

BEFORE THE NATIONAL GREEN TRIBUNAL, WESTERN
ZONE BENCH AT PUNE

ORIGINAL APPLICATION NO. 117 OF 2024 (WZ)

TULSHIDAS SRIDHAR NAIK & ORS APPLICANTS

VERSUS

STATE OF GOA & OTHERS RESPONDENTS

REPLY AFFIDAVIT ON BEHALF OF RESPONDENT NO. 6,
THE GOA COASTAL ZONE MANAGEMENT AUTHORITY



I, Johnson Bedy Fernandes, Indian National, major of age, having office at 4th Floor, Dempo Towers, Patto, Panaji-Goa, do hereby solemnly affirm and state as under:

1. I say that I am the Member Secretary of Respondent No. 6 GCZMA and am authorised to affirm the present reply affidavit on its behalf. I have examined the relevant records available in my office in respect of the "Proposed construction of the High Level New Borim Bridge on NH - 17B(NH 566) in the State of Goa" and the land acquisition in respect thereof, and am affirming the present Reply Affidavit based on the same. Nothing in the present Reply Affidavit may be deemed to be an admission of any of the contents of the above Application. Nothing in the contents of the above Application may be deemed to have been admitted for mere want of specific denial.

2. I say that the said Application has been filed for seeking directions to Respondent Nos. 1 to 8 herein, including the answering Respondent, to study and consider the Environment impact envisaged for each alternative before deciding the alignment and carrying out land acquisition for the "Proposed construction of the High Level New Borim Bridge on NH -17B(NH 566) in the State of Goa" and to obtain necessary environmental and CRZ clearances.
3. I say that the present Respondent received an Application from Respondent No.3 herein dated 16/11/2023 regarding construction of High Level New Borim Bridge along with approaches across river Zuari along with bypass to Borim Bridge between km 4/00 to km 12/00 (proposed bypass length = 5.73 km) on NH -17B(NH 566) in the State of Goa". The said application was taken up for consideration in the 401st meeting of this Respondent held on 28/05/2024. Minutes of the said meeting are hereto annexed and marked as Annexure I.
4. I say and submit that the present respondent is concerned only to the extent of CRZ clearance applied for an extremely small portion of the affected CRZ area. I further say that upon receipt of the said application dated 16/11/2023, a site inspection was scheduled on 15/12/2023 and the officials of this Respondent and the PWD department, as mentioned in the minutes of the Meeting, attended the same.



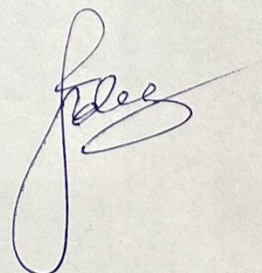
A handwritten signature in blue ink, consisting of a large, stylized initial 'J' followed by a cursive name.



5. I say that the details of the location, Survey Numbers affected by CZMP 2011, details of proposal, details of Environmental Impact Assessment/ Environmental Management Plan, Project demands in terms of land, water, soil and other demands were considered in the said meeting. The anticipated potential Environmental impacts were discussed in the 401st meeting dated 28/05/2024. I say that mitigation measures to prevent soil erosion and recommendations in accordance with CRZ Notification 2011 were issued to the project proponent i.e. Respondent No. 3 herein.

6. I say and submit that as per CRZ Notification 2011, construction of bridge is not a prohibited activity under clause 3.0 sub clause iv (a) and (b). Under clause 8.0, sub clause I (ii) (b) construction of bridge is a permissible activity in CRZ 1-A and under sub clause III (iii) (j), a permissible activity in CRZ III (NDZ).

7. I say that after duly deliberating on the proposal, the Answering Respondent had called upon Respondent No. 3 for clarification on 09/07/2024. The proposal is still pending for consideration and only upon thoroughly examining the proposal the Authority would take the final call.





8. I say and submit that as on date the Authority has not conveyed any clearance to the PP.

Gracias
DEPONENT

MEMBER SECRETARY

GOA COASTAL ZONE MANAGEMENT AUTHORITY
PANAJI - GOA

VERIFICATION

I, the deponent above-named do solemnly affirm that all that is stated in this Affidavit is true to the best of my knowledge and belief, which is based on the records available in respect of the issue involved in the above-captioned Appeal. Nothing false has been stated herein.

Verified at Panaji on this 23rd day of December, 2024.

Gracias
DEPONENT

MEMBER SECRETARY

GOA COASTAL ZONE MANAGEMENT AUTHORITY
PANAJI - GOA

Executed before me

At Panjim Tiswadi - Goa

Reg. No. 194/012/2024

Dated: 23/12/2024

Gracias
Venefreda C.P.F.B Gracias
Advocate & Notary Goa State



Extract of 401st GCZMA Meeting Minutes

Case No.2.3**Land acquisition for construction of high level new Borim bridge along with approaches across river Zuari along with bypass to Borim bridge between km 4/00 to km 12/00 (Proposed bypass length = 5.73km) on NH-566 in the state of Goa**

The office of GCZMA is in receipt of an application from The Executive Engineer XV (NH), PWD, Ponda Goa dated 16/11/2023 with regards to the Land acquisition for construction of high level new Borim bridge along with approaches across river Zuari along with bypass to Borim bridge between km 4/00 to km 12/00 (Proposed bypass length = 5.73km) on NH-566 in the state of Goa.

The proposal is basically put up as there is a major commercial traffic along the NH-566. The traffic also has increased in many folds along the stretch and the existing two lane bridge is over burdened.

Accordingly, a site inspection was scheduled on 15/12/2023 and the same was attended by following officials:

- Mr. Ganesh Velip (Expert Member, GCZMA)
- Mr. Nehal Devidas (Engg, GCZMA),
- Ms. Siddhi Morajkar (F.S, GCZMA)
- Mr. Amjad Lashkarwale (J.E., PWD)

Location of Proposals:

The bridge is proposed to connect Borim village in Ponda taluka and Loutlim village of Salcete taluka. The village boundary of Borim village and that of Loutulim village is passing approximately through the centre of the river width. Thus the river Zuari is being the village boundary. The bridge is proposed across river Zuari and be a connecting link from Ponda to Verna, Vasco and Madgaon. As submitted by the applicants, the following survey nos. will be effected by the proposal. Details of survey nos. as effected by CZMP 2011 is tabulated as follows:

Table 1.0

Sr. No.	Village	Survey No.	CRZ Classification
1	Loutolim	395/0	Mangroves, Mangroves buffer, Khazan, River NDZ
2		396/1	Water Body, Mangrove Buffer, Mangroves, Khazan
3		431/1 to 431/10	Khazan
4		432/4 to 432/16	Partly Mangroves buffer, Khazan
5		432/1 to 432/3	Khazan
6		430/1 to 430/9	Khazan
7		425/0	Khazan

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8		404/4 to 404/27	Khazan
9		404/3	Khazan, River NDZ, Mangroves Buffer
10		232/25	Water Body, Mangrove, River NDZ
11		232/23, 24	River NDZ, Mangroves Buffer
12		417/0	Khazan
13		441/1, 2	Khazan
14		440/2	Khazan
15		438/1 to 438/8	Water Body, Khazan
16		433/1 to 433/12	Khazan
17		432/6 to 432/16	Khazan
18	Borim	289/2	Mangroves, Mangroves buffer, Khazan, River NDZ
19		290/45 to 290/65	Mangroves, Mangroves buffer, Khazan, River NDZ
20		291/4 to 291/6	Boat Parking / Met mending Area, Fisherman community complex
21		226/1 to 226/14	Khazan
22		225/22 to 225/24	Khazan
23		242/1 to 242/26	Khazan
24		244/1 to 244/15, 244/23	Khazan

Details of Proposal:

The proposal is a concrete bridge along with its approaches. The total span of bridge including the approaches is approx. 8kms. The ROW (Right of Way) of proposed road is varying from 10m to 12m from Dhavli Junction to Margao Junction and from Margao Junction to Loutulim Junction the ROW is 20m.

In the revenue village of Loutulim, as per the drawings submitted there are total 17nos of piers proposed. Whereas, for the revenue village Borim, in total 13nos of piers are proposed. Each piers on the landward sides are equally spaced at a distance of 55m whereas the piers that lie in the water body are spaced at distance of 75m from the last pier on the landward side. Also, the applicant has left a navigation span of 15m with vertical clearance being 14m above the HTL. Further, along the landward side the vertical clearance is 5m above the HTL. Also, at the locations where the proposed bridge is crossing the existing road spans at the lower levels, the applicant has proposed the span of bridge to be constructed using MS steel sections with a minimum vertical clearance of 5m.

Further, the approach in the revenue village of Loutulim is approx. 3.75km with a slope gradient of 3.30%. The maximum raise at the approach end along the river bank is approx. 10.7m and that on the landward side is approx. 4.1m. The approach in the revenue village of Borim is approx. 2.47km with a slope gradient of 0.03%. The maximum raise at the approach end along the river bank is approx. 10.3m and that on the landward side is approx. 0.2m. The approach is proposed to be made using the Re-wall solid ramp.

Details of Environmental Impact Assessment / Environmental Management Plan:

The project proponent has produced an EIA report based on the standard TOR given by the Public Works Department, Work Division XV (NH), P.W.D., Panaji, Goa. The EIA study is carried out considering likely potential impacts on physical, biological, socioeconomic and cultural resources within approx. 100m each side of the project. The EIA study was also conducted on ecological sensitive area upto 10km from the project road as there is potential chances of impact on area beyond 100m.

At the local level, the proposed project is going to effect market of the villages such as Dhavali, Borim, Loutulim and few others. In these villages along the existing road there exists few local vendors selling vegetables and other vital items. Also, as per the study it was observed that the noise pollution is some times higher in peak hours of urban stretches for the road due to the traffic movement. Also, there will be air pollution caused due to construction of road.

Project Demands in terms of land, water and soil:

- The total estimated land required for the project is 40.3 ha and most of the private land under acquisition is agricultural.
- The average water demand is 200 cum/day and the peak demand is 265 cum/day. The water requirement is proposed to be met through canal and other surface water sources.
- The total soil requirement for the project is 750000 cum out of which 498000 cum is proposed to be taken from cutting locations and 252000 cum will be taken from borrow areas.

The applicant is also in need of the following units#:

1. Hot mix plants, Crushers and Batch mix plants
2. Storage, Handling and transport of Hazardous materials
3. Workers camp, Equipment and storage yards
4. Discharges from Labour Camp

The applicant has not produced any plans indicating the locations of above mentioned units.

The air quality was measured during the month of March 2017 at two locations and the result shows that all the parameters are well below the National Ambient Air Quality Standards, 2009. Also, the same process was repeated for the Noise levels and the noise levels are within the National Ambient Air quality standard w.r.t. Noise, 2000. The project corridor has significant amount of tree plantation. Approximately 4875 nos of trees needs to be cut with the current alignment^{###} of project which is the least possible.

Anticipated Environmental Impacts & Mitigation Measures:

- Erosion:

The soil along the proposed roads is sandy clam loam in texture. The erosion factor of the present soil is less. The two important eroding agents are the run-off water and the wind. The run-off dynamics are affected by the degree of slope,




extent if deforestation and the amount of water stored for irrigation. Grasses and other herbaceous plant limit the surface erosion effectively.

The potential impact includes,

- The ROW of the proposed road is covered by wide range of plantation at few places. Even in the area of high embankment the slopes are stable due to vegetation and other physio- chemical features. The degree of soil erosion is noted to be less.
- Once trees are removed and the herbal cover is cleared on the proposed road, the problem of soil erosion during construction is going to be there.
- Excavations of soil borrow areas may lead to higher degree of erosion.

The following mitigation measures needs to be taken:

- Cutting of required trees in phases and replanting the same nos wherever possible.
- Taking advantage of the period of monsoon.
- Developing not too high and steep slopes.
- Improving drainage.
- Turfing of the new embankment.
- Contamination of Soil:

The contamination of soil is negligible as there is no use of hazardous material which can contaminate the soil. However, at the material storage site, interceptor / HDPE sheets shall be provided to avoid any such scope of contamination.

- Impacts on Flora, Fauna and Ecosystem

- the mangroves located at the bank of the river Zuari needs to be cut which are of varying width of 25m to 125m approx.
- there will be loss of herbal cover which will be long lasting and it will lead to soil erosion. However, the soil type at major part of location of project is stable, erosion will be drastically low. The herbal cover can be re-planted as a turf.

##An alternative of 7 alignments were submitted to the MORTH and PWD (NH) Goa. Out of the 7 options, the current alignment is most feasible and economical.

Conclusion:

- a. The area effected by the project is Loutulim Village of Salcete Taluka and Borim Village of Ponda Taluka. The details of each village survey nos. wise is tabulated in **Table 1.0** as per CRZ classification as stated in CZMP 2011.
- b. As per CRZ notification 2011, the construction of bridge is not prohibited activity under clause 3.0, sub clause iv (a) and (b). Under clause 8.0, sub clause I, (ii), (b) construction of bridge is a permissible activity in CRZ I-A. Under clause 8.0, sub clause III, (iii), (j) construction of bridge is a permissible activity in CRZ III (NDZ).

Recommendation:

- The proposed construction should be carried out strictly as per the provisions of CRZ notification, 2011 (as amended from time to time) and guidelines / clarifications given by MoEF from time to time.

- Construction debris shall not be disposed in the CRZ area.
- Proposed bridge should not obstruct tidal free flow water.
- Environment Management Plan (EMP) shall be implemented effectively.
- All other mandatory permissions from different Departments / Authorities should be obtained prior to the commencement of work.
- The PWD is required to carry out Mangrove plantation in consultation with the Bio- Diversity Board and the Forest Department.
- Existing storm water drains if any flowing through the project land shall not be stopped. They shall be integrated in the project drainage network design in such a way that flooding in the surrounding does not occur due to upcoming of the project.
- The temporary Cofferdams erected by the Project proponent should not hamper the flow of water in any way and the same should be removed immediately after 30 days upon completion of the proposed work.
- The Gangway constructed for free movement of the manpower engaged in the construction work and any platforms constructed in the river for construction work has to be removed within 3 months of the completion of the work.
- A colony for the workers with adequate houses and allied common infrastructure such as medical dispensary, creche, primary school, training centre for the workers etc. shall be provided during the construction phase.
- All required sanitary and hygienic measures including sewage treatment plant and mobile toilets shall be provided during the construction phase.
- The construction site shall be provided with adequately barricades of at least 3m height on its periphery with adequate signage.
- Adequate dispensary with all first aid facilities and ambulance service shall be provided at the site during construction phase.
- Adequate drinking water, sanitation and other amenities shall be provided at the site for construction workers. The safe disposal of waste water and solid wastes generated during the construction phase should be ensured.
- Provision should be made for the supply of fuel (Kerosene or cooking Gas), utensils such as pressure cookers etc. to the laborers during construction phase.
- Adequate personal protective equipment shall be provided to the construction workers to ensure their safety and the project proponent shall insure its usage by the laborers.
- Monitoring of Ambient Air Quality, Noise Level monitoring, ground and surface water monitoring throughout the construction phase of the project shall



be carried out and the results shall be prominently displayed at the site. The location of the Ambient Air Quality monitoring stations and its frequency shall be decided in consultation with Goa State Pollution Control Board.

- Environment Management Cell shall be formed, which will supervise and monitor the environment related aspects of the project during construction and operational phases and maintains all the records.
- Disposal of debris including the excavated material during construction phase shall not create adverse effect on neighbouring communities and shall be disposed off within the project site with the approval of the competent authority after taking the necessary precautions for general safety and health aspects.
- Use of diesel generator sets during construction phase should be enclosed type and confirm to EPA rules for air and noise emission standards.
- Vehicles hired for bringing construction material at site should be in good conditions and confirm to applicable air and noise emission standards.
- Ambient noise levels should confirm to residential standards both during day and night. Incremental pollution load on the ambient air and noise quality should be closely monitored during construction phase.
- Structural design aspects in accordance to the seismic zone shall be strictly adhered to National and International standards / codes shall be practiced for the structural safety of the bridges.
- The construction materials and debris shall be properly stored and handled to avoid negative impacts such as air pollution and public nuisances by blocking the roads and the public passages. Appropriate barricading shall be done and signboards shall be put at such sites.
- A detailed Disaster Management Plan for preparedness to meet with all types of disasters and unforeseen conditions shall be prepared before commencing the construction activities.
- Traffic congestion on the roads approaching to the proposed project site and nearby highways (main roads) must be avoided by taking appropriate measures including the road signage, online / automatic displays, etc.
- Post monitoring on the Morphological checks has to be carried out by the PWD for a period of one year.
- In the event of any change in the project profile, a fresh reference shall be made to the GCZMA.
- The Mangroves, if any, on the site should not be disturbed in any way.
- The GCZMA or any other competent Authority may stipulate any additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.



- The environmental safeguard measures should be implemented in letter and spirit.
- Quarterly monitoring reports should be submitted to the GCZMA in soft and print format.

Decision: The Authority after seeing the presentation called upon the Project Proponent for clarification on 09/07/2024 at 4.30p.m.

Jules

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