

**BEFORE THE NATIONAL GREEN TRIBUNAL, SOUTHERN  
ZONE, AT CHENNAI**

**ORIGINAL APPLICATION No.97 OF 2022**

Dr.M.S. Tejashwari

... Applicant

**AND**

Union of India & Others

... Respondents

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**Place: CHENNAI**

**DRAWN AND FILED BY**

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**COUNSEL FOR APPLICANT**

**DATE: 01.05.2023**

*T. Hemalatha*



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**REJOINDER TO THE REPLY FILED BY THE RESPONDENT NO.2**

1. The allegations in the reply of the respondent no.2 are all false and untenable and the respondent no.2 is put to strict proof of all allegations which are not specifically dealt with hereunder:
2. The respondent no.2 is guilty of perjury and has vitiated the solemn proceedings of this hon'ble Tribunal and has rendered itself to be prosecuted for the same.
3. The facts stated in the O.A. are hereby reiterated. The reply filed by the respondent no.2 can only described as mischievous attempt to coverup the illegal acts committed by them. The allegations made in the counter have caused immense mental agony to the applicant and her family members.



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4. As regards the alleged brief facts stated by the respondent no.2 in paragraphs 2(i) to (xxxi) are nothing but bundle of lies and the respondent no.2 has stooped to such low levels in attempt to insulate himself from the gross illegalities and criminal offences committed by him and is trying to divert the attention of this Hon'ble Tribunal. The allegations with regard to the Layout application and is processing by the 2<sup>nd</sup> respondent is concerned is a subject matter pending before the Hon'ble High Court of Telangana. However, the applicant would like to counter the allegations made in the alleged facts detailed by the respondent no.2 as under:

5. The allegations made in paragraph (i) is not disputed.

6. As regards allegations in paragraph (ii) that applicant's father was allotted agricultural land known as muraki Bavi is incorrect as the land is known in the revenue records as Cheruvu Kommu Katta. However, for easy identification, in the partition decree, the land is described as mulaki Bavi, which means corner well and the further allegations that the said Well was receiving since time immemorial drain/storm water is absolutely false and motivated. However, the applicant is happy that the respondent no.2 has at least acknowledged the presence of a well in the property of the applicant as the respondent no.2 has all the while in all proceedings in the High Court for the State of Telangana filed by the applicant and her brother had consistently maintained that there was no well but only a cesspool. As regards the further allegations that the said Well is receiving drain/storm water from upstream due to natural gradient and it was never used for drinking water and that was the



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reason it was known as Muraki Bavi (dirty water well) is absolutely false and untenable for reasons to be stated herein after. The natural gradient is from west to east and not from north to south all storm water flow into the Trimulgherry lake and not as alleged.

7. As regards allegations in para 2(iii) and (iv) that the layout application was returned with certain objections of 21/11/2012 is correct, but it is cleverly concealed that the layout application was made on 26/12/2007 and the 2<sup>nd</sup> respondent did not process the same for more than 4 years, thereby forcing applicant's father late M Satyanarayana Reddy to filed W.P. No 8426 of 2011 seeking a writ of mandamus to the 2<sup>nd</sup> respondent to process the layout application dated 26/12/2007. The said writ petition was allowed directing the 2<sup>nd</sup> respondent herein to process the layout application within a period of 3 months from the date of receipt of the order vide orders dated 13/3/2012 and it was only after the honorable High Court intervened that the 2<sup>nd</sup> respondent raised objections to which applicant's late father had complied by resubmitting the plan. The said application was again and again returned with the maximum number of possible objections being raised by the 2<sup>nd</sup> respondent and ultimately finding that they don't have any other reason, the board of the 2<sup>nd</sup> respondent passed a resolution vide CBR No.30 dated 6/2/2013 approving the layout which is subject to the final seal of approval by the Principal Director, Southern Command.

8. Even after all the formalities were complied with, the final seal of approval from the Principal Director was not forthcoming and applicant's father late M. Satyanarayana



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Reddy was constrained to file WP number 31453 of 2017 which is pending and the 2<sup>nd</sup> respondent and the Principal Director, Southern Command have not filed any counter to the same till now.

9. As regards the further allegations that applicant's father had shown proposed stormwater drain line passing through his property from north to south direction connecting to an existing open nala on the southern side is true. The 2<sup>nd</sup> respondent is trying to twist the facts. The layout submitted by applicant's father was only for an extent of 1 acre 16 guntas out of 3 acres 11 guntas belonging to him and the portion of the land for which the layout was applied for is situated on the southern side of his property which is very near to the public drain and applicant's late father had intention to retain the rest of the land admeasuring about 1 acre 35 guntas for his passion for growing exotic plants.

10. As regards allegations that on the northern boundary of our property is a colony/hamlet name Chinna Kamela which forms part of general land register survey number 360/part and this colonies consisting of about 257 houses and that the same is in existence for more than 5 decades are all absolutely false and in the said statement same resembles the similar voice of the encroachers of the valuable defence land. That north of applicant's land is revenue survey number 114 which is A-1 defence land and is GLR survey number 360 (maintained by the Secunderabad Cantonment Defence Estates office) and is not Chinna Kamela as claimed by the 2<sup>nd</sup> Respondent which is elsewhere and has expanded into the defence land and the allegations



*Legal*

made by the respondent no.2 herein indicates his gross open support for the encroachers of the Defence land to grab the same. No government officer or a legal counsel would openly admit that encroachers have grabbed the govt. land and have perfected the title by prescription. It is the bounden duty of govt. employees and also standing counsels who are being paid from out of public funds to protect public property.

11. The applicant had already filed the Google Maps and satellite photos with timeline clearly showing the gradual expansion of the illegal encroachments which are of recent origin in the defence land in Revenue Sy.No.114 of Trimulgherry village. Apart from the same, the google maps of the year 2003 filed by the applicant shows that beyond the northern side of the boundary wall was a wide patch of open jungle land which has now been grabbed recently.

12. As regards the further allegations that the stormwater drain water is passing through applicant's father's property and that on account of the same a cesspool and agricultural kunta was formed in the said property for a period of time is absolutely false and untenable. Even in the plan annexed to the final decree, the agricultural well is shown as situated on the north-eastern side of my property. The freshwater well is being described by the deponent as cesspool is at least hundred feet deep and till recently, applicant's friends even had a picnic on applicant's land and also enjoyed a swim in the well which was full on account of heavy rains in the recent past.



13. As regards the further allegations that due to continuous flow of storm drain water, applicant's father was

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directed to resubmit the layout by showing underground stormwater drain allegedly in view of the appearance of the upstream neighboring colony? as well as 20 no. of upcoming plots of his own layout to avoid any cesspool are all absolutely incorrect. Whenever there is a layout application being processed, the layout rules require mandatorily to show underground drainage for sewage and the storm water drains for draining rainwater not sewage from the layout and not for the public.

14. As regards the further allegations in para2(iv) that applicant's father having submitted a layout has not developed the layout as shown in the layout plan is untenable that too coming from the CEO of the Secunderabad Cantonment Board. It is common sense that a layout can be developed only after it is sanctioned/approved. It is suggested preposterously that applicant's father should have carried out layout works without being permitted to do so.

15. As regards the further allegations that stormwater drain water from upstream area is being deposited in cesspool and the same is percolating into the soil due to this, there is no problem for discharge of effluent from the upstream area of Chinna Kamela for the last several decades is not only false but also mischievous and preposterous. The Telangana State Pollution Control Board Environmental Engineer gave a report dated 17/4/2018 to the 2<sup>nd</sup> Respondent that the Trimulgherry lake was being polluted due to discharge of sewage from surrounding



*W. P. S.*

colonies including Chinna Kamela proving that the natural gradient is emptying into the Trimulgherry Lake. The copy of the said report letter number Lr.No.15/TSPCB/RO-MDC/Compl/2018-254 is filed herewith. (Annexure I).

16. Further the question whether the applicant has constructed the compound wall without permission as required under Sec 261 or whether there is any need for obtaining permission for construct of compound wall which is not abutting the street is also a question pending adjunction before this honourable High Court for the State of Telangana in W.P.No.19579 of 2022 and W.P.No.22126 of 2022.

17. The allegations that the applicant was obstructing the natural flow of storm / drain water coming from alleged upstream area of Chinna Kamela due to alleged natural gradient and that the same formed has cesspool in the said property over a period of time are all untenable false statements. It is not out of place to state that the report of the Environmental Engineer of the 3<sup>rd</sup> Respondent dated 17/4/2018 clearly states that all the sewage and the storm water from surrounding colonies including Chinna Kamela were naturally emptying into the Trimulgherry Lake proving that the natural gradient is toward the lake and not towards the property of the applicant.

18. The fact that the JCB were used for demolishing the compound wall in Northern and North-eastern side of the compound wall to make entry for the JCB to enter and the said JCB is with registration number TS10EH7412 had



*Legal*

trespassed and had dug deep and wide channels to divert the sewage from the illegally laid drainage pipes by the Defence land encroachers into the fresh water well is clear from the photographs already submitted and also the CCTV video footage (**Annexure II**) which is filed herewith which recorded the gruesome acts of the 2<sup>nd</sup> Respondent's officers.

19. The printouts from the website of the Road Transport Authority, Secunderabad of the details of the JCB registration number TS10EH7412 clearly proves that the JCB used belongs to the 2<sup>nd</sup> Respondent. (**Annexure III**).

20. As regards to the allegations in the reply regarding the meeting with the Chief Executive Officer of the 2<sup>nd</sup> Respondent and the intimidation of the 2<sup>nd</sup> Respondent to lay a public drainage line through the middle of the property without following any due process of law or without paying any compensation is admitted.

21. The issue of the layout is irrelevant and the further allegations that the applicant and her brother closed the existing drainage line is misleading and it is like saying we have laid an illegal drainage line and your existing compound wall is causing obstruction to the flow of sewage and please remove it so that sewage can flow into your property. The fact remains that the encroachers/slum dwellers tried to make holes in the legally erected compound wall to protect the property and the 2<sup>nd</sup> Respondent unlawfully demolished a portion to commit illegalities.

22. The 2<sup>nd</sup> Respondent also admits that the Police did not provide protection to the applicant in preventing trespass to her property and the 2<sup>nd</sup> Respondent apart from being a



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mute spectator has admittedly encouraged grabbing of the Defence Land and facilitating illegalities to be committed with his own funds.

23. The allegation that the applicants brother dismantled the drainage system which was in allegedly in existence for more than 50 years shows the complexity of the 2<sup>nd</sup> Respondent and especially its Chief Executive Officer in the land grab activities. The stagnation of the drain / sewage beyond the compound wall on Northern Side of the applicant's property is due to the 2<sup>nd</sup> Respondent and the encroachers illegal acts.
24. The 2<sup>nd</sup> Respondent is put to strict proof that he laid the drainage line for the Defence land encroachers and is called upon to produce the tender and contract details and the financial statements and expenses incurred for the same.
25. As regards the allegations 2(v) that applicant's father wrote a letter dated 27/3/2015 informing the 2<sup>nd</sup> respondent that the land has been converted into non-agricultural by the revenue authorities is true. The said conversion is only on paper as the conversion of the land from agriculture to non-agriculture is a sine qua non for obtaining a layout from the 2<sup>nd</sup> respondent and nearly 16 years have passed and the layout is yet to be sanctioned. And unless the layout is sanctioned, the layout works cannot be commenced, this is a basic principle which the 2<sup>nd</sup> respondent appears to be ignorant of despite being the Chief Executive Officer of the Cantonment.



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26. The applicant gave a representation to the Defence Estates Officer, Secunderabad and also to the Director-General of Defence Estates complaining about the illegal encroachment of defence lands. In this regard, there was a phone call from the office of the headquarters, Telangana and Andhra sub-area requesting the applicant to attend the meeting with the President of the Secunderabad Cantonment Board and the respondent no.2 and a meeting took place on 3/2/2022 and instead of discussing the representation of the applicant dated 21/1/2022, the then CEO Mr. Ajith Reddy was shouting at the top of his voice unmindful of the presence of the President of the Secunderabad Cantonment who is a decorated Army officer declaring that he was going to demolish applicant's boundary wall to facilitate the draining of the sewage onto applicant's land illegally.

27. As regards allegations in para 2(viii) that applicant constructed a compound wall without any permission is incorrect. The boundary wall was constructed long ago about 20 years back even before the new Cantonments Act came into force and the said wall was unobjectionable to the defence estates office who had issued no objection to the increasing of the height of the compound wall vide their letter dated 9/12/2009 and the original compound wall was constructed even prior to the year 2004 with the permission of the Secunderabad Cantonment board even before the coming into force the Cantonments Act, 2006. Even otherwise, the compound wall has been unobjectionable nearly 2 decades now and all of a sudden, the respondent no.2 is raking up the issue which is not an issue in this O.A.



*K. S. Reddy*

28. As per section 261 of the Cantonments Act, permission for construction of compound wall is necessary only when the wall abuts a street. The term boundary wall/compound wall as defined in section 2(c) of the Cantonments Act, 2006 means a wall which abuts a street and is not included in the definition of a building as defined in section 2(d). Over 20 years back when the compound wall was constructed the said wall abutted defence land and irrigation tank and therefore no permission for construction is necessary. There was no stormwater drain, sewage drains in the area and all rainwater normally and naturally empty into the irrigation tank nearby (Trimulgherry Lake) till recently when the illegal encroachers and land grabbers had laid their own sewage line illegally under the blessings of the respondent no.2.

29. The applicant recently got a geological, geophysical and Hydrological study of her land and its surrounding through a private firm of eminent geologists and water, environment, mining and engineering consultants by name " Blue Energy Build Private Limited and Geotrax International Services who are highly qualified holding doctorates from reputed universities with international accreditations, who have given a detailed reports opining that the natural flow of storm water discharge from the land north of the my land was into the Trimulgherry lake existing on the eastern side of my land.

30. The collection of sewage water outside applicant's northern side compound wall was due to human intervention of recent origin and the existence of the fresh water well (wrongly described by 2<sup>nd</sup> respondent as cesspool



*Rajal*

previously now new description as dirty water well) on the northern eastern side is clearly visible from the high resolution satellite photos obtained from Google and studies of toposheets right from 1971-74 conclusively proves that the existence fresh water well which is perennial and also has underground channels recharging the borewells in the surrounding area and the likelihood of the underground water being polluted was very high and most probable.

31. The geophysical studies also indicate that applicant's land where the 2<sup>nd</sup> respondent is proposing to illegally lay a public drainage without due process of law is covered by hard massive and compact granite by shallow basement at depth in the study area involved huge cost for of excavation and laying of drainage was unviable economically for laying public drainage pipe line as proposed by the respondent. The copy of the report is filed herewith. **(Annexure IV)**.

32. As regards allegations in para-2(ix) that the compound wall was damaged by the slum dwellers of Chinna Kamela allegedly admittedly and the allegation that the 2<sup>nd</sup> respondent's officials were not responsible for demolition of compound wall is not factually correct and is also untenable and is also contradictory to his admission at para 2(xv).

33. The refusal of the 2<sup>nd</sup> respondent to see reason and consider applicant's alternate proposal is clearly indicative of the collusion with real estate sharks. The fact remains that the then CEO of 2<sup>nd</sup> respondent was frequently felicitated by the politicians and local leaders who've been instrumental in the grabbing of the defence land.



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34. As regards allegations that the meeting ended abruptly is incorrect. As a matter of fact, the applicant and her brother were most patient despite all the humiliations heaped on them by the respondent no.2.

35. As regards allegations in para-(xiii) of the counter affidavit, the drainage of Chinna Kamela is passing through applicant's land for 50 years is totally untenable for the reason that there was no Chinna Kamela nearby applicant's land. The said original Chinna Kamela, lies at least 4 km north east from applicant's land. The Chinna Kamela, now being referred to by the deponent of the counter affidavit is nothing but the recent encroachments of the defence land in survey number 114. The 2<sup>nd</sup> respondent instead of protecting land belonging to the defence of the nation has taken up cudgels on behalf of the illegal encroachers and land grabbers and stooped to such low levels to take false stand thereby vitiating the solemn proceedings. The scientific study report clearly shows that the natural gradient and the drainage of storm water was flowing from west to east into the Trimulgherry lake.

36. As regards the allegations in para 2(xiii), (xiv) and (xv) of the reply that 100 members of the Chinna Kamela basthi have submitted a representation that they are residing in a colony called Chinna Kamela for more than 50 years and the 2<sup>nd</sup> respondent had provided all basic amenities like roads drainage and drinking water etc., and that applicant's brother dismantled the existing drainage system due to which the drainage was getting stagnated in front of their houses, creating unhygienic health conditions and that the



*K. Raju*

drainage flow has been blocked and that a dharna was also staged in front of the office of the 2<sup>nd</sup> respondent Board and that due to which the officials of the 2<sup>nd</sup> respondent have visited the drain outlet area and observed closure of the drain outlet and the drain water had stagnated on the outside of the compound wall and entering into some of the houses of the Chinna Kamela colony and due to such compelling circumstances, the women folk of the colony had tried to clear the blockage etc., and the 2<sup>nd</sup> respondent's officials have cleared the obstruction to facilitate free flow of drain water into the cesspool. The 2<sup>nd</sup> respondent has not filed any report of the alleged visit of the officials. The 2<sup>nd</sup> respondent should explain if the drainage line was in existence for the past 50 years, then why there was no obstruction for the past 20 years of existence of the compound wall. Obviously the illegally laid drainage line is of recent origin and the 2<sup>nd</sup> respondent is hand in glove with the land grabbers for which they are being regularly felicitated.

37. The 2<sup>nd</sup> respondent is very sensitive to the problems faced by the illegal activities of the land encroachers and is turning a blind eye to the rights of the petitioners to their property and right to protect the same and is supporting the illegal and the gruesome act of polluting the fresh water well and calling it a cesspool /dirty water well.

38. The allegations that the officials of the 2<sup>nd</sup> respondents have cleared the obstructions is vague. On the other hand, it is tacit admission that the officials have demolished the portion of the compound wall on the northern and northern eastern side of my compound wall broad enough to facilitate



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the entry of a JCB and trespassed into the land of the petitioners and outrageously dug two wide and deep channels with the help of police personnel from Trimulgherry police station. The applicant and her brother were manhandled by the police at the instigation of 2<sup>nd</sup> respondent's engineer Mr. Dinesh.

39. The allegations in para 2 (xxii) &(xxiii) of the reply that an interim speaking order was passed is true and very passing of the illegal interim order was with oblique motives as the honourable High Court specifically directed the 2<sup>nd</sup> respondent to pass a final order and instead, the 2<sup>nd</sup> respondent passed an interim order in the style of an interim injunction illegally restraining the applicants from carrying on their lawful activities knowing fully well that the 2<sup>nd</sup> respondent has no powers to high handedly lay a public drainage line through private land and as if the 2<sup>nd</sup> respondent was trying to do a favour to the applicant and in fact was trying to do an eye wash and obtain a pliable report from his "favourite" contractors and wait till the courts close for vacation so that he can accomplish his high-handed illegal act of laying a public drain through the land of the applicant.

40. As the 2<sup>nd</sup> respondent was not passing the final order for oblique reasons, the applicant was constrained to file the writ petition W.P.No.19579 of 2022 challenging the passing of the very interim order and also very right of the 2<sup>nd</sup> respondent to issue notice under section 213 and 224 of the Cantonments Act, 2006 as both these sections are not applicable and do not give any power to lay a public drain through applicant's land without any appropriate due process of law.



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41. As regards the further allegations in the said paragraph, that the 2<sup>nd</sup> respondent wanted to consult on the alleged feasibility report allegedly submitted to the 2<sup>nd</sup> respondent on 1/4/2022 and submitted on 4/4/2022 and that the 2<sup>nd</sup> respondent requested the applicant to appear on 8/4/2022 is absolutely false as the feasibility report was not submitted to the applicant before calling for consultation and if he really had wanted to discuss on the said report, he would have forwarded the report in advance. The intention of the 2<sup>nd</sup> respondent is obviously clearly different.

42. The applicant was getting intelligence reports from the local leaders from their posts in the Facebook that decks were being cleared for high-handed illegal laying of the public drainage line through applicant's property without following due process of law. Therefore, the allegations that the applicant did not show any interest in meeting the 2<sup>nd</sup> respondent is very far-fetched and has been made with a view to garner sympathy of this honourable court and paint himself as an angel. The claim of the 2<sup>nd</sup> respondent that he has powers under section 213 and 224 of the Cantonments Act, 2006 to lay a public drain through private land is totally untenable and exhibits the 2<sup>nd</sup> respondent and his learned legal advisor's total disregard for proper interpretation of the provisions of law. Mainly because the 2<sup>nd</sup> respondent has passed the final speaking order, doesn't mean that it is final as assumed by him.

43. The perusal of the report which is clearly unscientific and tailor made to the requirement of the land grabbers and their patron, the 2<sup>nd</sup> respondent is also subject matter of a writ petition pending before the hon'ble high Court of Telangana.



*W. J. J.*

44. The alleged consultant who prepared the report did not even visit the applicant's land or study the topography and geology of the land before recommending the proposal clearly indicating the collusive unscientific report. It is true the hon'ble High Court was pleased to pass an order of status quo and the same is with regard to the laying of the public drainage pipeline through the applicant's land and with regard to the boundary wall. The status quo did not prevent the 2<sup>nd</sup> respondent from stopping the further pollution of the fresh water well and take up steps to explore alternate ways to divert the sewage as per the options given in their own "feasibility report". When it was clear that the applicant and her brother were not giving any consent for laying a public drainage through their land, nothing prevented the 2<sup>nd</sup> respondent from taking appropriate steps to stop the discharge of sewage into the applicant's fresh water well. The 2<sup>nd</sup> respondent is trying to feign helplessness and the 2<sup>nd</sup> respondent is not really serious and it is obvious that the 2<sup>nd</sup> respondent is acting as per the directions of the encroachers of the land and their leaders including the respondents 3 & 4.

45. As regards allegations that applicant's father himself proposed an underground pipeline or drainage of sewage through his property is correct for complying with the layout rules and the proposed pipeline is for draining the storm water not sewage that would be collected from the layout proposed by him and even the proposed to drain is at least 500 feet, from the Northern side compound wall and not 30 m which is the maximum requirement for exercising the power under section 213 of the Cantonments Act and even



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as per the said provision of law, the 2<sup>nd</sup> respondent is not empowered to lay a drainage through the applicant's land for more than hundred feet. The respondent no.2 having committed a grievous unpardonable sin of channeling the sewage into the applicant's freshwater well has the temerity to describe it as a cesspool and has also dared to depose falsely before this honourable court and has thereby vitiated the solemn proceedings. Section 224 of the cantonments Act on which the 2<sup>nd</sup> respondent is relying is also not applicable as he cannot give permission to any encroachers who are not owners to trespass into the applicant's land and lay in a drainage pipe line. It is very clear that knowing fully well that the 2<sup>nd</sup> respondent cannot lay any drainage line through applicant's land has resorted to illegalities in order to help the land grabbers who have emptied their sewage on the northern side of applicant's boundary wall.

46. The 2<sup>nd</sup> respondent instead of acting upon the applicant's complaint about the illegal laying of drainage pipe lines since May 2021 by the encroachers for over a kilometer is now supporting and justifying his illegal acts of demolishing of the applicant's compound wall and also causing havoc on the applicant's land with the help of a mob. Instead of protecting law-abiding citizens, the 2<sup>nd</sup> respondent is going out of his way to help lawbreakers that too encroachers of defence lands.

47. As regards the further allegations that the 2<sup>nd</sup> respondent suggested laying of public drainage pipe line through the applicant's land is incorrect. As a matter of fact, the 2<sup>nd</sup> respondent did not suggest but has only in a high-handed manner started demolishing the compound wall with



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an intention to lay underground drainage through the middle of the applicant's land to make it useless at the instance of local leaders who have been trying to grab the applicant's land since long.

48. As regards allegations that the 2<sup>nd</sup> respondent is planning to lay a drainage line as per the plan submitted by my father is absolutely incorrect for the simple reason that the layout itself has not had been sanctioned and there is no public drain at all as on date and the proposed drainage line is more than 500 feet away from the northern side compound wall and the proposed layout is on the southern side of the applicant's land. The Cantonments Act does not permit any private drainage to be connected to a public drain for more than hundred feet and as such 2<sup>nd</sup> respondent has no power as on date to lay any public drainage through the applicant's land and a notice dated 16/2/2022 itself is illegal.

49. As regards allegations in paragraph (xxvii) 2<sup>nd</sup> respondent was directed by the 3<sup>rd</sup> respondent to take immediate steps to prevent untreated sewage into the open well may be true, yet the same as fallen on deaf ears.

50. As regards the further contention that there was a plan for sewage diversion for Chinna Kamela and surrounding colonies, is true and it is a fact that the 2<sup>nd</sup> respondent had engaged the Hyderabad Metropolitan water supply and sewerage board to prepare a project report as early as in 2016 and the said board has also prepared a project report ring sewer plan and since the 2<sup>nd</sup> respondent failed to pay

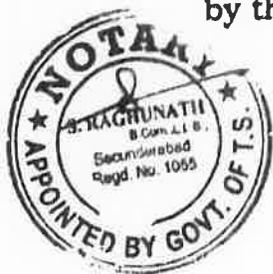


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the project fee, the report is in cold storage. Therefore, the allegations in para-28, 29 and 30 of the reply are all false and the 2<sup>nd</sup> respondent is not at all interested in addressing the issue. The applicant is filing the documents obtained under RTI Act for the kind perusal of the Hon'ble Tribunal (**Annexure V**).

51. As regards the further allegations in para-31 that it is not the 2<sup>nd</sup> respondent's duty to prevent the encroachments is shocking and untenable. The honourable Supreme Court in its judgement reported in the Hon'ble Supreme Court of India, Mr Justice Anil R. Dave, Mr Justice L. Nageswara Rao, CIVIL APPELLATE JURISDICTION CIVIL APPEAL No. 9728-9729 of 2016 (Arising out of SLP (C) No.20677-20678 of 2016) Sunil Kumar Kori & Anr vs Gopal Das Kabra & Ors.Etc on 27 September, 2016 held that it is the primary responsibility of the 2<sup>nd</sup> respondent Cantonment board under the Cantonments Act to prevent encroachments of defence lands. Apart from the same, admittedly being a Municipal body, it is the primary duty of the 2<sup>nd</sup> respondent to prevent illegal constructions and to see proper and planned development and the 2<sup>nd</sup> respondent has allowed illegal constructions on A-1 defence lands reveals its complicity in the matter.

52. As regards the allegations in paragraph 4 that the well of the applicant situated on the north-eastern side has been receiving drain/storm water since time immemorial is absolutely false. Reference may be made to the report submitted by geologist Blue Energy Build Pvt. Limited filed by the applicant that the well has been receiving water from



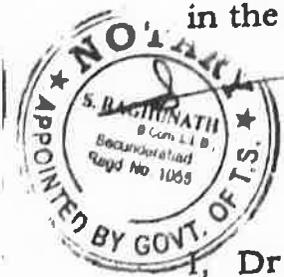
*K. J. J.*

underground sources and has been a perennial water source for agriculture and the 2<sup>nd</sup> respondent has the temerity to describe it as a dirty water well when its water was being used for worshipping deities on the tank Bund and also at the temple is situated nearby. The support given by the 2<sup>nd</sup> respondent to the respondent's numbers 4 and 5's complexity in grabbing the defence land and for laying illegal drainage lines is bewildering. As already submitted, the natural gradient is from west to east towards the Tirumalagiri Lake and not downstream the lake is evident from the scientific report submitted by the applicant.

53. The allegations that the 2<sup>nd</sup> respondent was prevented from taking remedial action on the issue of sewage discharge into the property of the applicant from the nearby slum is untenable and nothing but abdication of statutory duties.

54. It is submitted that the applicant has got the estimate of the damages done through reputed civil engineers, who estimated the cost of restoration of the well as approximately at ₹.2,00,00,000/- (**Annexure VI**) and above and time for restoration would be about 3 years or more as per the norms laid down by the Central Pollution Control Board for restoration of the polluted water bodies.

Therefore, the applicant prays that the O.A. may be allowed in the interest of justice.



#### VERIFICATION

I, Dr. M.S.Tejaswari, D/o Late Sri. M.Sathyannarayana Reddy, R/o H. No: 3-16-668/A, Trimulgherry 'X' Roads, Secunderabad - 500015; Telangana the applicant herein, do

*Tejaswari*

hereby verify that the contents of the above paragraphs are true to the best of my knowledge and grounds are based on legal advice and that I have not suppressed any material fact.

Date: 01/05/2023

Place: Secunderabad.

*[Handwritten Signature]*  
**APPLICANT**



**ATTESTED**  
*[Handwritten Signature]*  
**S. RAGHUNATH** 2023  
B. Com. LL.B.  
**ADVOCATE & NOTARY** ■ 1 MAY 2023  
H.No. 30, (7-3-439)  
Audiah Nagar Ghasmandi,  
SECUNDERABAD - 500 003  
Ph. : 9347009895



o/c

**TELANGANA STATE POLLUTION CONTROL BOARD  
REGIONAL OFFICE, MEDCHAL**

# 6-3-1219, Block .C, Ward No :- 91, Near Country Club,  
Kundanbigh, Umanagar, Begumpet, Hyderabad

**Kumar Pathak,**  
Environmental Engineer

Tele : 23404744  
Website : [tspb.egg.gov.in](http://tspb.egg.gov.in)

Lr. No.15/TSPCB/RO-MDC/Comp/2018 - 254

Date:17.04.2018

To  
The Chief Executive Officer,  
Secunderabad Cantonment Board,  
Secunderabad.

Sir,

Sub: TSPCB - Medchal - Complaint received from local residents regarding pollution of Trimulgherry lake due to discharge of sewage from surrounding colonies - Action Requested - Reg.

- Ref:
1. Complaint received from local residents regarding pollution of Trimulgherry lake due to discharge of sewage from surrounding colonies.
  2. Inspection of the Trimulgherry Lake and its surroundings by the Board officials on 21.02.2018.
  3. Analysis report of lake water sample received on 13.04.2018.

\*\*\*

With reference to the above, it is to inform that the T.S. Pollution Control Board has received complaint from local residents regarding pollution of Trimulgherry lake due to discharge of sewage from surrounding colonies.

In this regard, the Board officials have inspected Trimulgherry Lake and its surroundings on 21.02.2018. During inspection, it was observed that untreated sewage generated from surrounding residential colonies such as Airlines Colony, Padmanabha Colony, Surya Avenue, Sri Mahalakshmi Colony, Malani Enclave, Chinna Kamella, etc is joining the Trimulgherry lake. This is resulting surface water pollution and causing inconvenience to the local residents.

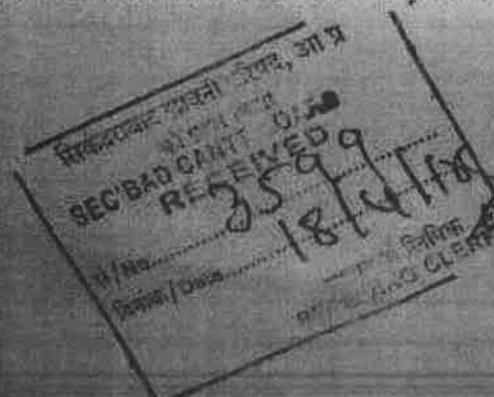
A sample of Inlet of lake and surface water (from North-East side) were collected from the lake. The analysis results indicate that the water in the lake is contaminated with sewage. As per the analysis results, the lake water falls under Class 'E' as per CPCB (Central Pollution Control Board) Water quality criteria. Copy of analysis report is enclosed.

In view of the above, it is requested to take immediate action to avoid pollution of Trimulgherry lake due to discharge of untreated sewage into the lake.

This is for kind information and necessary action.

Encl: a/a

Yours faithfully,



*K.P. Pathak*  
17.04.2018  
ENVIRONMENTAL ENGINEER.



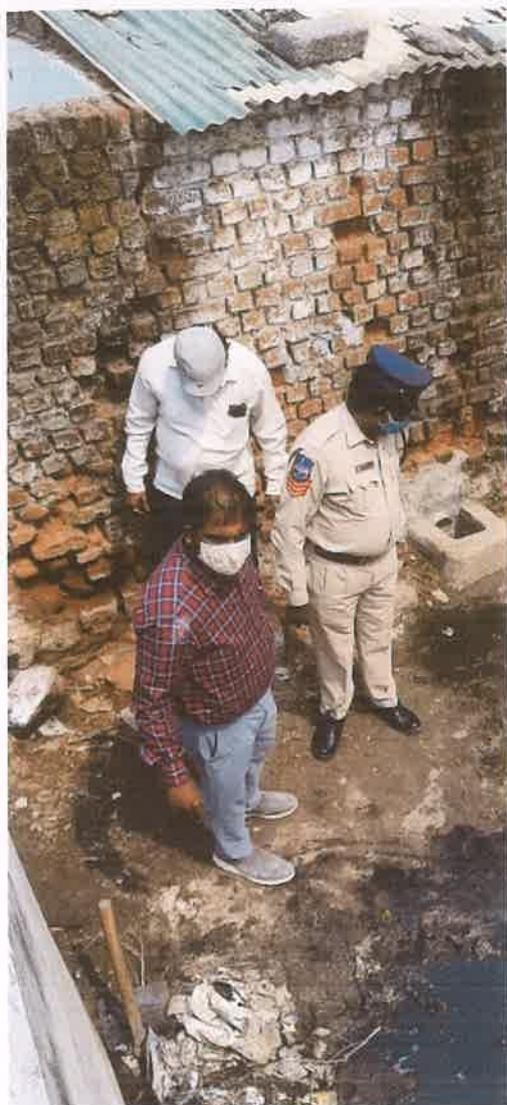
**JCB WITH REGISTRATION NUMBER  
TS10EH7412 BELONGS TO THE  
SECUNDERABAD CANTONMENT  
BOARD**



**SCB ENGINEERS MR. DINESH  
AND MR. BALAKRISHNA  
ALONG WITH SCB JCB**

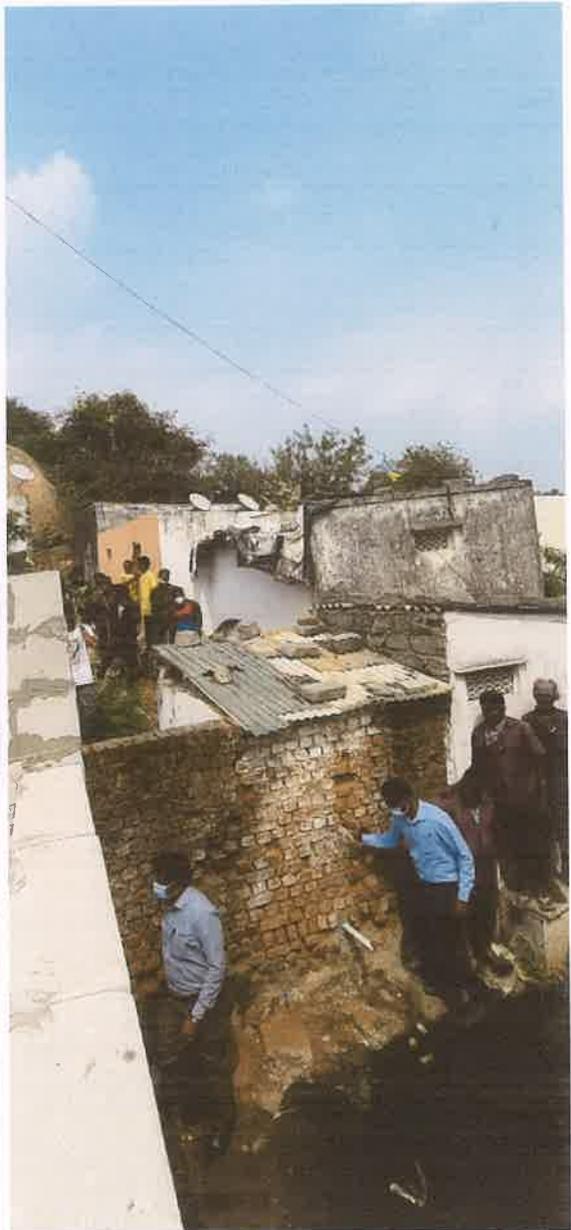
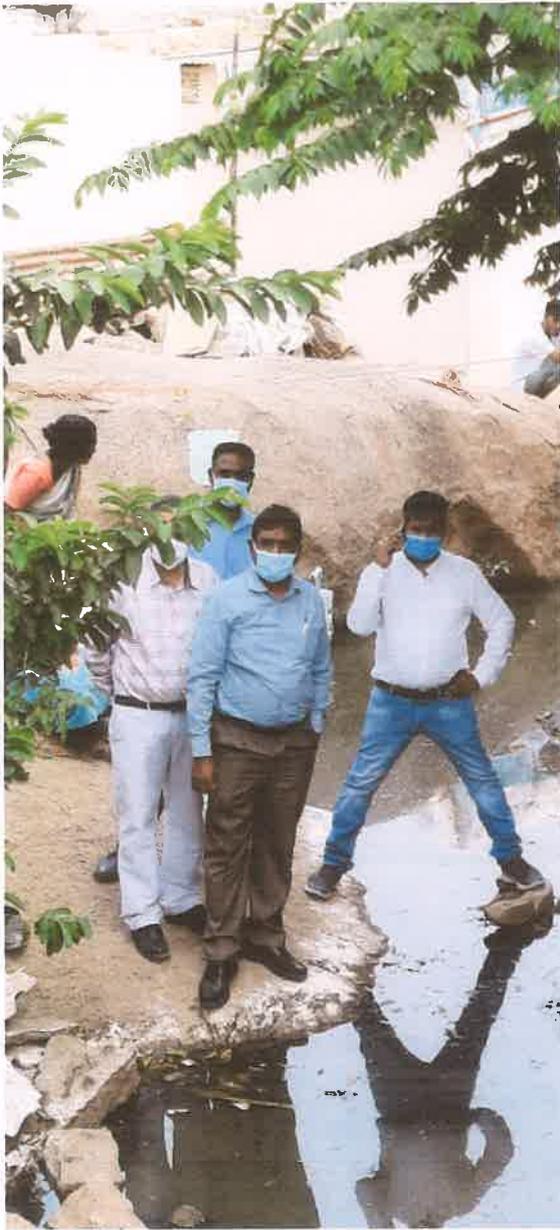


SCB ENGINEERS **MR. DINESH** AND **MR. BALAKRISHNA** GIVING INSTRUCTIONS TO DEMOLISH COMPOUND WALL



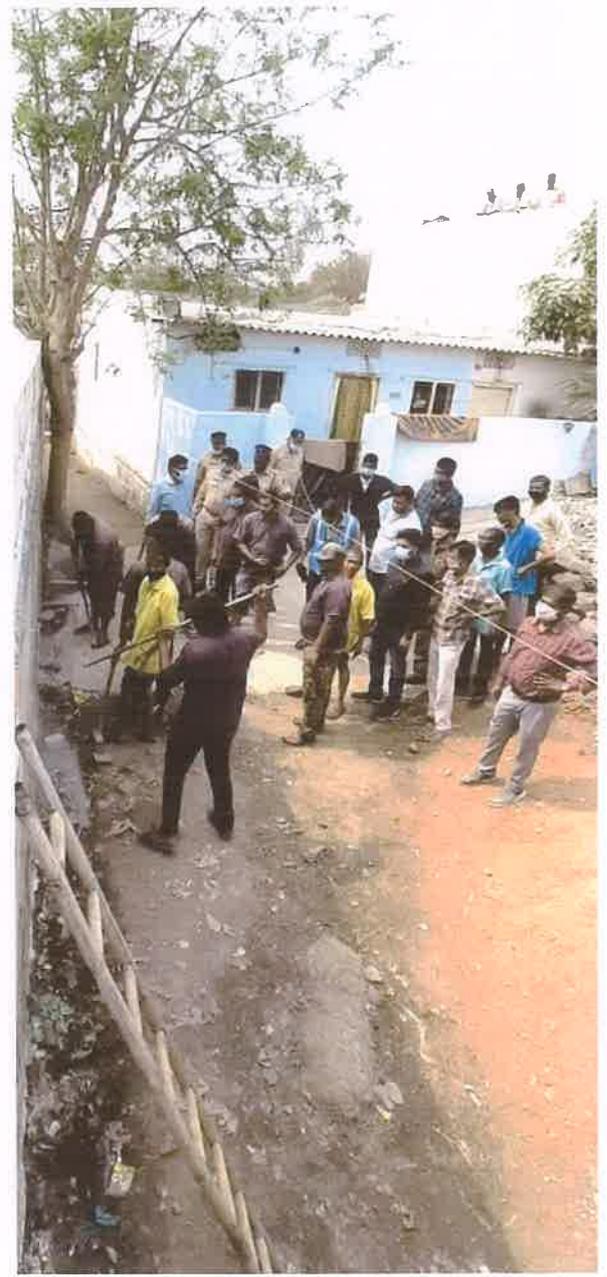
**SCB ENGINEER MR. DINESH INSTRUCTING THE SCB CONTRACT WORKERS TO DAMAGE THE BASEMENT OF MY COMPOUND WALL USING HAMMERS.**

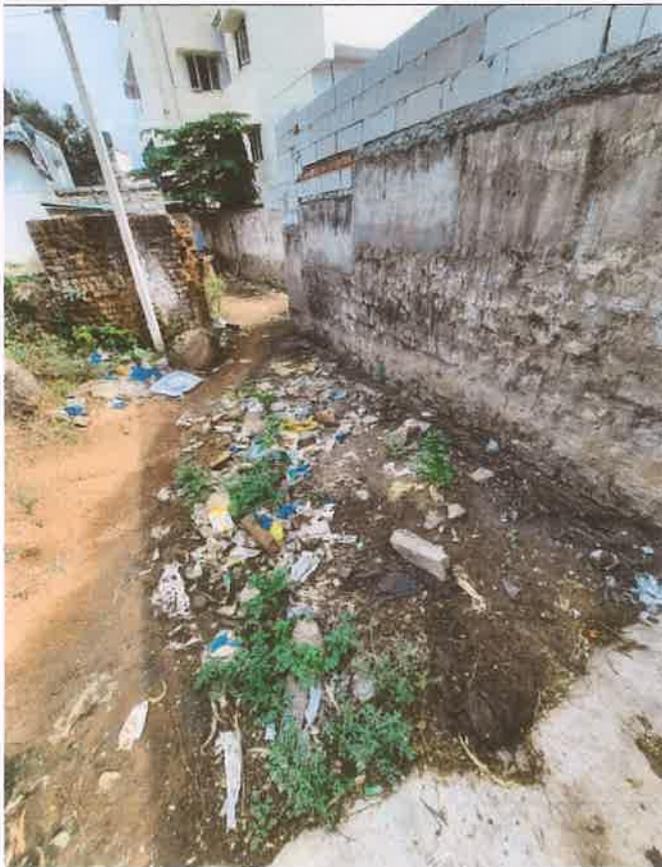






**SCB ENGINEERS BALAKRISHNA AND DINESH INSTRUCTING THE SCB CONTRACT WORKERS TO DEMOLISH THE COMPOUND WALL USING CROWBARS**







ONLINE  
TRANSACTIONS  
UPDATE MOBILE  
NUMBER

DEALER

CONTRACT CARRIAGE  
PERMIT

EDUCATIONAL  
INSTITUTION

ALTERNATE ADDRESS  
ENTRY

VEHICLE TRANSFER  
INTIMATION

SLD

### Vehicle Registration Search

Select Search Element: \* REGISTRATION NO v

Enter Search Element: \* TS10EH7412

Enter Last 5 Digits of Chassis Number \* 93977

938359

Captcha : \*

938359



GET DATA

CLEAR

#### Vehicle Details

Registration No:	TS10EH7412	Fuel Type:	DIESEL
Owner Name:	SECUNDERABAD CANTONMENT BOARD	Vehicle Color:	YELLOW
Vehicle Class:	VEHICLE FITTED WITH CONSTRUCTION EQUIPMENT	Maker's Name:	JCB INDIA LTD.,
Mfg.Year:	01/04/2016	Maker's Class:	3DX 2WD BACKHOE LOADER BSIII
Engine No:	H001XXXXX	Date Of Registration:	27/07/2016
Chassis No:	HAR3DXSSJ018XXXXX	Financier:	
Prev Registration No:	TS07RTXXXXX	Registration Authority:	RTA-HYDERABAD-NZ
Harvester Chassis No:		Status:	ACTIVE

**ABOUT BLUEENERGY BUILD PRIVATE LIMITED**

We are Water, Environment, Mining & Engineering Consultants.

We Investigate, We Develop, We manage and We audit your water resources.

**OUR SERVICES**

**Groundwater Exploration & Management Services**

- o This service includes investigation by using Hydrological, Geophysical and Satellite Mapping, drilling, groundwater management plan & auditing of groundwater resources.

**Mineral Exploration Services**

- o This service includes investigation of ore bodies, its strike and depth extensions and evaluation of resources using Geological & Geophysical survey.

**Environmental Impact Assessment (EIA) Studies**

- o This service includes collection, processing and analysing the data at multiple levels using hydrological, geological, geophysical and Remote sensing methods.

**Remote Sensing & GIS Mapping Services**

- o This service includes mapping of information & extraction of statistics from different theme layers for various departmental usages.

**Water Resources Management**

- o This service includes the management of water resources by using estimations of availability and consumption of water-like rainfall, surface storage and groundwater.

**Geotechnical Services**

- o This service includes bedrock depth & topography identification using various Geological & Geophysical Techniques.

**Water Resources Modelling**

- o This service include Hydrological modelling, hydraulic modelling, groundwater modelling & pollution modelling used in Infrastructure, environment and mining sectors.

**OUR CONTACT DETAILS**

**BLUEENERGY BUILD PRIVATE LIMITED**

GROUND FLOOR, HOUSE NO 9, ROAD NO 1, CZECH COLONY, SANATH NAGAR, HYDERABAD-500018



**For easy communication:**

**Calls us @** 04035890894, 9976854999, 9912945992

**Mail us @** [info@blueenergybuild.com](mailto:info@blueenergybuild.com), [blueenergybuild@gmail.com](mailto:blueenergybuild@gmail.com)

**Our website:** <http://www.blueenergybuild.com>

COVERING LETTER

Date: 30-08-2022.

**Ref:** your letter dated 27<sup>th</sup> July 2022.**Sub:**

1. Evaluation of natural storm water /sewage passing through Sy. No 114 (A1 defence land) Private Land in Sy.Nos.96/e, 97/a, 98/a (96,97,98 parts); Sy. No's 115,115/2, 117,118, Trimulgherry lake for the last 50 years.
2. Evaluation of Fresh water Agricultural well located in private land in Sy.Nos.96/e, 97/a, 98/a (96,97,98 parts prior to and after illegal letting of untreated sewage into agricultural well dated 16.02.2022.
3. Evaluation of Proposed Topographical Map of Proposed Drain at Chinna Kamela-Trimulgherry Lake Catchment Area Submitted by Ps Engineering Consultancy to Secunderabad Cantonment Board.
4. Hydrogeological evaluation of private land in Sy.Nos.96/e, 97/a, 98/a (96,97,98 parts) with respect to Option 3.
5. Water collection from the contaminated agricultural well and analysis and underground water contamination.

To,

1. Dr.M.S. Tejashwari  
D/o: Late M. Sathyanarayana Reddy  
Occ: Consultant  
H. No: 3-16-668/A; Plot No.1  
Trimulgherry 'x' Roads, Secunderabad 500015, Telangana  
Mobile No: 7702892451
2. Dr. M.S. Raghavender  
S/o: Late M. Sathyanarayana Reddy  
Occ: Doctor.  
H. No: 3-16-668/A; Plot No.1  
Trimulgherry 'x' Roads, Secunderabad 500015, Telangana  
Mobile No: 8501037390

Madam /Sir,

With reference to subject aforementioned, we are hereby giving our opinion the Geological, Geophysical and Water Quality Test for understanding the Hydrological regime of your land in Sy. No's 96-99 Part Tirumalagiri (Ward No-7).

1. Sewage water or storm water emptying into client's land
  - During our study and site visit, the sewage water from channels is directly joining into open fresh water well of the clients land.

- There is no evidence from the satellite data observed over a decade period.
- There was only agricultural fresh water well instead of cess pool during our observation at northern eastern side (attached satellite image) of the clients land.
- Fresh water well located in the North eastern side of clients land is contaminated  
Two important studies were conducted to understand the water contamination in the present existing open well and found there is contamination. Details provided in the report.
  - Water quality testing (Physical, Chemical & Biological Testing)
  - Satellite image study to understand the temporal change in Water body of the present and past.

#### Groundwater is contaminated by sewage water

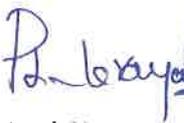
- For understanding the groundwater contamination, geophysical studies along with hydrogeological information integrated and the results were provided in report.
  - Geophysical survey depicting the highly weathered and fractures systems on the surface and deep layers are good indicators of ground water recharging system.
  - Due to shallow fracture system at northern side of the study area, along which most of the sewage water is flowing and absorbed into deeper aquifers contaminating the fresh water aquifer zones at shallow and deeper depths.
  - Due to direct linking of the sewage channels to Fresh water open well in the northern & north eastern side (well depth of more than 100 ft) is contaminating the shallow (35 to 40 ft) and deeper aquifer (80 to 120 ft) (fracture systems delineated by Geophysical Survey).
- 2. The Topographical Map submitted by the M/S. PS Engineering Consultant to the CEO-SCB is vague and not supported by any scientific study.
- 3. Due to presence of hard, massive and compact granite/shallow basement at depth in the study area is imparting the higher cost for excavation and laying of the waste water drains economically not viable and not fit for laying public drainage. At places due to hardness and undulating topography created by exposed rocks may be the barriers for drainage excavation.

4. The water quality test result indicates that, the water is contaminated by sewage water flowing into the open well from the channels in the north and north eastern side, show evidence of faecal contamination of open dug well. The water is unfit for drinking and also general usage in view of faecal contamination. The well head should be protected and sewage flow diverted appropriately.
5. Study of the natural flow/sewage water from upstream to downstream towards the client's land
  - The compound wall was constructed about two decades back and is also evident from high resolution Google satellite images (Google image of 02-2005 is attached in report) and also the analysis of the hydro topographical data, all the storm water was emptying into the Trimulgherry Lake through natural and artificial channels.
  - There is no evidence of any natural water flow/sewage being obstructed by the compound wall except from April/May 2021 which is due to human intervention and the change can be attributed / concluded only due to human intervention on account of massive encroachments on the northern side of the compound wall and irrefutable conclusion that can be drawn is due to rapid encroachments and illegal waste water disposal changing the natural gradient.

Also enclosed a detailed Geological, Geophysical and Water Quality Test Report for understanding the Hydrological regime of your land in Sy. No's 96-99 Part Tirumalagiri (Ward No-7).

Thanking You,

For BLUEENERGY BUILD PRIVATE LIMITED

  
Authorised Signatory



Report Enclosed for your reference

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# GEOLOGICAL, GEOPHYSICAL AND WATER QUALITY TEST FOR UNDERSTANDING THE HYDROLOGICAL REGIME OF THE AREA



Survey & Report by

**BLUE ENERGY**

*Technology Never Before...*

**9, Street 1, Czech Colony,  
Sanath Nagar, Hyderabad – 500 018, Telangana  
(040-35890894, 9976854999, 9912945992 )**

August, 2022



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## Introduction

As per your letter dated 27.07.2022, M/s. Blueenergy build Private Limited, Hyderabad have been taken up the task to understand the hydrological regime and disposition of the exposed and concealed granite gneiss / basement configuration by using hydrological and electrical resistivity surveys including shallow profiling and sounding techniques in a land belongs to Dr. M.S. Tejashwari, D/o Late M. Sathyanarayana Reddy; Dr.M.S. Raghavender S/o Late M. Sathyanarayana Reddy Survey Nos. 96 to 99 (Part), Tirumalagiri area, Hyderabad.

## Study area

The study area falls in Survey Nos. 96 to 99 (Part), near Gunrock, Tirumalagiri area, Hyderabad falls in parts of Survey of India Toposheet No. 56K/11 (E44M11), Hyderabad district, Telangana, which is about 6.2 km north of Secunderabad Railway Station, Telangana State, covering a geographical area of about 3Ac.11gts, lies between latitudes: 17°.475796 to 17°.476617 N and longitudes: 78°.504749 to 78°.506381 E (Figure 1). The study area can be approached by road from Hyderabad to Karimnagar State Highway near Tirumalagiri. The below image showing the temporal change of the area over a period of 30 years. The natural stream network is gradually disappeared at Trimulgherry Lake due to urbanization over a period of time & the same was confirmed by satellite image of 04-2022 also.

## Objectives of the study

The main objective of the study area is to understand the bed rock topography and hydrological nature of the area.

Other objectives include

- Assessment of the change in natural stream flow system over a period of time.
- Assessment of the water quality of the existing fresh water opens well.
- Assessment of the dynamics of the sewage water flow into the open well using satellite images.
- Assessment of the weathered and fracture systems to understand the groundwater flow system
- Assessment of the bed rock topography for construction of the sewage/storm channels

## Tools and Methodology

Collection and analysis of the available maps from

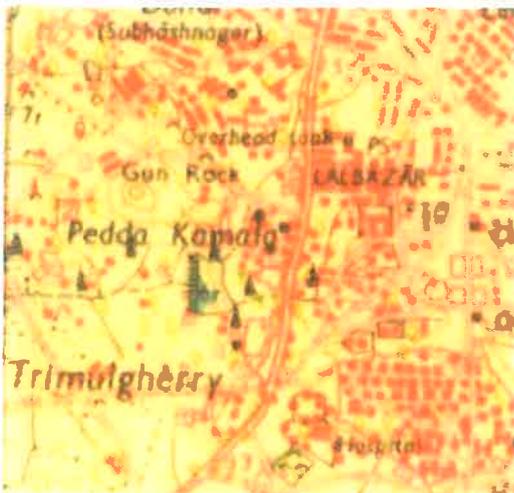
-Toposheet of 56 K11 from Survey of India

-High resolution satellite images from Google earth Search Engine

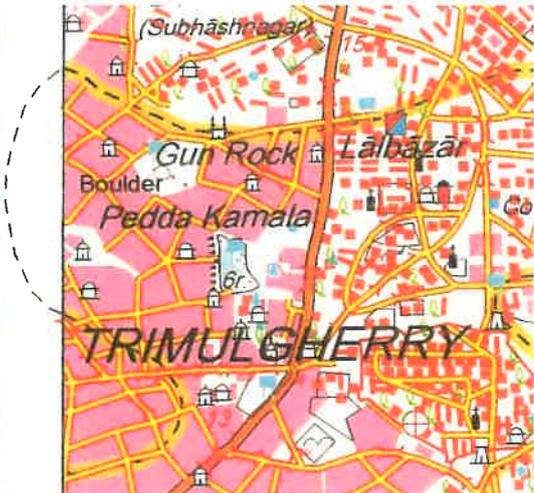
-Geological Maps from Geological survey of India (GSI)

Collection of field data from the site

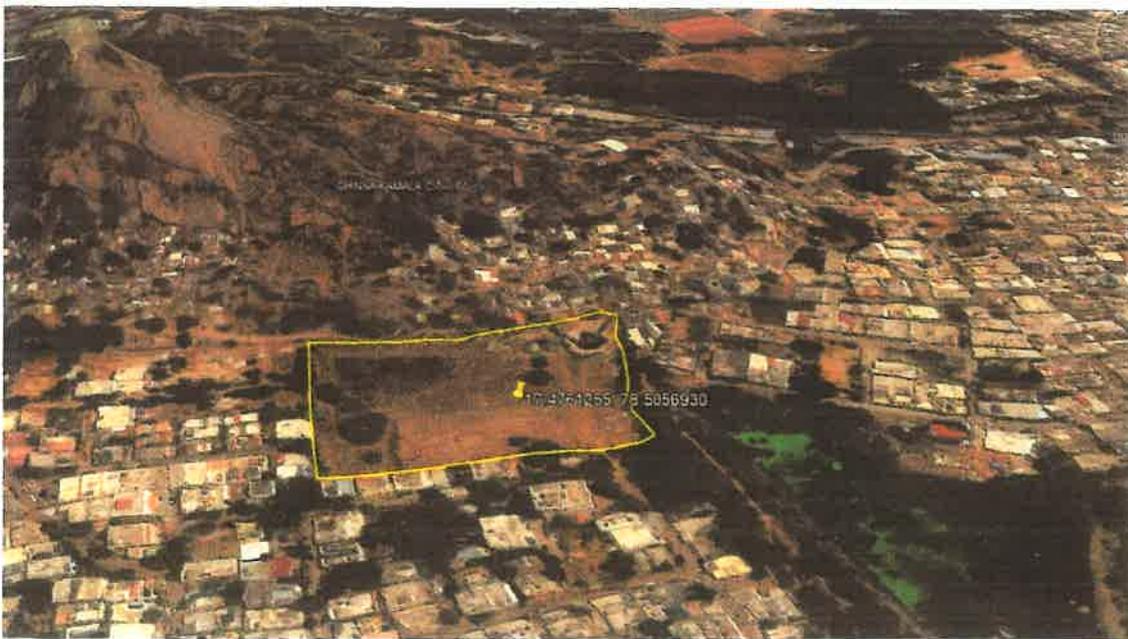
- Water sample collection and analysis in NABL Accredited Laboratory
- Collection of Geophysical data using Micro Processor based Resistivity meter
- Observation & collection of rock exposures data



SOI Toposheet -1971-74 (56K11)



SOI Toposheet - 2005-2006 (56K11)



Satellite Image of 04-2022

Figure 1 : Location map of the study area

### Physiography and Climate

Physiographically, the study area is mostly belongs to granitic country, and occupied by thin granitic / sandy soil, associated with flat to gentle slope terrain in the central part and moderate slopes towards southern and eastern parts depicting rolling topography. Highest elevation noticed in the north-western and eastern parts of the study area, which is about 555 m (amsl), whereas lowest elevation of 550 m recorded in the northern and southern parts, with a relief of 5 m. The area experiences hot climate during summer with temperatures rising to 49<sup>0</sup> C and is comparatively cooler during winter with <20<sup>0</sup> C. The annual rainfall is moderate with sparse to thick vegetation at places.

### Soils

~ 75 % of the study area is mostly falls in the flat to gentle low-lying area, sloping towards west in the client's land occupied by granitic soil which is derived from weathered granites. Remaining 25% of the area occupied by granitic outcrops exposed here and there.

### Drainage

The pattern of drainage is mainly dendritic seen in the study area indicating the homogeneous nature of the ground, where granitic outcrops are exposed here and there mainly in the eastern and north-western parts. A west to east trending nala / stream passing through the study area in the northern side. Geophysical traverse was laid in N-S direction, is perpendicular to the drainage line.

### Geology

The entire study area is mainly covered by oldest crystalline formations or Peninsular Gneissic Complex (PGC) of Archaean age, are dominant rock type to recent alluvium. A major part of the area is underlain by gneissic complex with a structural fill of granitic to red sandy soil. The gneissic complex is intruded by several younger rocks namely pink granite and at places by pegmatite's and quartz veins.

The study area was visited on 07-08-2022 and found that the majority of the area is occupied with exposed granitic terrain on the surface. The places where the exposed rock was observed is shown in the below figure. As per the observations, the rock exposures were identified in entire land area as isolated patches and some areas are covered with very thin weathered material. The hardness is increased as we go deep from surface was also confirmed by geophysical survey.

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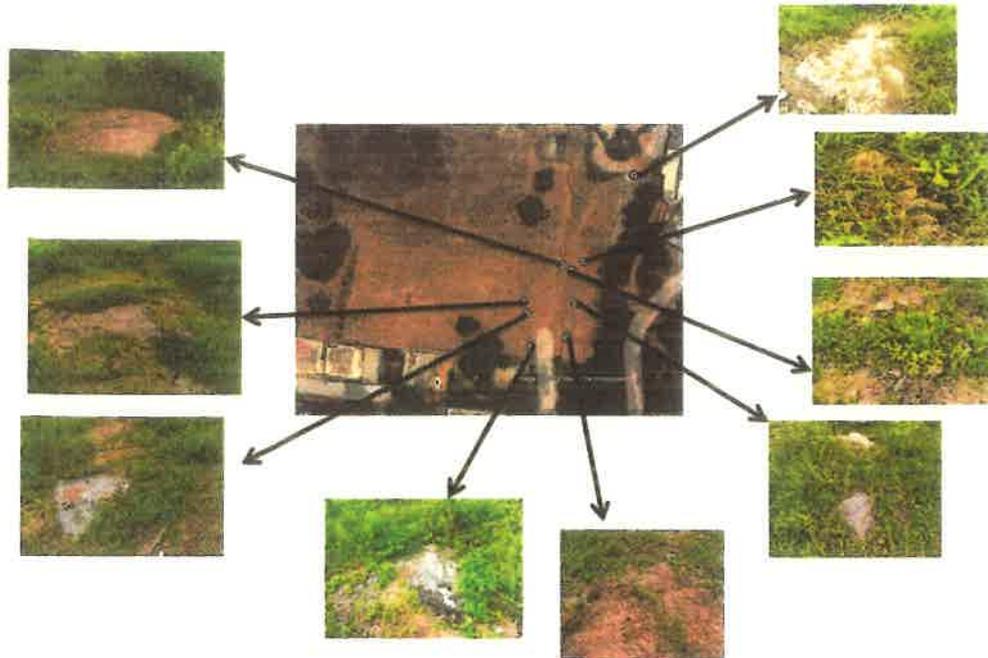


Figure 2: Rock exposures with in the study area

### Geophysical Survey

Geophysical survey is conducted with the aim of understanding the bed rock topography and weathered fractured systems at shallow and deeper zones. Also, it was used to understand the contamination of the groundwater through weathered and fractured

45

Systems at depths. The assumptions made based on the physical observations and geophysical survey conducted at the site area. The application of the geophysical survey is indirect method to understand the weathered and fracture systems within the subsurface of the study area. The weathered and fractured systems are the main features of the groundwater flow in hard rock terrain.

BLUEENERGY Team Carried out shallow electrical resistivity profiling with Wenner Array (a = 10m and 20m) keeping in mind with the objective and scale of mapping. Relevant information such as local geology, elevation, existing bore well data and drainage map etc., have been collected for correlation purpose with the acquired profiling and sounding data for identifying and delineate the disposition of the exposed and concealed granites / basement configuration. Survey work which includes laying of north-south traverse, stacking of stations with 10 m interval were carried out with desirable accuracy. Position locations obtained with GPS. Employed resistivity profiling with Wenner Array have brought out the lateral variations in the form of structures at shallow depth if any. Resistivity sounding technique is also employed here to delineate the horizontal variations to know the thickness of individual horizons viz., thickness of top soil cover, weathered granite, semi-weathered granite and bed rock disposition. Since, these zones / structures are characterized by contrasting resistivities and conductive in nature in comparison with the hard, massive granite gneiss / pink granites.



**Survey Layout & Instruments used**

One traverse was laid in north-south direction from main entrance gate (south side) to compound wall (northern side) in the eastern part of the study area for carrying out resistivity profiling (Wenner Array a=10 and 20m) and sounding, with a traverse length of 160 m (Fig.1 ). O/O was fixed on the centre of traverse (latitude: 17.47594911 N and longitude: 78.50594699 E) and stations were stacked at 10m interval on either side, covering a total strike length of 0.480 Line km (2 profiles and 1 sounding) for identifying thickness of individual formations and structures favourable for occurrence of groundwater at depth. An IGIS make SSR-MP-ATS resistivity meter is used for carrying out resistivity measurements. Details of the traverse laid, its length, trend, location of O/O and coordinates are shown in Table 1.

**Table 1: Details of the traverse laid and location of coordinates**

Traverse No	Profile trend	Trav. length covered	Lat, Long of Station O/O	of	Lat, Longs of stations	end
					(from north to south)	
Traverse-1 a = 10m a = 20m	North-South	160m 160m	17.47594911, 78.50594699		N80: 17.47667522, 78.50604471 S80: 17.47525089, 78.50596371	
Sounding VES-1	North-South	160m	17.47594911, 78.50594699			

Ab

**Processing of Profiling & Sounding Data**

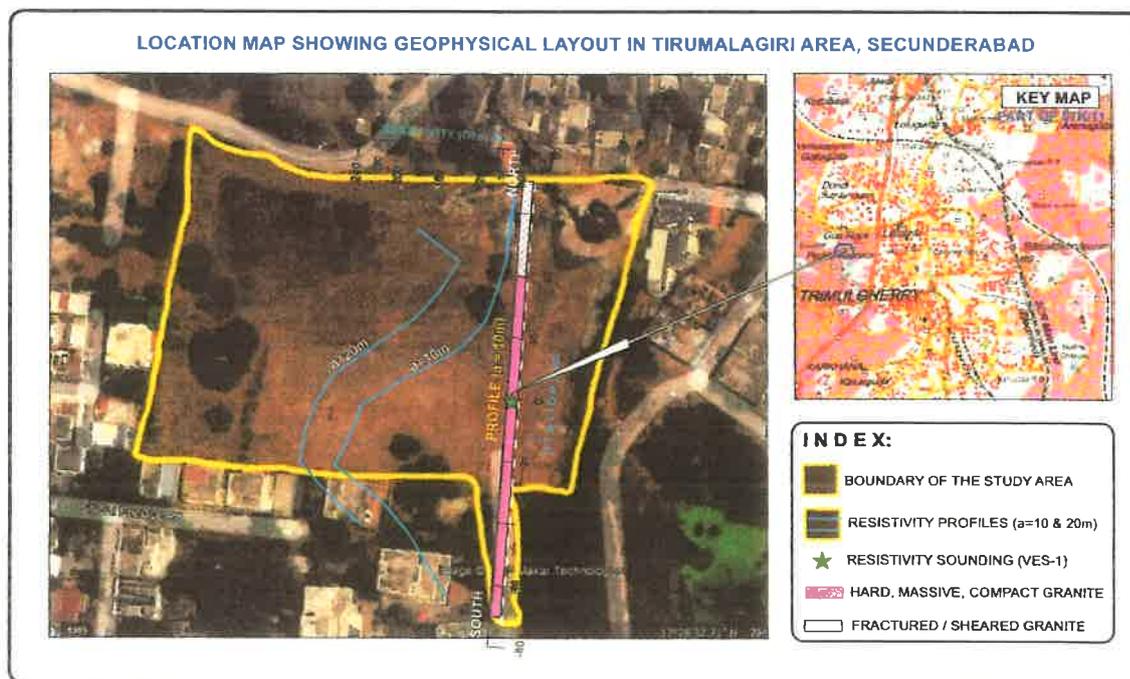
The resistivity data base was initially prepared using Ms-Excel. The apparent resistivity's obtained from profiling with wenner array and soundings are expressed in Ohm.m. The entire database of all the geological parameters was prepared along the traverse to facilitate plotting of individual profile using Grapher-11 software. Resistivity sounding data was interpreted using 1x1D software to get the individual thickness of different concealed layers.

**RESISTIVITY PROFILE**

**Traverse-1 (a = 10m & 20m)**

The geophysical layout map of the Resistivity profiles with a=10 m and a= 20 m are showing in

Figure 3. The Resistivity profile with a = 10 m along the traverse, trending approximately in north-south direction (Fig.2) have brought out an overall resistivity variation of 155 Ohm.m. Resistivity highs of the order of 100 - 240 Ohm.m recorded over the central and southern parts of the profile indicating the presence of hard, massive and compact granite / shallow basement at depth. Whereas, resistivity profile with a = 20m along the same traverse have brought out a relief of 131 Ohm.m. Resistivity highs of the order of 150 - 259 Ohm. m recorded in the central and southern parts of the profile also indicating the presence of hard, massive and compact granite / shallow basement at depth.



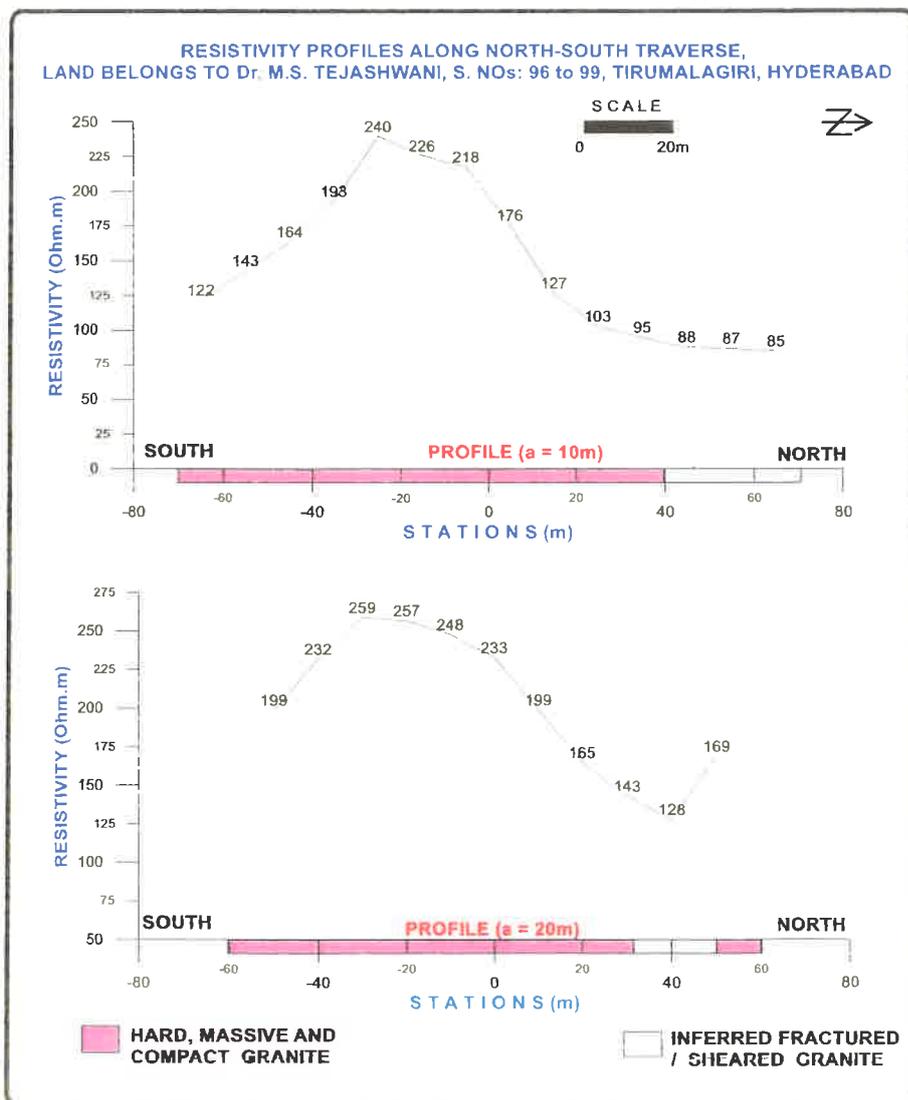
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Figure 3: Geophysical survey map showing the profile and sounding location within the study area

Whereas, low resistivity's of the order of 85 - 100 Ohm.m with  $a = 10$  m and 128 - 150 Ohm.m with  $a = 20$ m respectively, noticed on northern part between stations N40 to N70 may indicating the presence of fracture / fault / shear zone trending in east-west direction, which may be favourable structure / potential zone for possible occurrence of groundwater at depth in hard rock terrain. For better understanding of the resistivity anomalies, profiles with  $a=10$ m and  $a=20$ m are overlay on Google image of the study area ( Figure 3).

Vertical Electrical Sounding (VES-1)

Vertical Electrical Resistivity Sounding (VES-1) with  $AB/2=70$  m was carried out in the central part at 0/0 (latitude: 17.47594911 and longitude: 78.50594699) over N-S trending traverse in the eastern part of the study area, shown in Figure 5.



AS

Figure 4: Resistivity Profile of a=10 m and a=20 m along north south direction

The interpreted resistivity sounding with depth model using 1x1D software indicating the presence of 2 to 3 layer set up in the form of HA type curve. Intersected top brown sandy / granitic soil having a thickness of 1.27 m, with a resistivity of 43 Ohm.m, underlain by semi-weathered granite having a thickness of 4.6 m upto a depth of 5.8 m, having a resistivity of 79 Ohm.m. Followed by shallow granite basement in the form of hard, massive and compact granite or granite gneiss with high resistivity variations from 1528 to 7880 Ohm.m.

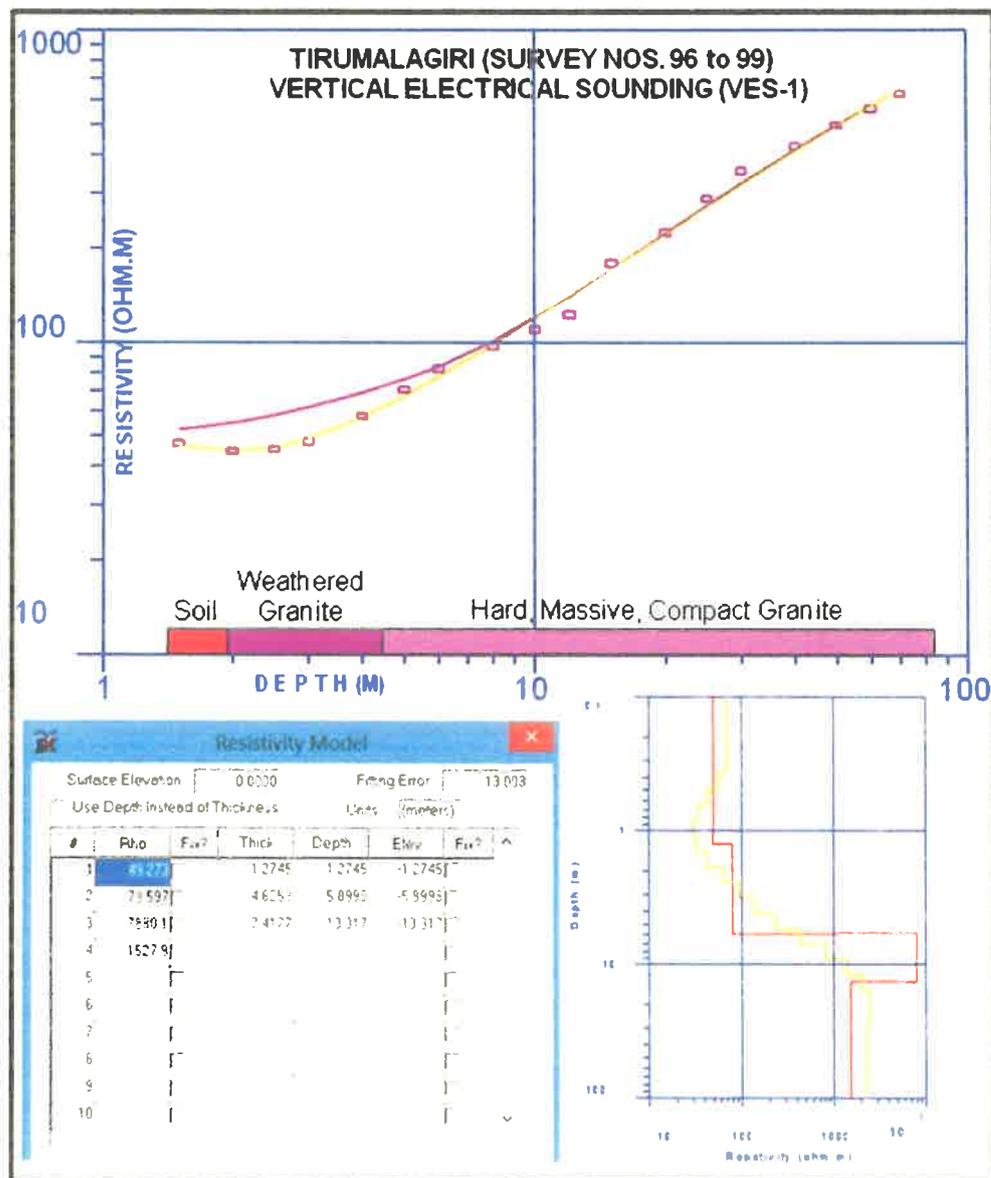


Figure 5: VES data interpretation using IXID Software

### Observations from Geophysical Survey

After careful analysis of available geology, drainage, existing bore well and the obtained resistivity profiling and sounding data along the north-south trending geophysical traverse, a prominent high resistivity zone trending in east-west direction have been identified across the study area between stations N40 to S70. Indicating the presence of hard, massive compact granite at shallow depth in the form of granite basement at a depth from 5.8 m on wards whereas, an east-west trending resistivity low zone in the northern part along the compound wall may indicating the presence of a fracture / shear zone within the hard, massive and compact granite, may be promising for potential zone for groundwater occurrence. The existing bore well in the study area falling close to this resistivity low zone.

### Conclusive remarks from Geophysical survey

1. **The hard formation at central part of the surveyed line trending east west direction is indicating the hard, massive compact granite at shallow depth.**
2. The low resistivity zone in the northern part along the compound wall may indicating the fracture/shear zone within the hard massive and compact granite, may be promising for potential zone for groundwater occurrence.
3. **Using geophysical survey, the groundwater fracture system is identified at 25 to 40 ft and 80 to 120 ft depth is well matching with the open well system.**
4. **The presence of the open well and low resistivity areas both fall in the same zone indicating the promising potential zone for groundwater occurrence which may be the one of the reason for sustenance of the existing open well over a period of 200 years. Even the satellite images of the both summer and rainy season period are showing the open well always alive with good quantity of water.**
5. **The observed shallow weathered zones and deep fracture systems in the northern side acts as a good recharge system to groundwater.**
6. **High resistive granitic basement found at shallow depth in the entire study area except in the extreme northern part may be the barrier for the construction of sewage/storm water channels through this area.**

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### Inferences of the geophysical survey along with hydrological study

- The recent sewage drain passing from the northern side (outside from clients land) is flowing through the highly weathered zone (trending in east west direction) is seeping into the existing groundwater channels may be contaminating the shallow fresh water aquifer system.
- Also, the sewage channel emptying into the open well may be contaminating the fresh water aquifer at deeper depths.
- Due to the point source pollution (Open well contamination), the impact of contamination is very high during non-monsoon season which may be polluting the nearby bore wells which are relying on the same aquifer system.

### Water Quality Test

For understanding the freshwater well contamination and dynamics of the water body, BLUEENERGY TEAM conducted water quality test and satellite data analysis of the study area. The results were presented below.

The water sample is collected from **Open Dug well**, which is having a depth of **100 to 120 ft** (approx.) on 07-08-2022 at 9:58 am. The sample is tested for physical, chemical and Microbial contamination. The results indicate that, **the water is contaminated by sewage water flowing into the open well from north side. The odour of the sample is sewage smell. TDS is 611 mg/ltr.** The chemical parameters of Alkalinity and Total hardness are within the permissible range. Ammonia (NH<sub>3</sub>) is 12.3 which are more than prescribed value 0.5.

The physical-sensory characteristics and observed values of general chemical parameters as well as microbiological characteristics tested in this case **show evidence of faecal contamination of open dug well.**

**The water is unfit for drinking and also general usage in view of faecal contamination. In addition, open well filled with surface water inflows including sewage provides a breeding site for mosquitoes and increases the risk of vector borne diseases.** (Report Attached in Annexure-1)

### Satellite Imagery study

The visible images of the 03-2018 and Image of 04-2022 were collected from Google earth search Engine for understanding the changes in the well morphology. The observations in change in colour of the water, development of new sewage channels and new constructions within the periphery of the study well are given in Table 2. In the image of 2018, the well is

clearly marked without any sewage contamination from the northern side of the study area. **The water colour is indicating the very fresh without any contamination.** In the image of 04-2022, the well is look like with dark colour fully contaminated by sewage water entering from the North and north eastern side of the study area. Two new channels were identified on 04-2022 images which were not existed in 03-2018 images. New construction developments (encroachments) were observed in 04-2022 images shown with red colour marking which were not existed in 03-2018 images (Figure 6).

**Table 2: Observation from satellite images of 2018 & 2022**

Observations	Image of 03-2018	Image of 04-2022	Inference
Colour of Water	Fresh water with light green colour	Polluted water with dark colour	The open well water is fully contaminated which was observed during the field visit on 07-08-2022
Development of new Sewage channels	No sewage channel is entering into the open well	Two sewage channels were entering into the open well from the northern side	The sewage channels which are fully loaded with dark colour sewage water along with faecal matter were observed from the northern western and north eastern direction are polluting the open well.
New Construction Developments beside the northern wall	No specific construction was observed beside the northern wall	New <b>three houses</b> were constructed beside the northern wall (shown in below fig. with white marking)	Due to the new house constructions, the previous water flow morphology is changed and forced to move into the clients land.



A) Image of 03-2018 (no occupations along the boundary)  
 B) Image of 04-2022 (occupations showing in white colour marking)

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Figure 6: Satellite image of study area pertaining to 2018 (A) and 2022 (B) period

Temporal changes in open well over a period of time



The satellite image of 04-2022 is showing the clear channelling of sewage water into the fresh water pond within the clients land.



The image of 01-2022 is showing the very fresh water well (Blue Circle) with no sewage channelling into the open well (at client's premises).



The satellite image of 12-2021 is showing the fresh water well without any sewage channelling.



The satellite image of 05-2021 is showing the fresh water well without any sewage channelling. Also there is no waste water stagnation (orange colour marking) at North West of the well outside clients land.



The satellite image of 10-2015 is showing the fresh water well without any sewage channelling



The satellite image of 04-2010 is showing the fresh water well without any sewage channelling



The satellite image of 10-2006 is showing the fresh water well without any sewage channelling

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The satellite image of 02-2005 is showing the compound wall constructed surrounding the boundary



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**ANNEXURE-1: Water Quality Test of the Open Well exists in the clients land**

**The Institute of Health Systems - Laboratory**  
 Sivananda Rehab Home Campus, Kukatpally, Hyderabad, TS 500072, India.  
 Tel: 91(40) 23210138/9; 23211013/4; http://www.ihs.org.in; E-mail: ihs@ihs.org.in

**Water Analysis Report**

Report No. CB02379 DT17-08-2022

Rev Dt:08-08-2022, 11:10am

Place of Sample & Description of Source as in WCR: Sri Sai Enclave, Thirumalagiri, Secunderabad. **Open dug well, depth: 120ft (approx).** Sample collected from dug well into a clean plastic mug and then transferred into a clean and empty Coca-Cola 1.75 l. bottle and Clarifications: brought to IHS laboratory.



Other sample(s) from same client: Nil. Past tests, if any: NIL.

Sample Collection Date: 07-08-2022, 09:58am. Desired Groundwater Data (as in WCR) By: Shri. Mohd Ashwaq Khan with support of daily wage labourer M: 9182977928. Testing Ser Potability & Code Tests (GPT)

Client concerns: To know quality of water in the open dug well which is exposed to sewage coming from the nearby residences and colony. General usage and drinking purpose.

Test Request by: Blue Energy Build Pvt Ltd, M:9976854999 on behalf of Dr. Tejuswini; Email: blueenergybuild@gmail.com

**Test Dates:**

Group	Start	End	Interpretation & Reporting
Physical	08/08/2022	08/08/2022	The time between end of analysis and report dates is utilised for clarifications & interpretation of results.
Chemical	08/08/2022	11/08/2022	
Microbial	08/08/2022	11/08/2022	

**A. Physical & Sensory Characteristics:**

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Colour (Filtered by WM42 Paper / 0.45µ Membrane)	5	PCU (Hazen)	5	10
2	Odour	Sewage smell	Odor Rating	Agreeable	Agreeable

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Water Analysis Report

Bottle Id: CB02379

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
3	Turbidity	36.0	NTU	5	5
4	pH At 25°C	7.2	pH value	6.5 to 8.5	No relaxation
5	Electrical Conductivity (EC)	987	$\mu$ Siemens / cm		2000 (CPCB)
	EDS Range Est. (TDS) from EC	193.5 - 202.5	mg/ltr	500	2000
6	Total dissolved solids (TDSG)	611	mg/ltr	500	2000

1. Color is based on IS3025 Part-4 platinum cobalt visual comparison. Colorless = 0 Hazen Unit (PCU)
2. Odor rating by lab personnel: Odorless, Agreeable or Disagreeable (Unpleasant or Offensive).
3. Turbidity est. as in IS3025Pt10, using HI98703 Nephelo-Turbidimeter NTU = Nephelometric Turbidity Unit
4. pH value at 25 °C is as measured by Hanna HI2003-02Edge (pH) instrument
5. EC at 25 °C measured by Hanna HI2003-02Edge (EC) The reference value in this case is as specified by the Central Pollution Control Board (CPCB). TDS range = 0.5LC - 0.75LC
6. TDSG is estimated by IS3025 Part-16 (Gravimetry)

**B. Chemical Characteristics:**

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Alkalinity (Alk)				
a	Phenolphthalene Alk (P)	0	As CaCO <sub>3</sub> mg/l		
b	Total Alkalinity (T)	270	As CaCO <sub>3</sub> mg/l	200	500
c	Carbonate (CO <sub>3</sub> )	0	As CaCO <sub>3</sub> mg/l		
d	Bicarbonate (HCO <sub>3</sub> )	270	As CaCO <sub>3</sub> mg/l		
e	Hydroxides (OH)	0	As CaCO <sub>3</sub> mg/l		
2	Total Hardness	211.6	As CaCO <sub>3</sub> mg/l	200	600
b	Calcium	63.6	As Ca mg/L	75	200
c	Magnesium	12.8	As Mg mg/L	30	100
d	Carbonate hardness	211.6	As CaCO <sub>3</sub> mg/l		
e	Non-CO <sub>3</sub> hardness	0	As CaCO <sub>3</sub> mg/l		
3	Nitrogen				
a	Ammonia (NH <sub>3</sub> )	12.30	NH <sub>3</sub> -N mg/l	0.5	No relaxation
b	Nitrite (NO <sub>2</sub> )	0.0560	As NO <sub>2</sub> mg/L		WHO: 3.0 mg/l
c	Nitrate (NO <sub>3</sub> )	14.00	As NO <sub>3</sub> mg/l	45	No relaxation
	As Nitrogen	3.16	As NO <sub>3</sub> -N mg/l	100	No relaxation
4	Chloride	86.47	As Cl mg/l	250	1000
	Chloride meq/l	2.44	meq/l		
5	Fluoride	0.52	As F mg/l	1	1.5
6	Sulphates	24.8	As SO <sub>4</sub> mg/L	200	400
7	Total Iron	0.07	As Fe mg/L	0.3	1
8	Manganese	BDL	As Mn mg/l	0.1	0.3

1. Alkalinity titration as in IS3025Pt23 with 20 ml sample
2. Total hardness (TH) is est. by EDTA titration, using 50 ml sample, ammonia buffer & EBT indicator as in IS3025Pt21. Calcium is est. by EDTA titration using 50 ml sample, NaOH, P&R indicator as in IS3025Pt40. Mg est. is derived from TH & Ca, following IS3025Pt46. The US Environment Protection Agency (USEPA) classifies hardness of waters as (a) Soft: 0 to 75 mg/L, (b) Moderately hard: 76 to 150 mg/L, (c) Hard: 151 to 300 mg/L, and (d) Very hard > 300 mg/L. According to WHO Guidelines (2011) Consumers, in some cases.

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Water Analysis Report

Bottle Id: CB02379

- may tolerate water hardness in excess of 500 mg/l. Drinking-water can be a contributor to Ca & Mg intake and could be important for those who are marginally deficient of these minerals. There are insufficient data to suggest either min or max concentrations of Ca or Mg at this time, as adequate intake will depend on a range of other factors. Therefore, no guideline values are proposed (by WHO) for hardness, Ca & Mg. Carbonate hardness is also referred to as temporary hardness as it may be removed by boiling or lime softening.
- Ammonia est. by Nesslerization as in IS3025Pt34 using 50 ml undistilled sample. Nitrite est. as NO<sub>2</sub>-N mg/ltr. by APHA 4500-NO<sub>2</sub>-Colorimetric. Nitrate est. by UV spectrophotometric screening as in APHA 4500-NO<sub>3</sub>. WHO has not proposed any guideline value for ammonia as it is not of immediate health relevance (WHO guideline 4th ed p313). The reference value for NO<sub>3</sub> shown here is based on WHO guideline, as the IS is silent on this. For NO<sub>3</sub>, IS10500 specifies guideline value as 45 mg/l of NO<sub>3</sub>. This is equivalent to 10 mg as NO<sub>3</sub>-N.
  - Chloride is est. by titrating 100 ml sample with 0.0141N AgNO<sub>3</sub> soln. & K<sub>2</sub>CrO<sub>4</sub> indicator as in IS3025Pt32
  - Fluoride is est. by APHA 4500-F- D SPADNS method.
  - Sulfate is est. by IS3025Pt24 Turbidity method based on nephelometry & calibration with known standards.
  - Total Iron is est. by IS:3025Pt53, Phenanthroline, direct determination of soluble iron.
  - Manganese is est. by IS:3025Pt59, Formaldoxime Spectrophotometry. (Detection limit is 0.02 mg/L)

**C. Bacteriological Analysis:**

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Total Coliforms	> 1600(600.Inf)	MPN/100ml,(95%CI)		
2	Thermotolerant Coliforms	Present	Absent / Present	Absent	Absent
3	<i>E.coli</i>	Present	Absent / Present	Absent	Absent

1 Most probable number (MPN) & 95% Confidence Interval (CI), is estimated by results of 48h incubation of 5 MacConkey broth culture tubes for each of 3 (10, 1 & 0.1 ml) dilutions, using IS1622-1981 App-B, Table-3-4

2 Positive culture of total coliforms, from one of the tubes with minimum dilution, cultured in HiMedia brilliant green lactose broth (BGLB) in water bath at 44 °C for 24 hours and examined for gas formation to identify thermo-tolerant coliforms.

3 Positive culture of total coliforms, from one of the tubes with minimum dilution, is incubated in HiMedia tryptone water at 44 °C for 24 hours, and examined, after adding Kovac's reagent for pink ring to identify presence of *E. coli*.

**D. Notes and Recommendations:**

- Physical-sensory characteristics, and observed values of general chemical parameters as well as microbiological characteristics tested in this case show evidence of faecal contamination of open dug well.
- The water is **unfit for drinking and also general usage in view of fecal contamination. In addition, open well filled with surface water inflows including sewage provides a breeding site for mosquitoes and increases the risk of vector borne diseases. The well head should be protected and sewage flow diverted appropriately.**

End of the Report

*[Signature]*  
Director 17/8/2022

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Additional Note: At the time depositing sample for testing the client had informed the source of the sample as 'open dug well' and provided two photos of the well and sample collection. The photos give an impression of a pond. Hence, in the original report dated 16-08-2022, the source was described as 'pond'. In the meanwhile, the client clarified that the source is indeed a 120 ft dug well and provided an old satellite map snip. This revised report is issued after incorporating subsequent clarifications. No change in test results. Interpretation notes has been revised in view of the clarification about the source.

**References:**

IS10500. Indian Standard Drinking Water Specification, Second Revision, New Delhi, Bureau of Indian Standards (BIS); 2012 May; [https://law.resource.org/pub/in/bis/IS/IS\\_10500\\_2012.pdf](https://law.resource.org/pub/in/bis/IS/IS_10500_2012.pdf)



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Water Analysis Report

Bottle Id: CB02379

WHO Guidelines for drinking-water quality. Fourth Edition. Geneva: WHO, 2011.  
[http://www.who.int/water\\_sanitation\\_health/publications/whodoc\\_guidelines.pdf](http://www.who.int/water_sanitation_health/publications/whodoc_guidelines.pdf)



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**ANNEXURE-2: Geophysical and Geological survey field photographs**



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## Water Analysis Report

Report No. CB02379 DT17-08-2022

Rev Dt:08-08-2022, 11:10am.

Place of Sample & Description of Source as in WCR + Clarifications. Sri Sai Enclave, Thirumalagiri, Secunderabad. **Open dug well, depth: 120ft (approx).** Sample collected from dug well into a clean plastic mug and then transferred into a clean and empty Coca-Cola 1.75 L bottle and brought to IHS laboratory.



Other sample(s) from same client: NiL. Past tests, if any: NiL.

Sample Collection Date: 07-08-2022, 09:58am. Desired Groundwater Data (as in WCR) By: Shri. Mohd Ashwaq Khan with support of daily wage labourer M: 9182977928. Testing Ser. Potability & Code Tests (GPT)

Client concerns: To know quality of water in the open dug well which is exposed to sewage coming from the nearby residences and colony. General usage and drinking purpose.

Test Request by: Blue Energy Build Pvt Ltd, M:9976854999 on behalf of Dr. Tejaswini; Email: blueenergybuild@gmail.com

### Test Dates:

Group	Start	End	Interpretation & Reporting
Physical	08/08/2022	08/08/2022	The time between end of analysis and report dates is utilised for clarifications & interpretation of results.
Chemical	08/08/2022	11/08/2022	
Microbial	08/08/2022	11/08/2022	

### A. Physical & Sensory Characteristics:

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Colour (Filtered by WM42 Paper / 0.45µ Membrane)	5 Pale yellow	PCU (Hazen) Naked Eye Observation	5	15
2	Odour	Sewage smell	Odor Rating	Agreeable	Agreeable



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Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
3	Turbidity	36.0	NTU	1	5
4	pH At 25°C	7.2	pH value	6.5 to 8.5	No relaxation
5	Electrical Conductivity (EC)	987	$\mu$ Siemens / cm		2000 (CPCB)
	TDS Range Est. (TDSE) from EC :	493.5 740.25	mg/ltr	500	2,000
6	Total dissolved solids (TDSG)	611	mg/ltr	500	2,000

- Color is based on IS3025 Part-4 platinum cobalt visual comparison; Colorless= 0 Hazen Unit (PCU).
- Odor rating by lab personnel: Odorless, Agreeable or Disagreeable (Unpleasant or Offensive);
- Turbidity est. as in IS3025Pt10, using HI98703 Nephelo-Turbidimeter. NTU=Nephelometric Turbidity Unit.
- pH value at 25°C is as measured by Hanna HI2002-02Edge (pH) instrument.
- EC at 25°C measured by Hanna HI2003-02EdgeEC. The reference value in this case is as specified by the Central Pollution Control Board (CPCB). TDSE range = 0.5EC - 0.75EC.
- TDSG is estimated by IS3025 Part-16 (Gravimetry).

## B. Chemical Characteristics:

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Alkalinity (Alk)				
	a Phenolphthaleine Alk (P) :	0	As CaCO <sub>3</sub> mg/l		
	b Total Alkalinity (T) :	270	As CaCO <sub>3</sub> mg/l	200	600
	c Carbonate (CO <sub>3</sub> ) :	0	As CaCO <sub>3</sub> mg/L		
	d Bicarbonate (HCO <sub>3</sub> ) :	270	As CaCO <sub>3</sub> mg/L		
	e Hydroxides (OH) :	0	As CaCO <sub>3</sub> mg/L		
2	a Total Hardness	211.6	As CaCO <sub>3</sub> mg/l	200	600
	b Calcium	63.6	As Ca <sup>++</sup> mg/L	75	200
	c Magnesium	12.8	As Mg <sup>++</sup> mg/L	30	100
	d Carbonate hardness	211.6	As CaCO <sub>3</sub> mg/l		
	e Non-CO <sub>3</sub> hardness	0	As CaCO <sub>3</sub> mg/l		
3	Nitrogen				
	a Ammonia (NH <sub>3</sub> )	12.30	NH <sub>3/4</sub> -N mg/L	0.5	No relaxation
	b Nitrite (NO <sub>2</sub> )	0.0560	As NO <sub>2</sub> mg/L		WHO: 3.0 mg/l
	c Nitrate (NO <sub>3</sub> )	14.00	As NO <sub>3</sub> mg/L	45	No relaxation
	As Nitrogen :	3.16	As NO <sub>3</sub> -N mg/L	10	No relaxation
4	Chloride	86.47	As Cl <sup>-</sup> mg/L	250	1,000
	Chloride meq/l :	2.44	meq/L		
5	Fluoride	0.52	As F <sup>-</sup> mg/L	1	1.5
6	Sulphates	24.8	As SO <sub>4</sub> mg/L	200	400
7	Total Iron	0.07	As Fe mg/L	0.3	1
8	Manganese	BDL	As Mn mg/L	0.1	0.3

- Alkalinity titration as in IS3025Pt23 with 20 ml sample.
- Total hardness (TH) is est. by EDTA titration, using 50 ml sample, ammonia buffer & EBT indicator as in IS3025Pt21. Calcium is est. by EDTA titration using 50 ml sample, NaOH, P&R indicator as in IS3025Pt40. Mg est. is derived from TH & Ca, following IS3025Pt46. The US Environment Protection Agency (USEPA) classifies hardness of waters as (a) Soft: 0 to 75 mg/L, (b) Moderately hard: 76 to 150 mg/L, (c) Hard: 151 to 300 mg/L, and (d) Very hard: >300 mg/L. According to WHO Guidelines (2011) Consumers, in some cases,

may tolerate water hardness in excess of 500 mg/l. Drinking-water can be a contributor to Ca & Mg intake and could be important for those who are marginally deficient of these minerals. There are insufficient data to suggest either min or max concentrations of Ca or Mg at this time, as adequate intake will depend on a range of other factors. Therefore, no guideline values are proposed (by WHO) for hardness, Ca & Mg. Carbonate hardness is also referred to as temporary hardness as it may be removed by boiling or lime softening.

3. Ammonia est. by Nesslerization as in IS3025Pt34 using 50 ml undistilled sample. Nitrite est. as NO<sub>2</sub>-N mg/ltr, by APHA 4500-NO<sub>2</sub>-Colorimetric. Nitrate est. by UV spectrophotometric screening as in APHA 4500-NO<sub>3</sub>B. WHO has not proposed any guideline value for ammonia as it is not of immediate health relevance (WHO guideline 4th ed p313). The reference value for NO<sub>2</sub> shown here is based on WHO guideline, as the IS is silent on this. For NO<sub>3</sub>, IS10500 specifies guideline value as 45 mg/l of NO<sub>3</sub>. This is equivalent to 10 mg as NO<sub>3</sub>-N.
4. Chloride is est. by titrating 100 ml sample with 0.0141N AgNO<sub>3</sub> soln. & K<sub>2</sub>CrO<sub>4</sub> indicator as in IS3025Pt32.
5. Fluoride is est. by APHA 4500-F- D. SPADNS method.
6. Sulfate is est. by IS3025Pt24 Turbidity method based on nephelometry & calibration with known standards.
7. Total Iron is est. by IS:3025Pt53, Phenanthroline, direct determination of soluble iron.
8. Manganese is est. by IS:3025Pt59, Formaldoxime Spectrophotometry. (Detection limit is 0.02 mg/L)

### C. Bacteriological Analysis:

Sl	Parameter & Estimation Methods	Result	Units	IS:10500 Ref. Values	
				Acceptable	Permissible
1	Total Coliforms	: >1600(600, Inf)	MPN/100ml,(95%CI)		
2	Thermotolerant Coliforms	: Present	Absent / Present	Absent	Absent
3	<i>E. coli</i>	: Present	Absent / Present	Absent	Absent

1. Most probable number (MPN) & 95% Confidence Interval (CI), is estimated by results of 48h incubation of 5 MacConkey broth culture tubes for each of 3 (10, 1 & 0.1 ml) dilutions, using IS1622-1981 App-B, Table-3/4.
2. Positive culture of total coliforms, from one of the tubes with minimum dilution, cultured in HiMedia brilliant green lactose broth (BGLB) in water bath at 44°C or 24 hours and examined for gas formation to identify thermo-tolerant coliforms.
3. Positive culture of total coliforms, from one of the tubes with minimum dilution, is incubated in HiMedia tryptone water at 44°C for 24 hours, and examined, after adding Kovac's reagent for pink ring to identify presence of *E. coli*.

### D. Notes and Recommendations:

1. Physical-sensory characteristics, and observed values of general chemical parameters as well as microbiological characteristics tested in this case show evidence of faecal contamination of open dug well.
2. The water is **unfit for drinking and also general usage in view of fecal contamination. In addition, open well filled with surface water inflows including sewage provides a breeding site for mosquitoes and increases the risk of vector borne diseases. The well head should be protected and sewage flow diverted appropriately.**

End of the Report

Director

Test results are given only in relation to sample(s) tested for desired test service, & based on sampling information provided by the client. The test report shall not be reproduced except in full, without prior written approval of the laboratory.

Additional Note: At the time depositing sample for testing the client had informed the source of the sample as 'open dug well' and provided two photos of the well and sample collection. The photos give an impression of a pond. Hence, in the original report dated 16-08-2022, the source was described as 'pond'. In the meanwhile, the client clarified that the source is indeed a 120 ft dug well and provided an old satellite map snip. This revised report is issued after incorporating subsequent clarifications. No change in test results. Interpretation notes has been revised in view of the clarification about the source.

### References:

IS10500. Indian Standard Drinking Water Specification. Second Revision. New Delhi: Bureau of Indian Standard (BIS); 2012 May; <https://law.resource.org/pub/in/bis/S06/is.10500.2012.pdf>.

WHO. Guidelines for drinking-water quality. Fourth Edition. Geneva: WHO, 2011.  
[http://www.who.int/water\\_sanitation\\_health/publications/2011/dwq\\_guidelines/en/](http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/)

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# GEOTRAX INTERNATIONAL SERVICES.

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ISO 9001:2008 (CORS/DGPS Manufacturers, Survey and Mapping Consultants)

Plot.156 First Floor, Lokayata Colony, Badangpet, Hyderabad - 500 058, phone : 99899 31010, email: info@geotrax.in

Dated: 23/06/2022.

Ref: your letter dated 25<sup>th</sup> May 2022.

Sub: DGPS Survey and feasibility of sewer water line

To,

Dr.M.S. Tejashwari

D/o Late Sri. M.Sathyanaarayana Reddy.

H. No: 3-16-668/A, Trimulgherry 'X' roads

Trimulgherry, Secunderabad - 500015.

Telangana. Mobile No: 7702892451

Madam,

Sub: Survey and Opinion regarding the feasibility report and topographical map submitted by the M/S. PS Engineering Consultant for the proposed outfall sewer/storm water line at encroached A1 defence land, Revenue Sy. No 114, North of Sy. No's 96-99-part Tirumalagiri (Ward No - 7).

With reference to subject aforementioned, we are hereby submitting surveyed map and our opinion regarding the feasibility report and topographical map submitted by the M/S. PS Engineering Consultant.

1. The Topographical Map submitted by the M/S. PS Engineering Consultant to the CEO-SCB is not supported by
  - a. Drawing level, length and Scale.
  - b. Not supported by DGPS coordinates,
  - c. Layout plan of Malani Cooperative housing society (showing roads, drainage system, manholes and others) in Revenue Sy. No 's 115, 115/2, 116, 117 not included in their survey report.
2. Both option 1 and 2 submitted by the M/S. PS Engineering Consultant are very much feasible and economical also.
3. Option 3 submitted by the M/S. PS Engineering Consultant is not feasible technically due to hard granite sheet rock and also economically not viable.

Also enclosed the Topographical map, Sketch with DGPS co-ordinates, Feasibility report of proposed drain at encroached A1 defence land, Revenue Sy. No 114, North of Sy. No's 96-99-part Tirumalagiri (Ward No - 7).

Thanking You,



Signature

Enclosure as above

**FEASIBILITY REPORT FOR THE PROPOSED OUTFALL SEWER/STORM WATER LINE AT CHINNA KAMELA (A1 DEFENSE LAND REVENUE SY.NO 114) TRIMULGHERRY (WARD NO – 7) – TRIMULGHERRY.**

Sewage/storm water from the U/s area of Chinna Kamela is presently be drained into agricultural fresh water well located in the Sy. No's 96/e, 97/a, 98/a (96,97,98 parts) through the channels dugged from the northern and north eastern demolished portions of the compound wall of the above mentioned patta/private land.

**OPTION 02:**

**A. Physical Verification:** On the eastern side of your private land and the bund is the Malani Cooperative Housing Society Layout in Revenue Sy. No's 115, 115/2, 116, 117 which is bounded on

North: A1 Defence land (Sy. No 114) (Chinna Kamela)

South: Trimulgherry Lake

West: Plot No 17 (Salvo Explosives and Chemicals Pvt LTD; office of the Swayam Khushi)

Plot No 18, 19;

Plot No's 20,21 of Malani Colony (new apartments being constructed) abutting the bund on the western aspect of the Malani Cooperative Housing Society

Layout.

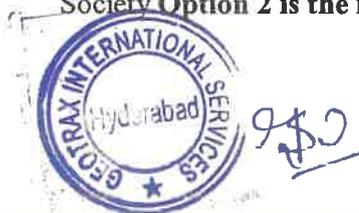
East: other colonies/layouts (Padmanabha colony, Airlines colony, Srinagar Colony, etc...).

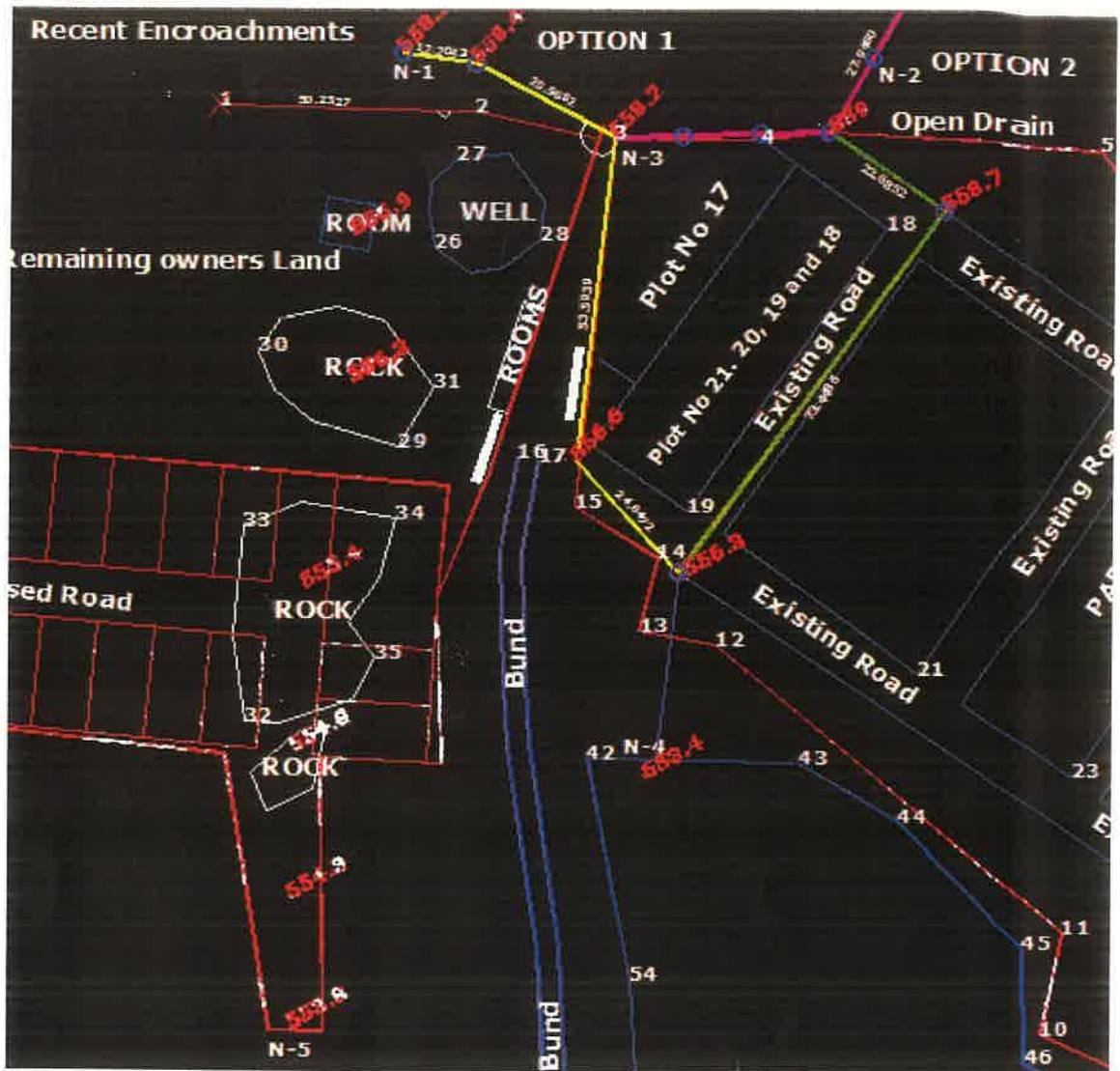
**B.** Also, as per the Malani Cooperative Housing Society Layout there is existing road on the northern side of the layout reaching up to the north western aspect of their Compound wall and also on the western aspect reaching up to the bund. The sewage/storm water from the apartments/colonies in the Malani Cooperative Housing Society layout drain through the public drains and empty into the Trimulgherry Lake.

**C.** Manholes and Public/Cantonment drains exist along the Northern side of Malani Cooperative Housing Society Layout which are nearest to the A1 defence land (Chinna Kamela) for the proposed outfall sewer / storm water line at Chinna Kamela and shown the same in the Topographical map.

**D.** Option 2, (Green color) whereas two stretches Node N1 to N3 and Node N3 to N2 dispose directly to N4 from N2 as shown in the map. In case the pipe line laid as per the option 2 the existing sewer lines of Malani colony can be connected and drained through it and it will be beneficial in long term for the Malani Cooperative Housing

**Society Option 2 is the most feasible and economical one.**





E. The concern about the drainage pipeline taking a steep 120° angle (Option 2) can always be surmounted by constructing appropriately sized manholes. The laying of public drain by creating appropriate gravitational flow is not a technical issue at all as appropriate depth can be assessed.

**OPTION 1:**

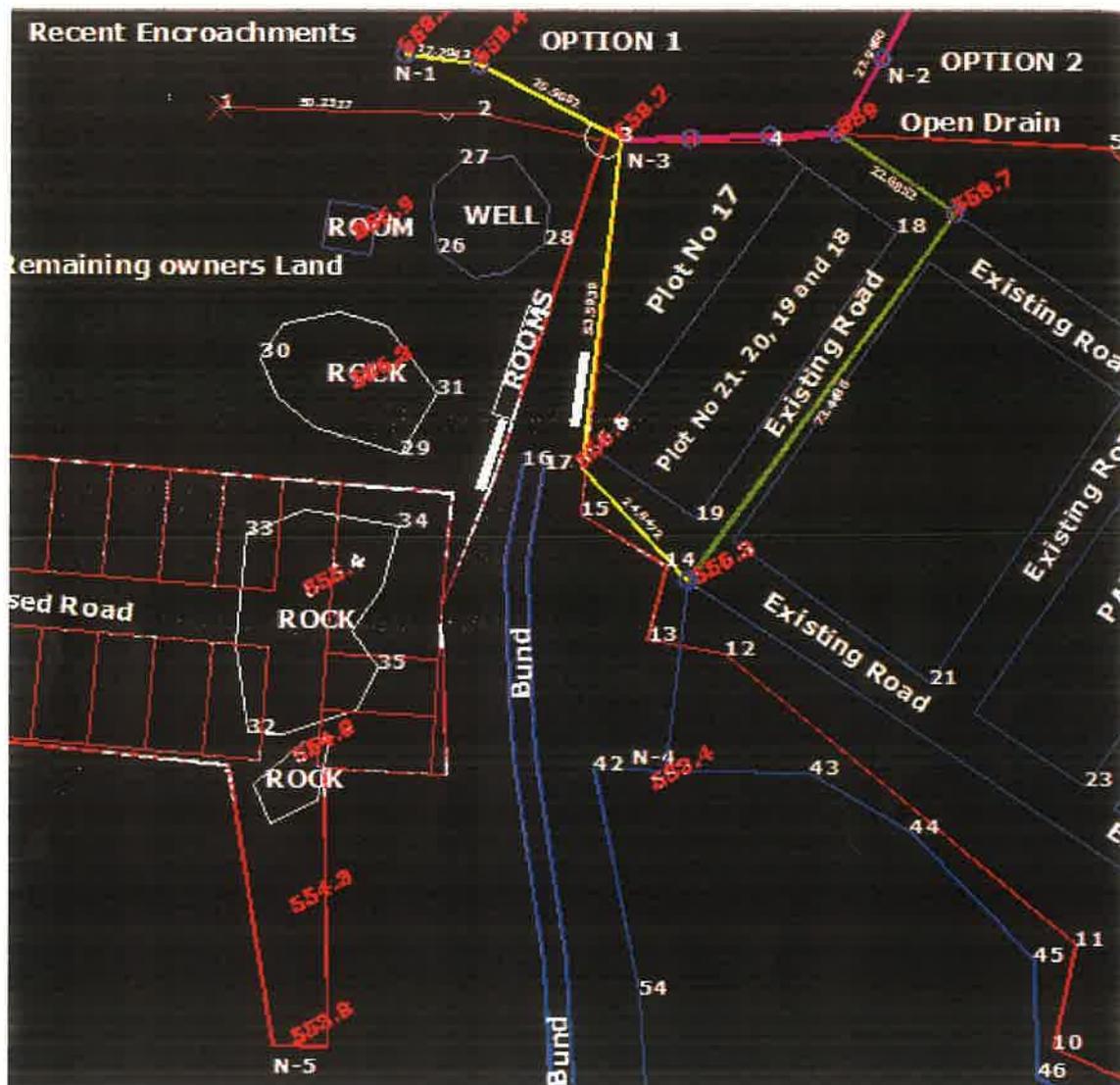
**Physical Verification:** the part of the bund abutting the western compound wall of Malani Cooperative Housing Society Layout comprising Plot No 17, 18,19, 20, 21 does not have rocky structures and the proposed Chinna Kamela drainage pipe can also be laid along the western aspect of the compound wall of Malani Cooperative Housing Society Layout and connected to the manhole existing at Plot No 21 and 22. As such it will not disturb the bund



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structure. The part of the bund on the eastern side of your compound wall comprises of rocky strata and extends into your land further as shown in the topographical map.

Option 1, (Yellow color) whereas two stretches Node N1 to N3 and node N2 to N3 as shown in the map will merge and dispose to Trimulgherry Lake through N3 to N4 stretch



It's the second most feasible and economical one.



**OPTION 3:**

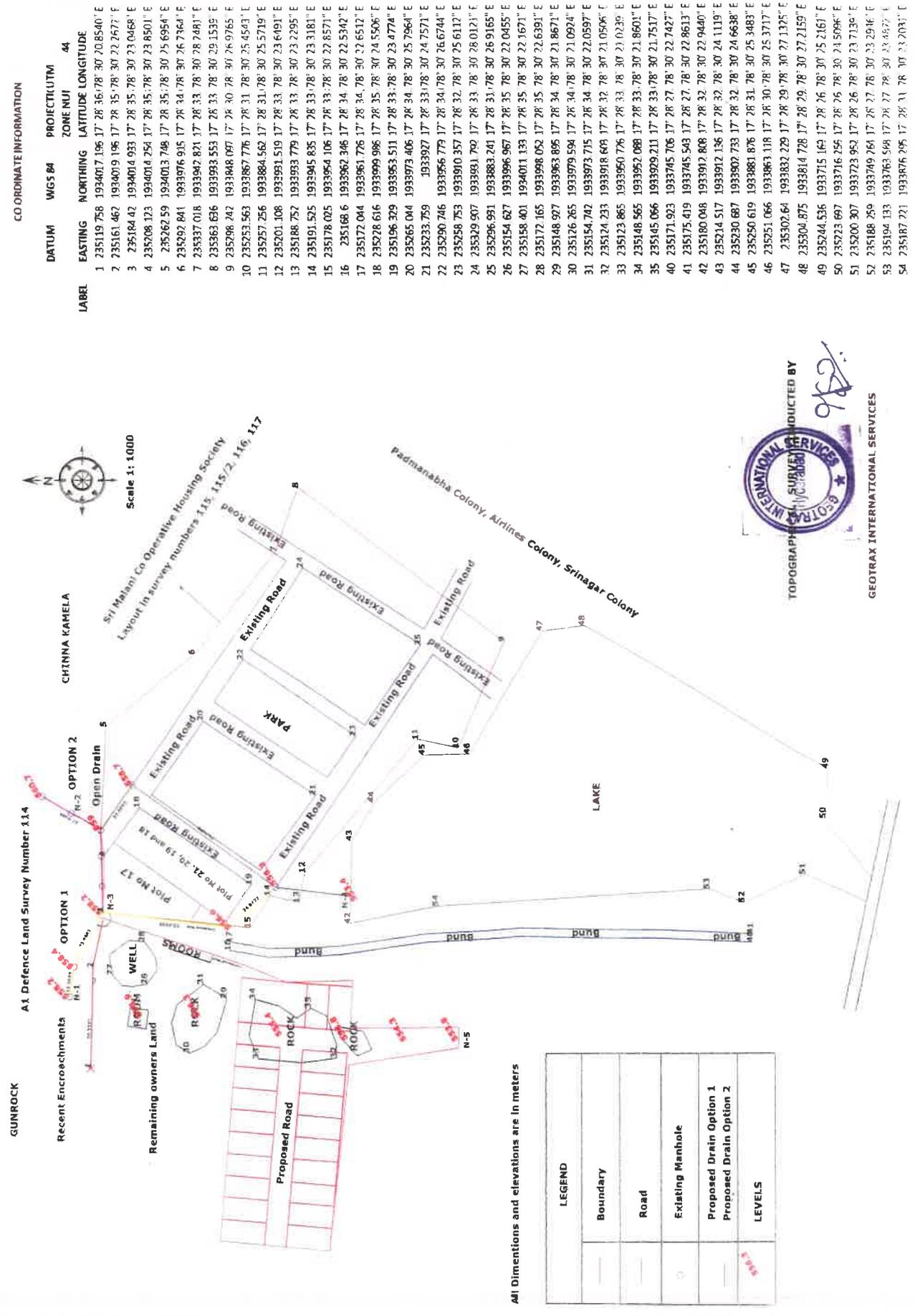
1. **Physical Verification:** The study of the land in Sy. No's 96/e, 97/a, 98/a (96,97,98 parts) reveals the presence of huge sheet rock in the area marked out in the plan annexed with this report which is hard granite and which can be verifiable through scientific hydrogeological tests. It is not feasible technically due to hard granite sheet rock and also economically not viable.
2. The area was surveyed using Dual frequency DGPS (Differential Global Positioning System). The topographical overview of the land has been observed and noted and pointed in the plan prepared.
3. The area Chinna Kamela was identified as situated at north of Malani Co-operative Housing Society and is dotted with drainage pipelines network and draining directly through Malani Co-operative Housing Society into the Trimulgherry lake situated at southern side of the Malani Co-operative Housing Society Layout who are also draining into the Trimulgherry lake.
4. There are cluster of houses north to Private land in Sy. No's 96-99(Part) which appear to be of recent origin upon perusal of Google timeline maps.
5. Presently land in Sy. No's 96-99(Part) of Trimulgherry village lying on the west of the Trimulgherry lake bund is surrounded by compound wall which is broken/demolished in the north eastern side and a huge gaping hole has been made on the northern side of the compound wall to let in the sewage water which is accumulating from recently laid drainage line of the unplanned and unauthorized illegal encroachments. Freshly dug channels inside the compound wall have been made to drain the sewage coming from the northern and north eastern side into the open agricultural well which is now filled to the brim.
6. The study of the land in Sy. No's 96-99(Part) reveals the presence of huge sheet rock in the area marked out in the plan annexed with this report which is hard granite.
7. The east of the land beyond the compound wall is open space not having any rocks/boulders upon study of laying a public drain to empty the sewage, options have been explored to avoid the laying of public drain through the private land which are shown in green and yellow colour. The best option is one in green and the slope is also towards the east and the public drainage line can be laid easily with appropriate



size manholes to ease the pressure and connect it to the already existing public drainage through the Malani colony. In case if this is not feasible due to reasons not known then the best possible option is the one shown in yellow colour and which will avoid any structures and directly drain into the manhole beyond the Malani layout.

8. The concern about the drainage pipeline taking a steep  $120^\circ$  angle (Option 2) can always be surmounted by constructing appropriately sized manholes. The laying of public drain by creating appropriate gravitational flow is not a technical issue at all as appropriate depth can be assessed.
9. Therefore, option 1 and option 2 are only feasible and option 2 is most economical.

# TOPOGRAPHICAL MAP OF PROPOSED DRAIN AT ENCROACHED A1 DEFENCE LAND, REVENUE SURVEY No. 114, NORTH OF PRIVATE LAND OF SURVEY No. 96 TO 99 PART TIRUMALGIRI LAKE CATCHMENT AREA.



GUNROCK

A1 Defence Land Survey Number 114

CHITINA KAMELA

Recent Encroachments

Remaining owners Land

Proposed Road

Existing Road

WELL

REMN

PARK

LAKE

BUND

BUND

BUND

BUND

ROCK

LEGEND	
—	Boundary
—	Road
○	Existing Manhole
—	Proposed Drain Option 1
—	Proposed Drain Option 2
LEVELS	
100.00	

All Dimensions and elevations are in meters

CO ORDINATE INFORMATION

DATUM	WGS 84	PROJECT UTM	ZONE	NUJ	44
EASTING	NORTHING	LATITUDE	LONGITUDE		
1	235119.758	1934017.106	17° 28' 36.78"	30° 20' 85.40"	E
2	235161.462	1934019.196	17° 28' 35.78"	30° 22' 26.77"	E
3	235184.42	1934014.933	17° 28' 35.78"	30° 23' 04.68"	E
4	235208.123	1934014.254	17° 28' 35.78"	30° 23' 85.01"	E
5	235262.59	1934013.748	17° 28' 35.78"	30° 25' 69.54"	E
6	235292.841	1933976.915	17° 28' 34.78"	30° 26' 73.64"	E
7	235337.018	1933942.821	17° 28' 33.78"	30° 28' 24.81"	E
8	235363.636	1933933.553	17° 28' 33.78"	30° 29' 15.39"	E
9	235298.242	1933848.097	17° 28' 30.78"	30° 26' 07.65"	F
10	235253.563	1933867.776	17° 28' 31.78"	30° 25' 45.43"	E
11	235257.256	1933884.569	17° 28' 31.78"	30° 25' 57.19"	E
12	235201.108	1933991.519	17° 28' 33.78"	30° 23' 6.91"	E
13	235188.752	1933933.779	17° 28' 33.78"	30° 23' 22.95"	E
14	235191.525	1933945.835	17° 28' 33.78"	30° 23' 31.81"	E
15	235178.025	1933954.106	17° 28' 33.78"	30° 22' 85.71"	E
16	235168.6	1933962.346	17° 28' 34.78"	30° 22' 53.42"	E
17	235172.044	1933961.776	17° 28' 34.78"	30° 22' 65.12"	E
18	235228.616	1933999.998	17° 28' 35.78"	30° 24' 55.06"	F
19	235196.329	1933953.511	17° 28' 33.78"	30° 23' 47.74"	E
20	235265.044	1933973.406	17° 28' 34.78"	30° 25' 79.64"	E
21	235233.759	1933927.172	17° 28' 33.78"	30° 24' 75.71"	E
22	235290.746	1933956.779	17° 28' 34.78"	30° 26' 67.44"	E
23	235258.753	1933910.357	17° 28' 32.78"	30° 25' 61.17"	E
24	235329.907	1933931.792	17° 28' 33.78"	30° 28' 01.21"	F
25	235296.991	1933883.241	17° 28' 31.78"	30° 26' 9.165"	E
26	235154.627	1933996.967	17° 28' 35.78"	30° 22' 04.55"	E
27	235158.401	1934011.139	17° 28' 35.78"	30° 22' 16.71"	E
28	235172.165	1933998.052	17° 28' 35.78"	30° 22' 63.91"	E
29	235148.927	1933963.895	17° 28' 34.78"	30° 21' 86.71"	E
30	235126.265	1933979.594	17° 28' 34.78"	30° 21' 09.24"	E
31	235154.742	1933973.715	17° 28' 34.78"	30° 22' 05.97"	E
32	235124.233	1933918.609	17° 28' 32.78"	30° 21' 05.94"	F
33	235123.865	1933950.776	17° 28' 33.78"	30° 21' 02.39"	E
34	235148.565	1933952.088	17° 28' 33.78"	30° 21' 86.01"	E
35	235145.066	1933929.211	17° 28' 33.78"	30° 21' 75.17"	E
40	235171.923	1933745.706	17° 28' 27.78"	30° 22' 74.27"	E
41	235175.419	1933912.136	17° 28' 27.78"	30° 22' 86.13"	E
42	235180.048	1933912.808	17° 28' 27.78"	30° 22' 94.40"	E
43	235214.517	1933912.733	17° 28' 27.78"	30° 24' 11.19"	E
44	235230.687	1933902.733	17° 28' 27.78"	30° 24' 66.38"	E
45	235250.619	1933881.876	17° 28' 27.78"	30° 25' 34.83"	E
46	235251.066	1933863.118	17° 28' 27.78"	30° 25' 37.17"	E
47	235302.64	1933832.229	17° 28' 29.78"	30° 27' 13.25"	E
48	235304.875	1933814.778	17° 28' 29.78"	30° 27' 21.59"	E
49	235244.536	1933715.164	17° 28' 26.78"	30° 25' 21.61"	F
50	235223.697	1933716.256	17° 28' 26.78"	30° 24' 50.94"	F
51	235200.307	1933723.952	17° 28' 26.78"	30° 23' 71.96"	F
52	235188.259	1933749.264	17° 28' 27.78"	30° 23' 29.14"	F
53	235194.133	1933763.598	17° 28' 27.78"	30° 23' 48.77"	F
54	235187.221	1933976.295	17° 28' 31.78"	30° 23' 20.31"	F



TOPOGRAPHICAL SURVEY CONDUCTED BY

GEOTRAX INTERNATIONAL SERVICES

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Mr. P. Ravi Kumar, B.Tech, FIE,  
Director (Projects-II)



hmwssb.gov.in  
Metro Customer Care Tel: 155313

Hyderabad Metropolitan Water  
Supply and Sewerage Board

9<sup>th</sup> Floor, Administrative Building,  
Kharatabad, Hyderabad-500004, Telangana, INDIA  
Tel: 011-91-40-23433933  
Fax: -91-40-23442855

Lr.No:HMWSSB/DP-II/Trimulgherry Lake/2021-22/ 21

Dated: 18-05-2021

To  
The Chief Executive Officer,  
Secunderabad Cantonment Board,  
Secunderabad.

109  
18/0

Sir,

2021 Sub:

HMWSSB Diversion of sewerage entering into Trimulgherry Lake - Estimate for Manufacturing, supplying, lowering, laying, jointing, testing and commissioning of 600mm dia RCC NP4 class Trunk Sewer Main & conducting preliminary survey for comprehensive project for Rejuvenation of Lake - Depositing of estimate amount - Reg.

- Ref:
1. Lr.No.SCB/EB/GEN/Vol.II/1144, dt: 5.5.2018 from CEO, SCB.
  2. Lr.No.GM(E)/HMWSSB/PD-III/Trimulgherry lake/2019-20. dated: 3.4.2020.
  3. Lr.No.SCB/GEN/Vol.V/707, dt: 7.4.2020 from CEO, SCB.
  4. Lr.No.HMWSSB/MD/Diversion of Sewer/Trimulgherry Lake/2020-21/91, dated: 17.04.2020.
  5. Lr.No.SCB/GEN/Vol.III/33, dt: 26.3.2020 from CEO, SCB.
  6. Lr.No.SCB/GEN/Vol.V/746, dt: 21.4.2020 from CEO, SCB.
  7. Lr.No.HMWSSB/MD/Diversion of Sewer/Trimulgherry Lake/2020-21/107, dated: 02.05.2020.
  8. Lr.No.SCB/GEN/Vol.V/1469, dt: 01.07.2020 from CEO, SCB.
  9. Lr.No.SCB/EB/DPR/2478, dt: 12.11.2020 from CEO, SCB.
  10. Lr.No.CGM(E)/PCC-I/HMWSSB/Trimulgherry Lake/Estimate/2020-21/316, dated: 25.11.2020.
  11. Lr.No.SCB/EB/DPR/1014, dt: 09.04.2021 from CEO, SCB.

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Adverting the subject and references cited, it is to inform that as per the request of CEO, Secunderabad Cantonment Board, HMWSSB has prepared proposal for diversion of sewerage entering into Trimulgherry Lake and the cost of proposal of Rs.2.90 Crores was estimated vide reference 4<sup>th</sup> cited for depositing amount with HMWSSB.

With regards to the clarifications sought in the letter 11<sup>th</sup> cited, it is to inform as follows.

1. At the first instance, it was proposed to divert the sewage entering into the lake so as to prevent pollution as immediate measure. Hence the estimate proposal / estimate for Ring Sewer main to intercept existing sewers discharging sewage into the lake and divert flow to the downstream side. The size of the sewer main is proposed as per the Comprehensive Sewerage Master Plan (CSMP) prepared by HMWSSB for this Trimulgherry Lake Catchment. The estimate amount also includes consultancy charges to study the existing sewer network and proposed new network along with STP of suitable capacity to maintain hydrology and beautification of the lake.

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2. The CSMP is prepared for the entire service area of HMWSSB upto ORR limits, which is far beyond the SCB limits on all sides. Decentralized STPs are proposed at various lakes under the jurisdiction of HMWSSB and the resultant sewage flows from various catchments of lakes located in SCB area also taken into consideration. The internal sewer network is to be developed by the SCB. As per the request of the SCB, to undertake the study of network and STPs and lake rejuvenation, it was requested to deposit Rs.20 Lakhs for engaging consultancy agency, which is still awaited. Only after the study by consultant, proposals for sewer network, STP and lake improvement can be prepared.
  3. The plan showing the proposed Ring Sewer main for diversion of sewage to downstream side is furnished along with cost estimate of Rs.2.90 Cores (copy enclosed for ready reference).
  4. The characterization of sewage is part of the consultancy scope of work for designing STP and treatment process.

In view of the above, the CEO, SCB, is requested to provide consent whether to take up the diversion proposals for Trimulgherry Lake catchment exclusively or for the entire Secunderabad Cantonment Area and in either case the SCB has to deposit charges for engaging consultancy agency.

Hence it is requested to communicate consent of SCB on the above and also to deposit Rs.20 Lakhs initially towards consultancy charges and balance amount if any may be deposited once the agency is fixed by HMWSSB based on response from your end.

Yours faithfully,

  
Director (Projects-II),  
H.M.W.S. & S.B.

✓ Copy to CGM(E), PCC-I, HMWSSB, K'bad, Hyd, for information and necessary action.

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**GENERAL ABSTRACT**

Name of Work: Diversion of Sewage entering into the Tirumalagiri Lake by Manufacturing, supplying, lowering, laying, jointing, testing and commissioning of 600 mm dia RCC NP4 Class trunk sewer main.

Sl.No.	Description	Amount
	PART - I	
1	Working Items Part I	Rs. 19,114,014.37
	Part-II - Reimbursement Items:	Rs.
	GST@12%	Rs. 2,293,681.72
	Labour Cess @1.0%	Rs. 191,140.14
	NAC @0.1%	Rs. 19,114.01
	<b>Total (Part-II - Reimbursement Items)</b>	Rs. 2,503,935.88
	Part-III - LS Provisions	Rs.
i.	LS provision 2.5% for Price Adustment (Payable on actual)	Rs. 477,850.36
ii.	LS provision 2.5% for Physical Contingences	Rs. 477,850.36
iii.	Centage Charges 15.5%	Rs. 2,962,672.23
iv.	LS provision for towards shifting of utilities, cables, sewer and water supply lines (Payable on actual)	Rs. 477,850.36
v.	LS Provision for Consultancy charges for Preparation and Submission of Comprehensive Proposal for undertaking UGD for <sup>UPSTREAM</sup> <del>entire</del> <sup>entire</sup> <del>contonment</del> <sup>area</sup> and also Preliminary proposal for STP, conservation, Protection and Beautification of Tirumalagiri Lake.	Rs. 1,830,000.00
vi.	LS provision towards 3rd party QA & QC charges	Rs. 191,140.14
vii.	LS provision towards Paper publication, and Rounding off (Payable on actual)	Rs. 964686.30
	<b>Total (Part-III - LS Provisions)</b>	Rs. 7,382,049.75
	<b>GRAND TOTAL</b>	Rs. 29,000,000.00
	<b>Rupees: Two Crores Ninety Lakhs Only</b>	

Kirane

9/4/2020

GM/PP-III

*[Signature]*  
9/4/20

Chief General Manager (E)  
Project Construction Circle  
H.M.W.S.S.B., Khairatabad, Hy

9/4/2020

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**HYDERABAD METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD**

**Office of the Director (Projects-II)  
6<sup>th</sup> floor, Administrative Building,  
Khairatabad, Hyderabad 500 004.**

Memo.No.HMWSSB/DP-II/RTI Act-2005/2022-23/172

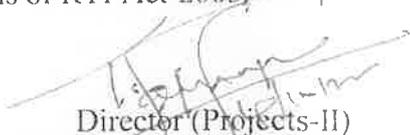
Date: 04-10-2022

Sub: HMWS&SB – Application of Sri. M.S.Raghavender, R/o H.No.3-16-668/A. Beshide HDFC ATM, Thirmulgherry X Roads. Secunderbad - 500015 Seeking further information under RTI Act 05 - Forwarded to the PIO. O/o GM(E). Project Division No.III, for furnishing information - Reg.

Ref: Application dated: 21.09.2022 under RTI Act by Sri. M.S.Raghavender, R/o H.No.3-16-668/A. Beshide HDFC ATM, Thirmulgherry X Roads. Secunderbad

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With reference to the above subject and references the PIO o/o General Manager(E). Project Division No.III, HMWSSB, Adikmet. Hyderabad, is hereby instructed to furnish the information of “plan showing the proposed Ring Sewer for diversion of sewage to downstream side” sought by Sri. M.S.Raghavender, R/o Secunderabad directly to the applicant duly marking a copy to this officer for record as per norms of RTI Act 2005.

  
Director (Projects-II)  
H.M.W.S. & S.B

04/10/22

To  
Public Information Officer,  
O/o General Manager(E),  
Project Division No.III.  
H.M.W.S & S Board,  
Khairatabad, Hyderabad.

✓ Copy to Sri. M.S.Raghavender, R/o H.No.3-16-668/A, Beshide HDFC ATM, Thirmulgherry X Roads. Secunderbad



HYDERABAD METROPOLITAN WATER SUPPLY & SEWERAGE BOARD

Lr.No.GM(E)/PD.III/RTI-2005/Thrimulgherry Lake/2022-23/216 Dt: 22-10-2022.

From,

To,

Er. S. Kiran Kumar, M.E.,  
General Manager (E),  
PD.III, HMWSSB,  
Adikmet, Hyderabad.

Dr. M.S. Raghavender,  
R/o. H.No.3-16-668/A,  
Beside HDFC ATM,  
Thrimulgherry "X" Road,  
Secunderabad - 500015.

Gentle man,

Sub: Estt - PD-III - RTI Act, 2005 - Application of Dr. M.S. Raghavender,  
R/o. H.No.3-16-668/a, Beside HDFC ATM, Thrimulgherry X Roads,  
Secunderabad - 500015 - Seeking further information under RTI Act 05  
- Submission of information - Regarding.

Ref: 1) Application of Sri M.S. Raghavender dated: 21-09-2022.  
2) DP-II Memo No. HMWSSB/DP-II/RTI Act-2005/2022-23/172,  
Dt: 04-10-2022.

\*\*\*\*

With reference to the subject cited, I am herewith submitting the " Plan showing the proposed ring Sewer for diversion of sewage to downstream side " vide reference 1<sup>st</sup> cited sought under RTI Act, 2005.

Encl: Copy of Plan

Yours faithfully,

*Kiran Kumar*  
21/10/22

General Manager (E),  
Project Division.III, Adikmet, Hyd.

*Dr.*

*Dr.*  
22/10/22



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**Srinivasa Consultancy**  
**Civil and Horticulture**

(Prop. U. Satya Siva Saradhi)  
Flat no. 201, K.L.R Venture, Medchal.

GST No. 37ABLPU1587A23E  
Ph. No. 8074773939

Dated: 13/04/2023.

**Covering letter**

To,

Dr.M.S. Tejashwari  
D/o Late Sri. M.Satyanarayana Reddy.  
H. No: 3-16-668/A, Trimulgherry 'X' roads  
Trimulgherry, Secunderabad - 500015.  
Telangana.

Madam,

- Sub:** 1. Agricultural Open Well restoration in North east corner of Private Land in Sy. No's 96-99 (part)  
2. Reconstruction and repair of North, Northeastern of compound wall of Sy. No's 96-99-part Tirumalagiri (Ward No - 7). reg

With reference to subject aforementioned, I am hereby submitting quotation for restoration of Agricultural Open Well in compliance with "Indicative Guidelines for Restoration of Water Bodies" Central Pollution Control Board in compliance to Hon'ble NGT order dated 10.05.2019 in M.A.No. 26/2019 in O.A.No. 325 of 2015) and also separate quotation for the reconstruction and repair of North, Northeastern compound wall of Sy. No's 96-99-part Tirumalagiri (Ward No - 7).

Thanking You,

  
Signature.

Enclosure: as above

1. Quotation for restoration of Agricultural open well along with printout of lake/pond restoration techniques as suggested in "Indicative Guidelines for



*Srinivasa Consultancy*  
*Civil and Horticulture*

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*(Prop. U. Satya Siva Saradhi)*  
*Flat no. 201, K.L.R Venture, Medchal.*

*GST No. 37ABLPTU587A22E*  
*Ph. No. 8074773939*

- 
- Restoration of Water Bodies" Central Pollution Control Board in compliance to Hon'ble NGT order dated 10.05.2019 in M.A.No. 26/2019 in O.A.No. 325 of 2015.
2. Quotation for Reconstruction and repair of North, Northeastern of compound wall of Sy. No's 96-99-part Tirumalagiri.



*Srinivasa Consultancy*  
*Civil and Horticulture*

*(Prop. U. Satya Siva Saradhi)*  
*Flat no. 201, K. L. R Venture, Medchal.*

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*GST No. 37ABLPM1587A23E*  
*Ph. No. 8074773939*

**(A) Quotation for Agricultural Open Well restoration**

Cleaning & reconditioning of North east corner open well in Sy. No 96-99 (part) - 50 lakhs

to 2 crore rupees & even more have to be spend.

**Justification:**

- As untreated sewage water is containing bacteriological & chemical contamination dumping into open well needs special attention to restoration.
- As the well is having multiple fracture systems from 40 ft to 120ft up to the maximum depth of well is absorbing the polluted water into the fractures during dry period & transports to longer distance needs to restored.
- To restore the open well, desilting of the open well and removal of sledge is needed.
- To restore the open well, it is needed to extract water continuously & disinfect & dump. It has to be done till the problem is rectified.
- Disinfection outside of the well and adjacent land.
- The time frame to restore the system will be based on the contamination level only. We cannot predict the exact time but it needs some minimum period of one to three years.



*Srinivasa Consultancy*

*Civil and Horticulture*

*(Prof. U. Satya Siva Saradhi)*

*Flat no. 201, K. L. R Venture, Medchal.*

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*GST No. 37ABLPU1587A23E*

*Ph. No. 8074773939*

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Printout of lake/pond restoration techniques as suggested in "Indicative Guidelines for Restoration of Water Bodies" Central Pollution Control Board in compliance to Hon'ble NGT order dated 10.05.2019 in M.A.No. 26/2019 in O.A.No. 325 of 2015.

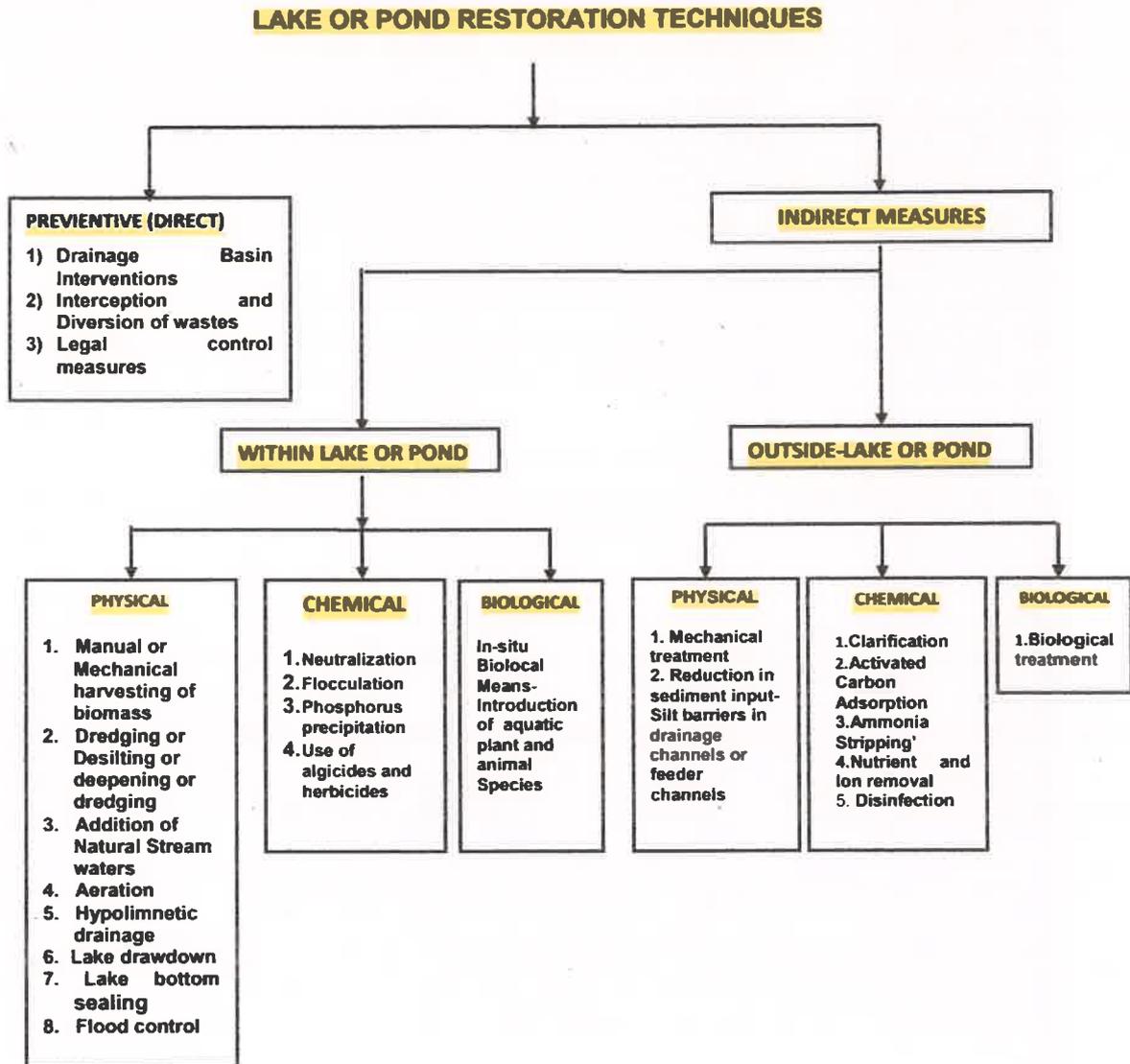


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**Srinivasa Consultancy**  
**Civil and Horticulture**

(Prop. U. Satya Siva Saradhi)  
Flat no. 201, K.L.R Venture, Medchal.

GST No. 37ABLPM1587A23E  
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**Figure 1. A Model Lake or Pond Restoration Technique**

**(B) Quotation for compound wall reconstruction**



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## Civil and Horticulture

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S. No	Description	Rate	Units	Grand Total
1.	Earth work excavation for foundations (Mechanical Means) for buildings in ordinary soils and depositing on bank for all lifts and with an initial lead of 10m and up to 3m depth 1 including all operational, incidental, labour charges such as shoring, sheeting, planking, strutting etc., and overheads & contractors profit complete for finished item of work excluding dewatering charges etc.,	20,000	1	₹ 20,000/-
2.	Plain Cement Concrete (1:4:8) (cement: fine aggregate; Coarse aggregate) for foundations and under flooring bed using coarse aggregate 40mm size hard, machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, including seignorge charges, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing etc., and overheads & contractors profit complete for finished item of work.	144	198 Sft	₹ 2,77,200/-
3.	RR Masonry in CM(1:6) Prop using hard granite stone metal from approved quarry including cost, conveyance of all materials to site including water, all labour charges for dressing stones to required size and shape, mixing of cement mortar, wall construction, scaffolding charges, curing, complete for finished item of work.	170	6,152 Sft	₹ 10,45,840/-

### Quotation for compound wall reconstruction



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S. No	Description	Rate	Units	Grand Total
4.	Providing Brick Masonry with CM(1:6) prop. 225 mm thick and above in foundations and superstructure using second class traditional bricks from approved source having crushing strength not less than 40 kg/sqcm and water absorption not exceeding 20% by weight including cost and conveyance of all materials like cement, sand, bricks, water, etc. to site, seigniorage charges, all labour charges like mixing cement mortar, wall construction, scaffolding charges, for finished item of work	144	6,420 Sft	₹ 9,24,480/-
5.	Plastering 20mm thick to External surfaces of brick masonry walls in two coats base coat of 16mm thick in CM(1:6) and top coat of 4mm thick in CM(1:4) with dubara sponge finishing including cost and conveyance of all materials like cement, sand, water etc., to site, including seignorge 5 charges, sales & other taxes on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, scaffolding, lift charges, curing, including cutting grooves and overheads & contractors profit complete for finished item of work	48	25,140 Sft	₹ 12,06,720/-

Quotation for compound wall reconstruction



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S. No	Description	Rate	Units	Grand Total
6.	Providing oil bound distemper two or more coats of approved make, shade and colour to give uniform shade to all interior plastered surfaces of walls, over a primary coat of distemper primer (total 3 or more coats) including cost and conveyance of all materials to site including all taxes, all labour charges such as preparation of the wall surface, applying distemper primer, curing for primary coat, applying distemper two coats etc. Complete for finished item of work	25	25,140 Sft	₹ 6,28,500/-
7.	Construction of M 25 Grade concrete for CCTV camera pillars.	7500	21 M3	₹ 1,57,500/-
	<b>Grand Total</b>			<b>₹ 42,60,240/-</b>



**BEFORE THE NATIONAL GREEN TRIBUNAL, SOUTHERN  
ZONE, AT CHENNAI**

**ORIGINAL APPLICATION No.97 OF 2022**

Dr.M.S. Tejashwari

... Applicant

**AND**

Union of India & Others

... Respondents

**REJOINDER FILED ON BEHALF  
OF THE APPLICANT**

**M/S. T.HEMALATHA & S.DEEPIKA**

**COUNSEL FOR APPLICANT**