# REPLY ON PRE- APPLICATION QUERIES OF M/S ADANI

| Sl. No. | Queries | Information |
|---|---|---|
| 1 | Kindly share latest bathymetry charts | The requisite data already been shared with officials of M/s Adani (Mr. Kuldeep Ahulwalia) on 14.09.2022. |
| 2 | Kindly share tidal range for the stretches, also share the Locations of installed ATGs and collected data | 1. **Tidal range for NW-5** Krushnadaspur to Dhamara -Paradip i.e. 85 KM from Dhamara Port towards Pankapal (varies from to 2 m to 0.9m)<br>2. **Tidal Range for NW-64** From Paradip upto 43KM towards Upstream (varies from 2.5m to 0.5m)<br><br>ATG is not available in this office. Tidal gauge readings are taken during MLTS survey and available in the monthly survey report which have already been shared. |
| 3 | WAPCOS and FEEDBACK reports have volume projections for Pankapal and not for Padanipal. Please provide cargo projections for Padanipal | At Padanipal no cargo is available. It is an Intermediate Terminal has been proposed between Pankapal and Paradip / Dhamra up to where tidal water available in NW-5. |
| 4 | There is no railway connectivity at Padanipal. Nearest railway station is Kendrapara station 54 kms away. Please confirm if this station needs to be considered or only transport from Padanipal to Kalinganagar through road. | The railway station at Kendrapara is to be considered as nearest railway station at 44.00KM from Padanipal. From Pankapal to Padanipal the route is 114.00 KM long by road via Kendrapara. The bidder may advise the economic model. |
| 5 | Contract shall mention capital or maintenance dredging | Maintenance dredging. |
| 6 | Soil data is not available. Kindly share soil data. | Soil Data near to proposed structures / bridges received from SM Consultants and Tractebel Engineering Pvt. Limited can be shared. |

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| 7 | What are the exact coordinates for proposed terminal locations at Padanipal, Marshaghai, Dhamra and Paradip | 1. The Proposed terminal at Pankapal & Talcher as identified on the village map may be shared.<br>2. For terminals at Padanipal, marsaghai, Dhamara and Paradip no land has been identified. However, the agency is advised to opt as per the requirement. |
| 8 | The stretch of NW-64 Paradip to Marshaghai, no volume projections are indicated. Only 0.62 MMTPA from Paradip to Cuttack is indicated in FEEDBACK report. These volumes are very low. Please confirm Marshaghai Terminal requirement w.r.t cargo projections | The terminal at Marsaghai can reduce the congestion of traffic at Paradip Port. The ODC movement for Industries at Kalinganagar can be considered from Marsaghai terminal for movement from sea to river to road movement. |
| 9 | Has IWAI checked the maximum capacity utilization of railway from Dhamra / Paradip to Kalinganagar(including enhancement on account of python trains and automated signaling) | No. |
| 10 | What would be the MGT for the volume projection of 11.75 MMTPA (FEEDBACK report 2016 for NW-5) | Traffic study by the Consultant being engaged is under progress |
| 11 | Instead of DBFOT, is EPC option available as the CAPEX is very high with limited to recovery options. | The project to be taken through PPP model for select stretches of Phase-I. |
| 12 | Proposed or identified locations on the stretches which required land filling for the purpose of land protection, where dredged material shall be disposed. | Govt.Land will be identified at the time of dredging. |

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| 13 | **Please share following information for Talcher to Paradeep & Dhamra stretch** | |
| 13.1 | List and details of all road and rail bridges from Talcher to Dhamra/ Paradip | List enclosed as **Annexure-1.** |
| 13.2 | For all the bridges, Kindly share the water draft & air draft level available at the time of:<br>a) Low flow<br>b) High flow<br>c) Flood | Statement enclosed as **Annexure-2** |
| 13.3 | 1. What is peak discharge criteria during monsoon or heavy flooding for barrages<br>2. Height and width of navigational locks and barrages | 1. Free flow no shutter or any control structure at Tantighai and Jokadia.<br>2. There is no navigational lock in the weir at Sujanpur and weir cum barrage with Foot Bridge at Jokadia. |
| 13.4 | What is the biggest navigable span in the NW-5 | The width of the navigable river varies between 500 m to 650m in the following reaches of NW-5 :<br><br>1. From Dhamara to Padanipal(Kalamada)via Mangalgadi (Chainage 00 to 70 00KM)<br>2. From Hansua Mouth(Paunsiapal) to Ramchandi Galia(Chainage 17.00KM to 32.00KMconsidering 0.00 at Mangalgadi)<br>3. From Jokadia to Pankapal (Chainage from 144.00KM to 155.00KM)<br>4. However, the navigable span at Gadgadighat & Rajnagar bridge is 100 m. |

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| 13.5 | Any underground pipeline like gas line, liquid line & underground electrical crossing. If yes, please share map and details of the crossings | 1. Underground JSW slurry pipe line at Pankapal across NW-5 (Chainage 154.900KM) and at Marshaghai across NW-64on the upstream of NH-53 bridge.(Google Maps and C/S enclosed)<br>2. Gas pipe line of GAIL India across NW-5 at Baringi village(Ch.89.00 from Dhamara) in Jajpur district across river Kani and across river Mahanadi near village Akhadasali in Kendrapara district.(Google Maps and C/S enclosed) |
| 13.6 | How many weirs are there in NW-5 | a. Existing weir cum Barrage at village Jokadia with foot bridge (chainage 143.54 KM from Dhamra)<br>b. Existing weir (Defunct) on Tantighai near village Sujanpur at change 114.87 KM from Dhamara<br><br>After mathematical model study IIT, Gwahati has proposed to construct three Numbers of Barrages with lock gate across river Karashrota& river Tantighai at Jokadia, Kacherigan and Sujanpur(**W1,W2,W3**) respectively, One rubber dam with barrage and lock gate (**W5**) at Padanipal, one weir cum barrage at Kamalpur across river Kharashrota (**W4**), one weir at Jenapur across river Brahmani (**W Jn**) and two Checkdams at Erada and Udaynathpur(**C1&C2**). |
| 13.7 | What is the height and depth of water upstream of weir | Depth of water upstream of weirs<br><br>a. Tantighai-3.70M(On 17.09.2022)<br>b. Jokadia- 6.10M(On 15.09.2022) |
| 13.8 | How many barrages are there in NW-5 | Existing weir cum Barrage at village Jokadia with foot bridge (chainage 143.54 KM from Dhamra) |

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| 13.9 | How many causeways are there in NW-5 | No causeway across waterways (NW-5 and NW-64) |
| 13.10 | Commitment of water by State government as we are planning to build barrages and weirs to maintain navigable depth. | An MoU will be signed with Govt. of Odisha. Favorable Commitment as all steps is taken with compliance observations of Water resources Department, Government of Odisha |
| 13.11 | Kindly share details of transmission lines and overhead lines along with height and span data during<br>a) Low flow<br>b) High flow<br>c) Flood | Below NH-16 (up to Ch. 130 from Dhmra) all low-level transmission lines have been modified and lifted by the State Government on deposit basis as per the criteria notified by MoPS&W. |
| 13.12 | Kindly share the existing railway capacity | Not available with IWAI |
| 13.13 | Kindly share the capacity utilization along with the relevant speed parameter considered for its derivation for railways. Capacity utilization for low speed as well as highest speed of train is required | Not available with IWAI |
| 13.14 | What is the incremental capacity available for the railways | Not available with IWAI |
| 13.15 | Does the railway have land adjacent for expansion (ROW) for line doubling? If yes, kindly share the expandable capacity. This is required to estimate maximum future capacity through railway | No information available with IWAI. |
| 13.16 | At every barrage location, can we have a holding pond to have water neutrality | Yes |

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| 13.17 | 1. Has any social impact study been carried out<br>2. What are the existing obligations for local community in terms of drinking, industrial and irrigation water | Social Impact Study has not taken up |
| 14 | 1. To map out the exact route which Cargo will take out of Talcher region to Dhamra / Paradeep i.e. connecting the Cargo to Terminals for barge loading at Talcher and then barge transportation uptoDhamra and Paradeep.<br>2. The cargo potential divertable in route described in point 1 above.<br>3. Traffic Study for point no. 1 and 2 above to assess the current and future potential of the project | 1. The Navigation route of NW-5 is as follow :<br>a. Talcher to Jenapur through river Brahmani<br>b. Jenapur to Sujanpur through river Kharshrota<br>c. Sujanpur to Padanipal through river Tantighai& river Kani<br>d. Padanipal to Mangalgadi through river Kharshrota<br>e. Mangalgadi to Dhamara through river Brahmani<br>f. Mangalgadi to Hansua mouth through river Hansua<br>g. Hansua mouth to RamachandiGalia through Hukitola Bay<br>h. RamachandiGalia to Musadia through Kharinasi Creek<br>i. Musadia to Mahanadi mouth through Mahanadi<br>j. Mahanadi Mouth to Paradip port through Bay of Bengal |
| | | 2. The cargo potential may be diverted in route described in point 1 above till completion of fairway development in NW-5 between Talcher and Padanipal |
| | | 3. Traffic study is proposed to be considered by the Consultant deployed by IWA. |
| 15 | What is maximum CAPEX funding possible if project economics requires, Is 100% Govt. budgetary support on this project available? | VGF funding up to 40 % can be considered for development on PPP model. |
| 16 | If project economics requires, is 99 year lease possible? | Bidder may provide the detailed breakup for obtaining the approval from the MoPS&W. |

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**Annex-1**

# List of Bridges exist/to be built across river

| Sl. No. | Name of Structure | Location | Authority | Present condition |
|---|---|---|---|---|
| | **NW-5 (Phase-I)** | | | |
| 1 | Railway bridge-I | Jenapur | Indian Railways | Existing |
| 2 | Railway bridge-III | Jenapur | Indian Railways | Existing |
| 3 | Railway bridge-III | Jenapur | Indian Railways | Existing |
| 4 | Jokadia Anicut | Jokadia | WR | Existing |
| 5 | HL Bridge at Jokadia | Jokadia | Works | Existing |
| 6 | Major Bridge at Sahapur-I | Sahapur | NHAI | Existing |
| 7 | Major Bridge at Sahapur-II | Sahapur | NHAI | Existing |
| 8 | Major Bridge(2 Lane) at Km 82.885 (Sahapur) Sahapur-III | Sahapur | NHAI | NOC issued To be constructed |
| 9 | HL Bridge at Jahal ghat | Jahal | Works | Existing |
| 10 | HL Bridge at Badabanta | Badabanta | NH(Odisha) | Existing |
| 11 | HL Bridge at Sujanpur | Sujanpur | WR | Existing |
| 12 | H.L.Bridge over river Tantighai at 3rd km on MDR-14 to Kantia via Bhanra-Bhurunga road in the district of Jajpur | Bhurunga | RW | NOC issued To be constructed |
| 13 | HL bridge over river Chingudia nalah near Ratlang | Ratlang | RW | NOC issued Under construction |
| 14 | H.L.Bridge over river Pandua on Kalamatia-Binjharpur road | Kalamatia-Binjharpur road | Works | NOC issued Under construction |
| 15 | HL bridge over river Kanthia Nalah near Krushnadaspur | Krushnadaspur | RW | NOC issued Under construction |
| 16 | HL Bridge at Manpur | Manpur | RW | Existing |
| 17 | HL Bridge at Gadgadighat | Gadgadighat | Works | Existing |
| 18 | H.L.Bridge over river Kharashrota on Nuabazar-Baliturаghat road(NW-5) | Nuabazar-Baliturаghat road | RW | To be constructed |
| 19 | H.L.Bridge over river Kani at Kalamada on RD road to Padanipal road(NW-5) | RD road to Padanipal road | RW | To be constructed |
| 20 | HL Bridge at Rajnagar over River Hansua | Rajnagar | Works | Existing |
| 21 | Jaynagar bridge over Brahmani | Jaynagar | NH(Odisha) | NOC Applied To be constructed |
| 22 | HL bridge over river Matai at 8 km on Kerasahi-Baliapal ghat Road to Balimed road | Kerasahi-Baliapal ghat Road to Balimed road | Works | NoC Issued To be constructed |
| 23 | HL bridge over river Matai on PWD Road to Balimed road | PWD Road to Balimed road | Works | NoC Issued To be constructed |
| 24 | HL bridge over river mantei at 10th km on Dogachhia-Bansada road | Dogachhia-Bansada road | Works | Under construction |
| | **NW-5 (Phase-II)** | | | |

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| 25 | Railway bridge at Samal | Samal | Indian Railways | Under construction |
| 26 | Major Bridge at Talcher on Brahmani | Talcher, | NHAI | Existing |
| 27 | Major Bridge at Talcher on Brahmani | Talcher, | NHAI | NOC issued Under construction |
| 28 | Rail bridge at Kamalanga | Kamalanga | Indian Railways | Existing |
| 29 | H.L.Bridge at Khadagprasad on Brahmani | Khadag Prasad | R&B | NOC issued Under construction |
| 30 | H.L.Bridge at Bridge at Gengutia | Gengutia/ Kamagara | R&B | Existing |
| 31 | H.L.Bridge over river Brahmani on Goradia-Kaluria ghat road in the District of Dhenkanal | Kaluria | R&B | NOC issued Under construction |
| 32 | H.L.Bridge at Bridge at Mandara | Mandara | RW | Existing |
| 33 | H.L.Bridge at Bridge at Bahabalpur | Bahabalpur | RW | Existing |
| 34 | Major Bridge at Ch 10+407 on the Brahmani Bridge(Pankapal) | Pankapal | NHAI | NoC Issued To be constructed |
| 35 | Existing NHAI bridge at Pankpal | Pankapal | NHAI | Existing |
| | **NW-5 (Phase-III)Odsha Coast canal** | | | |
| 36 | H.L.Bridge over coast canal at 2nd KM on Kulhachhad to Badatalapada road in the Dist. of Balasore | Kulhachhad to Badatalapada road | RW | NOC issued Under construction |
| 37 | H.L.Bridge over coast canal at 4th KM on Jaleswarpur to Batagram road in the Dist. of Balasore | Jaleswarpur to Batagram road | RW | NOC issued Under construction |
| | NB-There are number of bridges across Odsha Coast canal which are not traced out and no more information avalable in this office | | | |

Annex-2

| Vertical clearance of existing bridges from Dhamra to Pankpal as per NHFL calculation by SM Consultant | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gagadighat | | | Manpur | | | Sujanpur | | | Badabanta | | | Jahalghat | | | Sahapur-1 | | |
| HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc |
| 4.027 | 3.762 | 4.958 | 6.41 | 6.145 | 1.43 | 13.469 | 13.204 | 2.171 | 14.576 | 14.311 | 2.309 | 16.794 | 16.529 | 1.371 | 17.256 | 16.991 | 4.618 |
| Vertical clearance of existing bridges from Mangalgadi to Paradip as per NHFL calculation by SM Consultant | | | | | | | | | | | | | | | | | |
| Rajnagar | | | Sahapur-2 | | | Jokadia | | | | | | | | | | | |
| HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | HFL | NHFL | Vertical Clearanc | | | | | | | | | |
| 2.191 | 2.191 | 4.764 | 17.256 | 16.991 | 4.618 | 20.54 | 20.275 | 1.315 | | | | | | | | | |

**Vertical clearance(Air draft) of existing bridges from Dhamra to Pankpal as per MLTS report conducted by GMI**

| Month | Gagadighat | Manpur | Sujanpur | Badabanta | Jahalghat | NHAI Sahapur-1 | Sahapur-2 | Jokadia | Railway bridge -1 | Railway bridge -2 | Railway bridge -3 | Pankpal | Rajnagar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| June, 2020 | 7.50 | 8.20 | 7.60 | 5.80 | 4.80 | 6.90 | 8.00 | 4.90 | 5.90 | 10.30 | 7.10 | 8.80 | 6.00 |
| July, 2020 | 7.50 | 8.20 | 7.60 | 5.80 | 4.80 | 6.90 | 8.00 | 4.90 | 5.90 | 10.30 | 7.10 | 8.80 | 6.00 |
| Aug., 2022 | 4.00 | 4.80 | 4.80 | 3.10 | 1.30 | 4.90 | 5.90 | 2.00 | 4.20 | 8.00 | 6.30 | 9.30 | 6.00 |
| Sept., 2020 | 5.40 | 5.20 | 6.60 | 5.70 | 3.30 | 6.40 | 6.70 | 5.30 | 5.50 | 9.10 | 7.10 | 10.10 | 3.30 |
| Oct, 2020 | 4.70 | 3.90 | 8.00 | 7.00 | 5.00 | 8.80 | 6.70 | 5.40 | 7.10 | 11.50 | 7.80 | 9.30 | 4.70 |
| Nov., 2020 | 5.90 | 4.70 | 8.10 | 3.90 | 4.10 | 7.90 | 8.70 | 6.10 | 8.80 | 11.80 | 8.40 | 10.90 | 6.90 |

**Water draft of existing bridges from Dhamra to Pankpal as per MLTS report conducted by GMI**

| Months | Gagadighat | Manpur | Sujanpur | Badabanta | Jahalghat | Sahapur-1 | Sahapur-2 | Jokadia | Railway bridge -1 | Railway bridge -2 | Railway bridge -3 | Pankpal | Rajnagar |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| June, 2020 | 7.80 | 4.00 | 3.40 | 3.60 | 3.40 | 3.70 | 3.10 | 3.50 | 1.50 | 1.80 | 1.00 | 2.80 | 2.80 |
| July, 2020 | 5.62 | 6.28 | 4.40 | 3.70 | 4.00 | 2.10 | 3.90 | 2.20 | 1.60 | 2.00 | 2.50 | 2.60 | 10.71 |
| Aug., 2022 | 7.80 | 5.80 | 6.30 | 5.40 | 7.00 | 6.20 | 5.30 | 6.30 | 5.30 | 4.60 | 2.80 | 2.30 | 11.00 |
| Sept., 2020 | 6.40 | 5.40 | 4.50 | 2.80 | 5.00 | 4.70 | 4.50 | 3.00 | 4.00 | 3.50 | 2.00 | 1.50 | 11.60 |
| Oct., 2020 | 7.00 | 6.70 | 3.10 | 1.50 | 5.00 | 4.50 | 2.90 | 2.40 | 2.40 | 1.10 | 1.30 | 2.70 | 10.00 |
| Nov., 2020 | 5.90 | 5.90 | 3.00 | 4.60 | 4.20 | 3.20 | 2.50 | 2.20 | 0.70 | 0.80 | 0.70 | 0.70 | 8.00 |

| Horizontal clearance of existing bridges from Dhamra to Pankpal as per MLTS report conducted by GMI(Phase-I) | | |
|---|---|---|
| **Sl. no.** | **Locations** | **Horizontal Clearance (In m)** |
| 1 | Gagadighat | 100.00 |
| 2 | Manpur | 24.00 |
| 3 | Sujanpur | 30.00 |
| 4 | Badabanta | 20.00 |
| 5 | Jahalghat | 24.00 |
| 6 | Sahapur-1 | 30.00 |
| 7 | Sahapur-2 | 34.00 |
| 8 | Jokadia | 36.00 |
| 9 | Jokadia/Anicut/weir/Barrage | 8.00 |
| 10 | Railway bridge-1 | 41.00 |
| 11 | Railway bridge-2 | 45.00 |
| 12 | Railway bridge-3 | 43.50 |
| 13 | Pankapal bridge | 30.00 |
| **Horizontal clearance of existing bridges from Mangalgadi to Paradip as per MLTS report conducted by GMI** | | |
| 14 | Rajnagar | 92.00 |


Sidhabali
Baja Pada
Brahmani River
lamatia
PIPE LINE
CROSSING
Brahmani River
Maa Mangala Temple
Brahmani River
Tala Kai Pada
ashion garments