sample number : 1330

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	3.18
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.34
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.04
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.19
10	C.N. ratio	<20	9:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	24087
	Manganese (mg/kg)	-	133.55
	Copper (mg/kg), Max	300.00	44.65
	Zinc (mg/kg), Max	1000.00	54.75
	Lead (mg/kg), Max	100.00	30.60
	Cadmium (mg/kg), Max	5.0	2.85
	Chromium (mg/kg), Max	50.0	17.75
	Nickel (mg/kg), Max	50.0	60.25
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 4
4. Sample number : 1329

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	3.29
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.20
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.02
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.03
10	C.N. ratio	<20	17:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	25032.5
	Manganese (mg/kg)	-	132.35
	Copper (mg/kg), Max	300.00	40.35
	Zinc (mg/kg), Max	1000.00	46.30
	Lead (mg/kg), Max	100.00	24.75
	Cadmium (mg/kg), Max	5.0	2.65
	Chromium (mg/kg), Max	50.0	16.75
	Nickel (mg/kg), Max	50.0	51.50
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


Senior Assistant Director of Horticulture
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Phone (080) 6582784, 6582775, Fax: (080) 6584906.

No.DH: Biotech: SADH (PN): AHO: 1&2:2019-20

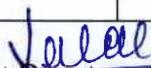
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 3
4. Sample number : 1328

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	5.91
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.37
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.01
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.02
10	C.N. ratio	<20	16:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	21142
	Manganese (mg/kg)	-	191.3
	Copper (mg/kg), Max	300.00	32.55
	Zinc (mg/kg), Max	1000.00	53.60
	Lead (mg/kg), Max	100.00	30.70
	Cadmium (mg/kg), Max	5.0	2.70
	Chromium (mg/kg), Max	50.0	15.35
	Nickel (mg/kg), Max	50.0	50.65
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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No.DH: Biotech: SADH (PN): AHO: 1&2:2019-20

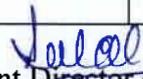
ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 2
4. Sample number : 1327

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	2.78
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.71
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.02
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.19
10	C.N. ratio	<20	4:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	19015.4
	Manganese (mg/kg)	-	123.15
	Copper (mg/kg), Max	300.00	22.40
	Zinc (mg/kg), Max	1000.00	60.90
	Lead (mg/kg), Max	100.00	15.20
	Cadmium (mg/kg), Max	5.0	2.20
	Chromium (mg/kg), Max	50.0	9.30
	Nickel (mg/kg), Max	50.0	26.05
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-


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No.DH: Biotech: SADH (PN): AHO: 1&2:2019-20

ANALYTICAL RESULT OF LAKE SEDIMENT

Date of receipt: 27.02.2020

Date of report: 12.03.2020

1. Name of the manufacturer: **Varthur lake sediment sample**
2. Sample sent by : Karnataka State Pollution Control Board, Bengaluru
3. Name of the Sample : 1
4. Sample number : 1326

SL.No.	Tests Parameter	Requirements Standard	Results
1	Colour	Brown to Black	-
2	Odour	Absence of Foul Odour	-
3	Moisture % by weight Maximum	25.0	-
4	pH	6.5 – 7.5	-
5	Conductivity (as dsm') not more that	4	-
6	Total Organic carbon (%) by weight, minimum.	18.0	8.10
7	Total Nitrogen (as N) % by weight, minimum.	1.0	0.69
8	Total Phosphorous (as P ₂ O ₅) % by weight, minimum.	0.8	0.13
9	Total Potash (as K ₂ O) % by weight minimum.	0.8	0.16
10	C.N. ratio	<20	12:1
11	Bulk density maximum	0.7-0.9	-
12	Particle size after passing through 4mm IS sieve min	Not less than 75%	-
13	Iron (mg/kg)	-	27149
	Manganese (mg/kg)	-	140.20
	Copper (mg/kg), Max	300.00	80.45
	Zinc (mg/kg), Max	1000.00	319.3
	Lead (mg/kg), Max	100.00	38.95
	Cadmium (mg/kg), Max	5.0	5.90
	Chromium (mg/kg), Max	50.0	16.30
	Nickel (mg/kg), Max	50.0	54.05
14	Calcium % by weight	-	-
15	Magnesium % by weight	-	-

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