

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL**  
**WESTERN ZONAL BENCH AT PUNE**  
**ORIGINAL APPLICATION NO. 28 OF 2020**

**IN THE MATTER OF:**

Sarang Yadwadkar and Ors.

...APPLICANTS

VERSUS

Pune Municipal Corporation and Ors.

...RESPONDENTS

**INDEX**

S. No.	Particulars	Page Nos
1.	<b>List of Dates on behalf of Applicant</b>	
2.	<b>ANNEXURE A-1</b> A copy of the said Submergence Map highlighting additional submergence caused due to the impugned project	

**FILED BY:**



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**Place: - Delhi/Pune**

**Date: - 10.11.2021**

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**LIST OF DATES ON BEHALF OF APPLICANT**

**MOST RESPECTFULLY SHOWETH:**

1. That the above titled application has been filed under Section 14, 15 and 20 of the National Green Tribunal Act, 2010, against the construction of the Pune Metro within the Blue Flood Line or the 'prohibitive zone' of the Mutha and Mula-Mutha rivers. That the applicants herein are seeking an alternative alignment of the Pune Metro for the safety of the lives of the citizens in large and protection of ecologically sensitive floodplains.
2. The Applicant submits that the Final Report of the Central Water and Power Research Station ('CWPRS') Pune dated January 2021 unequivocally suggests that there is likely to be a significant increase in additional submergence caused due to construction of the impugned Pune Metro within the prohibitive zone of the Mutha and Mula-Mutha rivers. That such CWPRS Final Report has previously been submitted by the Applicant on 18.02.2021 vide I.A. No. 13/2021/WZ.
3. The Applicant would like to submit the following detailed chronology of events so as to highlight the distinct and definite impact of the impugned project on increase in likelihood and intensity of flooding in thickly populated areas of Pune.

### LIST OF DATES

Date	Description	Page No.
24.05.2016	<p>Prior to commencement of construction of the impugned metro project within the riverbed of Pune, <i>OA 67/2016/WZ titled Sarang Yadwadkar v. Pune Municipal Corporation and Ors.</i> was filed before this Hon'ble Tribunal raising serious concerns with the impugned metro project on the following main grounds:</p> <p style="padding-left: 40px;">A. That the impugned project constructions are planned to be undertaken inside Blue flood line of river i.e. on Prohibitive Zone where no construction is allowed.</p> <p style="padding-left: 40px;">B. The said construction in the Prohibitive Zone of the river bed is bound to cause tremendous environmental, and ecological damage and rise in flood levels.</p>	-
13.10.2017	<p>Accordingly, this Hon'ble Tribunal constituted an Expert Committee to assess the impacts of riverbed construction within one month. This Hon'ble Tribunal vide order dated 13.10.2017 therefore ordered the following:</p> <p style="padding-left: 40px;"><i>"We constitute a Committee of Experts drawn from the field of Hydrology, Ecology and Biodiversity, and Water pollution and direct NEERI, Maharashtra State Bio-Diversity Board, Maharashtra Pollution Control Board (MPCB) to nominate Senior Scientists one each respectively to the said Committee"</i></p>	36-52
04.01.2018	<p>In pursuance of the order of this Hon'ble Tribunal dated 13.10.2017, the Expert Committee accordingly filed their report which <i>inter alia</i> mentioned the following</p>	-

	<p>with regards to additional submergence likely to be caused due to the impugned project:</p> <p style="text-align: center;"><b><u>"Maximum afflux shall be 12 mm. and submergence shall be 23 mm. at pier No. SP-10."</u></b></p> <p>Thereafter, OA 67/2016/WZ was transferred to Principal Bench and renumbered as OA 130/2018.</p>	
03.08.2018	<p>This Hon'ble Tribunal was pleased to dispose of OA 130/2018 with the following directions:</p> <p style="text-align: center;"><b><i>"15. As noted above, the Expert Committee has concluded that impact of construction of piers for metro rail on river Hydrology is insignificant, considering the level of discharge in the river due to rise in afflux from 2 to 12 mm and increased submergence from 3 to 23 mm considering the level of discharge in the river. Recommendations of the Committee which the project proponent has undertaken to comply include compensatory afforestation, cleaning of drain and installing dust sensors.</i></b></p> <p style="text-align: center;"><b><i>16. In view of the above, we are of the opinion that it will not be in public interest to prohibit the project. ...."</i></b> <i>(emphasis supplied)</i></p>	-
15.02.2019	<p>Aggrieved by the order dated 3.08.2018 passed by this Hon'ble Tribunal in O.A. 130/2018, a Civil Appeal No. 1054/2019 was filed by Applicants before the Hon'ble Supreme Court. Accordingly, the said Civil Appeal was heard by the Hon'ble Supreme Court, and vide order dated 15.02.2019, the said Civil Appeal was disposed of with the following directions:</p> <p style="text-align: center;"><b><i>"We see no reason to interfere with the impugned order. However, it is admitted that the appellants' view has not been taken into account by the Committee constituted for the purpose of this project. We, therefore, consider it appropriate to direct that the Committee shall give a hearing to the appellants on a fixed date and consider the objections and the evidence produced by them in their support. The Committee shall thereupon accommodate the</i></b></p>	

	<p><b><i>appellants' objections and suggest any suitable modification, if required, which shall be carried out by the respondent-Authorities. If the Committee does not uphold the objections it may give reasons. In that case, the appellants may approach the National Green Tribunal. The appellants shall be entitled to resort to any remedy available to them in law."</i></b>  <i>(emphasis supplied)</i></p>																					
<p>13.03.2019</p>	<p>That accordingly, the Expert Committee provided opportunity of hearing to the Applicants, wherein, the Applicants made their submissions and presented their written statement <i>inter alia</i> stating the following:</p> <p><i>"i. Five rivers flowing through the city, six dams on the immediate upstream side and saucer shaped topography;</i>  <i>ii. Pune is one of the most flood prone cities;</i>  <i>iii. Pune has experienced 14 floods from 1961;</i>  <i>iv. The afflux calculations of the EC are highly underestimated as the massive footings cast above riverbed are not taken into consideration while computing the afflux;</i>  <i>v. The actual available widths of the river, are much less than what are considered while computing the afflux:</i></p> <table border="1"> <thead> <tr> <th><b>Pier No.</b></th> <th><b>River Width M (As considered in the report)</b></th> <th><b>Actual available River Width M</b></th> <th><b>Error in river width in Meters</b></th> </tr> </thead> <tbody> <tr> <td>P 152</td> <td><b>214.885</b></td> <td><b>170</b></td> <td><b>+44.885</b></td> </tr> <tr> <td>DE 9</td> <td><b>228.57</b></td> <td><b>130</b></td> <td><b>+98.57</b></td> </tr> <tr> <td>SP 5</td> <td><b>193.116</b></td> <td><b>133</b></td> <td><b>+60.116</b></td> </tr> <tr> <td>P 191</td> <td><b>177.554</b></td> <td><b>156</b></td> <td><b>+21.554</b></td> </tr> </tbody> </table>	<b>Pier No.</b>	<b>River Width M (As considered in the report)</b>	<b>Actual available River Width M</b>	<b>Error in river width in Meters</b>	P 152	<b>214.885</b>	<b>170</b>	<b>+44.885</b>	DE 9	<b>228.57</b>	<b>130</b>	<b>+98.57</b>	SP 5	<b>193.116</b>	<b>133</b>	<b>+60.116</b>	P 191	<b>177.554</b>	<b>156</b>	<b>+21.554</b>	
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<p>13.06.2019</p>	<p>Expert Committee filed their second Report 3 months after hearing the Applicants. The report mentioned <i>inter alia</i> the following with regards to cross-sections of the river and Blue Line data which was used by the Maharashtra Metro Rail Corporation Ltd. ('MMRCL') for appraisal, assessment, and execution of the impugned</p>																					

	<p>project:</p> <p><i>"Red and blue line data along with <b>cross section published by Irrigation department were considered</b> for pier wise afflux calculations."</i></p> <p><i>(emphasis supplied)</i></p>	
06.09.2019	<p>As directed by the Hon'ble Supreme Court order in Civil Appeal No. 1054/2019, the Applicants being aggrieved by the Expert Committee Report filed OA 70/2019/WZ before this Hon'ble Tribunal. The Applicants <i>inter alia</i> raised the following main grounds:</p> <ul style="list-style-type: none"> <li>• <i>That the Expert Committee Report is based on incorrect data which grossly underestimates the flood levels likely to be caused due to the impugned project;</i></li> <li>• <b><i>That the Expert Committee, while computing the rise in flood levels, considered the river width in excess by 25.33% than the width as per the Irrigation Department's records.</i></b></li> <li>• <i>On 5.08.2019, Blue line of Mutha which is defined at 60,000 CuSecs. was breached at 45,474 CuSecs. (75%) around metro construction site.</i></li> </ul>	917-918
05.11.2019	<p>Thereafter, this Hon'ble Tribunal was pleased to dispose of OA 70/2019/WZ with the following directions:</p> <p><i>"Since the application primarily alleges non-consideration of the various aspects set out above, we are of the view that it would be appropriate to refer the matter for consideration to the same Committee constituted vide order dated 13.10.2017 in O.A. No. 130/2018 (earlier O.A. No. 67/2017).</i></p> <p><b><i>The Committee shall consider the objections raised by the Applicant and take a decision by a reasoned order. The proceedings may be completed within a period of six weeks."</i></b></p> <p><i>(emphasis supplied)</i></p>	53-56
16.01.2020	<p>Applicants appeared before the Expert Committee for the second time in order to place their objections regarding the incorrect data regarding river widths and cross section of river used for calculation and assessment of the impugned project. The Applicants</p>	-

	<p>accordingly filed the following objections through Written Statement submitted to the Expert Committee, which <i>inter alia</i> stated as follows:</p> <p><b><i>"The Expert Committee needs to substantiate with supporting data and cross sections from Irrigation Department, the widths of Mutha River considered while computing the rise in afflux are correct.</i></b></p> <p><b><i>In light of the floods experienced in 2019, Applicants state that the studies, assumptions, computation of flood levels done by the Expert Committee has been proved disastrously wrong as the Expert Committee members have miserably failed to perform local investigations in the larger social interest as well as environmental protection."</i></b></p> <p style="text-align: right;"><i>(emphasis supplied)</i></p>	
21.05.2020	<p>That after hearing the objections and submissions raised by the Applicants, the Expert Committee proceeded to consider the said objections and accordingly prepared another Report containing new findings. It is pertinent to note that the Applicants were not informed of the new Report prepared by the Expert Committee. It is submitted that without informing the Applicants, the Expert Committee filed their third report before this Hon'ble Tribunal. The Applicants filed RTI Application accordingly, and received a copy of the said report on 21.05.2020. The said Report made <i>inter alia</i> the following observations:</p> <p><b><i>"Expert Committee (EC) had calculated the rise in flood levels and subsequent submergence owing to the construction of the 59 piers of metro on riverbed of Mutha River. The calculations were based on the data provided by MMRCL.</i></b></p> <p><b><i>"After hearing the applicants for discrepancies in the width of the riverbed, EC recommends that MMRCL has to provide the reason and justification for the riverbed width discrepancies and subsequent calculation of flood level rise due to construction of the 59 piers of metro."</i></b></p> <p><b><i>"After hearing to applicants say on discrepancies in the riverbed widths, EC strongly recommends a fresh hydrodynamic study to be conducted to assess the</i></b></p>	-

	<p><i>impact of metro construction on rise of flood level and submergence."</i></p> <p><i>"Initial calculations were based on the dimension of footing, its level, pile cap and pier provided by MMRCL earlier. <b>Further MMRCL changed the dimensions which require revised afflux and submergence calculation.</b>"</i></p> <p><i>"Based on the recent flood and past history of floods in Pune, <b>EC strongly recommends that a fresh hydrodynamic study (two dimensional) is required to assess the impact of metro piers, footings and pile cap on afflux and submergence. EC also recommends that this study needs to be conducted by The Central Water and Power Research Station (CWPRS), Pune"</b></i></p> <p style="text-align: right;"><i>(emphasis supplied)</i></p>	
07.07.2020	<p>As the Third Expert Committee Report clearly made observations regarding discrepancies in river widths and recommended a fresh hydrodynamic study for the impugned project, the Applicants filed the present OA 28/2020/WZ before this Hon'ble Tribunal <i>inter alia</i> raising the following issues:</p> <p style="text-align: center;"><b><i>"The EC considered 25.33% more width than actual; resulting in arriving at significantly lower afflux levels. Committee could not find any scientific justification as to how the blue line which is defined at 60,000 Cusecs was breached around metro construction site at the discharge of mere 45,474 Cusecs. leading to the floods in 2019.</i></b></p> <p style="text-align: center;"><b><i>An alternate alignment as approved in the Development Plan can be built on the 120' wide road parallel to the riverbank will eliminate the flooding risk and environmental impact of the project and be in line with the precautionary principle."</i></b></p> <p style="text-align: right;"><i>(emphasis supplied)</i></p>	57-63
25.09.2020	<p>That during pendency of the present O.A. 28/2020/WZ, the project proponent Respondent No. 6, MMRCL filed their reply dated 25.09.2020, wherein MMRCL has clearly confessed that there has been misrepresentation of river widths while computing the flood levels. Accordingly, MMRCL has <i>inter alia</i> stated the following on page Nos. 267 and 332:</p>	267, 270, 332, 335

	<p style="text-align: center;"><b><i>"On verification it was found that due to manual digitisation of pdf file an error had indeed occurred....."</i></b></p> <p>That therefore, it is evident that it was MMRCL who provided the incorrect data regarding excessive river widths (25.33% excess) to the Expert Committee, which led to the unrealistically low submergence being computed due to the impugned project. That incorrect data resulted in calculations showing 23 mm submergence due to construction of the impugned project; whereas proper and scientifically valid data resulted in calculations showing 55.76 M. of additional submergence to be caused due to the impugned project.</p>	
11.01.2021	<p>As recommended by the Third Expert Committee Report, the Central Water and Power Research Station ('CWPRS') submitted their Report No. 5886 by the name of <i>"Mathematical Model Studies of River Mutha for Maha Metro Rail Corporation Ltd., Pune"</i> wherein CWPRS has computed the additional water spread levels likely to be caused due to construction of the impugned project within riverbed. Accordingly, the CWPRS Report of January 2021 states as follows:</p> <p style="text-align: center;"><b><i>"It was observed that the <b>computed water surface elevation is about 0.74 m above the red line</b> near/in the vicinity of Shinde bridge. The results obtained were also compared with the blue line. Similar trend as described above is observed for this condition also, wherein simulated water surface elevations are above the blue line provided by the Irrigation Department. The <b>computed water surface profile is about 1.5 m above the blue line</b> near/in the vicinity of Shinde Bridge</i></b></p> <p style="text-align: center;"><b><i>Table 7: Water Spread for the discharge of 1,00,000 ft<sup>3</sup>/S (Page 657)</i></b></p>	730, 754, 755

	<b>Location</b>	<b>Water Spread Before Metro (M)</b>	<b>Water Spread After Metro (M)</b>	<b>Additional Waterspread due to metro (M)</b>
	P 159	263.04	285.24	<b><u>22.20 (73 Ft.)</u></b>
	P 160	262.70	283.31	<b><u>20.61(68 Ft.)</u></b>
	Z Bridge	295.56	325.40	<b><u>29.84 (98 Ft.)</u></b>
	P 167	222.63	287.39	<b><u>55.76 (183 Ft.)</u></b>
11.08.2021	<p>For abundant precaution, the Applicant No.1 has filed an RTI Application dated 19.07.2021 before the Divisional Commissioner, Pune Division, asking for, "any scientific data/study/ research etc. which proves that the CWPRS Report No. 5886 is wrong/unscientific/erroneous."Accordingly, the Divisional Commissioner's office responded vide letter dated 11.08.2021 stating the following in response to queries raised in the RTI Application filed by the Applicant No.1:</p> <p style="text-align: center;"><b>"Any such information as mentioned by you, is not available."</b> (emphasis supplied)</p>			-
08.09.2021	<p>For further clarification and precaution, the Applicant No.1 filed another RTI Application with the MMRCL dated 18.08.2021, seeking response to the same query as was raised in the RTI Application filed before the Divisional Commissioner, Pune Division vide RTI Application dated 19.07.2021. In response to the Applicant No.1 RTI Application dated 18.08.2021, the MMRCL responded as follows:</p> <p style="text-align: center;"><b>"No such information exists in any material in this office."</b> (emphasis supplied)</p>			-

4. Additionally, the Applicants submit that a Submergence Map has been prepared on the basis of the CWPRS Report of January 2021 which distinctly demonstrates and displays the various areas affected by additional submergence likely to be caused due to construction of the impugned metro project within the river bed.
5. The Applicants submit that the said Submergence Map clearly shows that the additional submergence likely to be caused due to the impugned project would be across an area amounting to approximately 30 acres in densely populated areas of Pune City.

A copy of the said Submergence Map highlighting additional submergence caused due to the impugned project is annexed and marked herewith as

**ANNEXURE A-1.**

6. The Applicants therefore submit that the Submergence Map based on the CWPRS Report of January 2021 is incontrovertible evidence of the fact that the Expert Committee Report on which the order of this Hon'ble Tribunal in OA 130/2018 dated 03.08.2018 was relying upon, was in fact, incorrect and erroneous.
7. That such Expert Committee Report relied on by this Hon'ble Tribunal has substantially underestimated the cross sections and river widths which has led to dilution of the severity of the impact of the impugned project on flooding of thickly populated areas in Pune city.
8. That therefore, it is submitted that this Hon'ble Tribunal may accordingly reconsider the order dated 3.08.2018 in light of the above-mentioned facts and circumstances, including the January 2021 CWPRS Report which clearly assesses the present and correct river cross sections and river widths, as well as the Submergence Map which clearly elucidates that approximately 30 acres of thickly populated urban areas in Pune City will be submerged.

Pass any such Order deemed fit by this Hon'ble Tribunal in the facts and circumstances of the case.



**APPLICANT NO.1**



**RITWICK DUTTA**



**RAHUL CHOUDHARY**

**MAITREYA GHORPADE**

COUNSEL FOR THE APPLICANT

N-71, Lower Ground Floor,

Greater Kailash-I, New Delhi - 110048

Email:litigation.life@gmail.com

Ph: 93124 07881

**VERIFICATION**

I, Sarang Yadwadkar, r/o A-9, Pradnyangad Apartments, S. No. 119/3 Sinhagad Road, Pune – 411030 do hereby solemnly affirm and state as under:

1. That I am the Applicant No.1 in the above titled Application and I am conversant with the facts and the circumstances of the case and competent to swear this affidavit.

2. That that the contents of the present Application are true to my knowledge and/ or based on information, and/or the contents are based on the legal submission and/or inferences of facts, which I believe to be true.

Date: Delhi/Pune

Place: 10.11.2021



**APPLICANT NO.1**

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**AFFIDAVIT**

I, Sarang Yadwadkar, r/o A-9, Pradnyangad Apartments, S. No. 119/3 Sinhagad Road, Pune – 411030 do hereby solemnly affirm and state as under:

1. That I am the Applicant No.1 in the above titled Application and am conversant with the facts and circumstances described in the present case and as such, I am competent to swear this affidavit.
2. That the contents of the accompanying Application are true and correct and nothing material has been concealed therefrom.

*[Signature]*  
10/11/21  
**DEPONENT**

**VERIFICATION**

Verified on this 10<sup>th</sup> of Nov 2021 that the contents of the above mentioned affidavit are true and correct and nothing material has been concealed therefrom.

*[Signature]*  
10/11/21  
**DEPONENT**

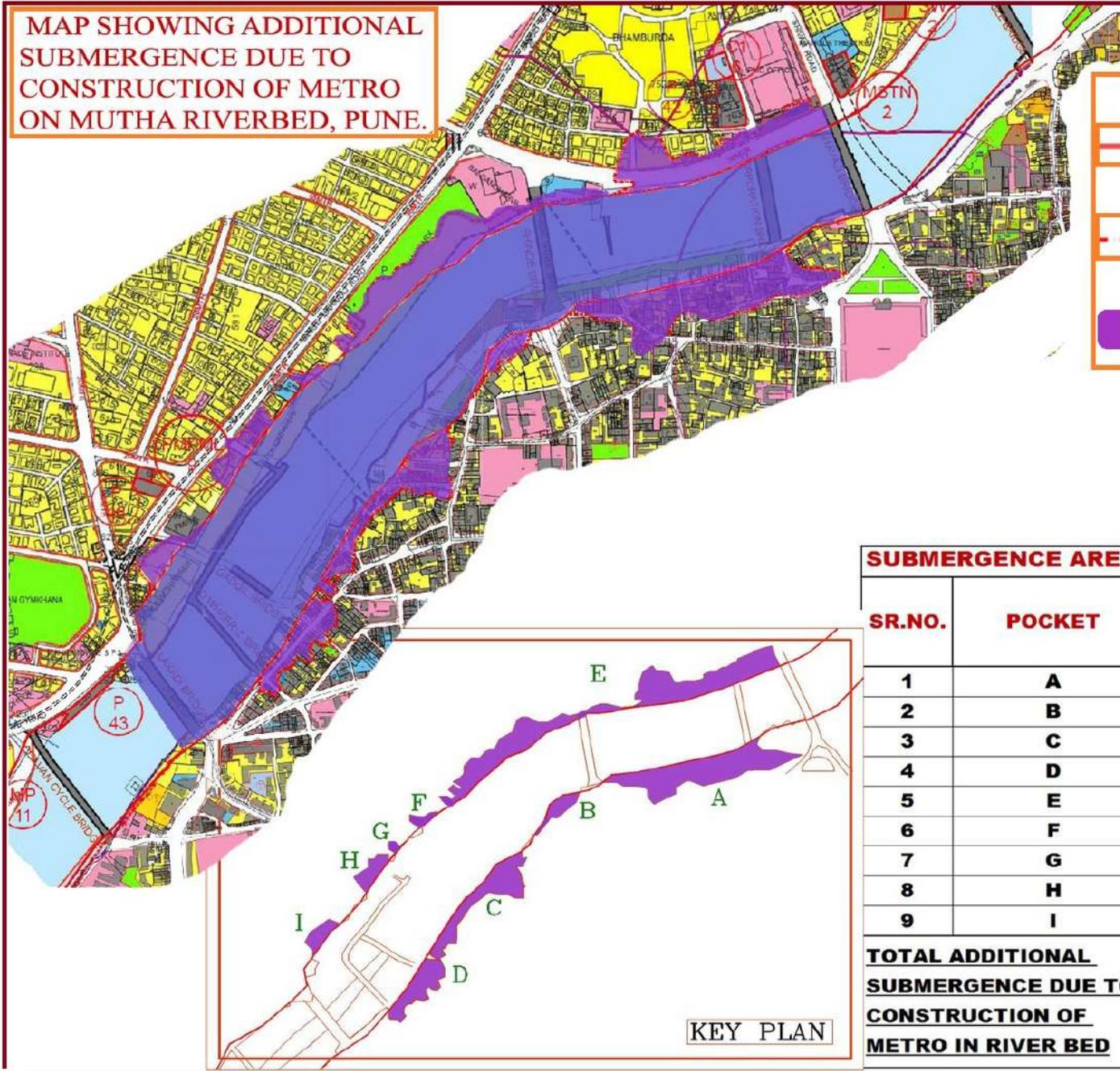
**BEFORE ME**

**SUNIL R. KOTLIKER**  
NOTARY, GOVT. OF M. P.  
PUNE DISTRICT (MAHARASHTRA)  
REGD. No. 31154



# Annexure A-1

**MAP SHOWING ADDITIONAL SUBMERGENCE DUE TO CONSTRUCTION OF METRO ON MUTHA RIVERBED, PUNE.**



**LEGEND:**

-  ORIGINAL FLOOD LINE AS PER WATER RESOURCES DEPARTMENT.
-  BOUNDARY OF ADDITIONAL SUBMERGENCE DUE TO METRO
-  ADDITIONAL SUBMERGENCE IN RESIDENTIAL AREA.

**SUBMERGENCE AREA STATEMENT**

SR.NO.	POCKET	AREA IN SQ.M.	AREA IN SQ.FT.	AREA IN ACRES.
1	A	31576.02	339884.28	7.80
2	B	3864.85	41601.25	0.96
3	C	16369.00	176195.92	4.04
4	D	10111.74	108842.77	2.50
5	E	47721.18	513670.78	11.79
6	F	1540.88	16586.03	0.38
7	G	800.93	8621.21	0.20
8	H	4554.00	49019.26	1.13
9	I	3943.19	42444.50	0.97
<b>TOTAL ADDITIONAL SUBMERGENCE DUE TO CONSTRUCTION OF METRO IN RIVER BED</b>		<b>120482</b>	<b>1296866</b>	<b>30</b>

KEY PLAN

t.c.

*Handwritten signature*