# CHARTERING OF TSHD FOR CARRYING OUT "DREDGING IN THE NAVIGATIONAL CHANNEL, KANDLA CREEK, OIL JETTIES & CARGO BERTHS AT DEENDAYAL PORT"

# Tender No. DCI/DPA/2024

DCI/DPA/2024

# PRE-BID CLARIFICATIONS

Based on the deliberations between DCI and participants of Pre-bid meeting held on 03.01.2025 @ 1500 hrs. through Webex, the following are replies to the Pre-Bid Queries for the referred Tender:

Sl. No.	Ref	Original Clause	Query	Clarification
1	Cl. No. 12.1	Pursuant to ITB Clause 7, the Bidder shall	We request you to provide us the Insurance	
	ITB	furnish, the Earnest Money Deposits by way of	Surety Bond Format for the submission of	
	Pg. No.20	e-challan (NEFT/RTGS) as indicated in the	Earnest Money Deposit as required.	
		tender to be submitted to the bank as detailed		
		from any Scheduled or Nationalized Indian		
		Bank or by way of unconditional, irrevocable		
		Bank Guarantee/ Insurance Surety Bond		
		drawn from any Scheduled or Nationalized		
		Indian Bank as per enclosed sample.		
2	Cl. No. 28.1	At the same time as the EMPLOYER notifies	Kindly amend the clause accordingly:	The "10 days" time given for
	ITB	the successful Bidder that its bid has been	" Bidder has to execute Contract Agreement with	executing the Agreement after
	Pg. No.24	accepted, Bidder has to execute Contract	EMPLOYER at his cost within 21 days after receipt of	receipt of work order may be read
		Agreement with EMPLOYER at his cost	work order."	as "10 working days"
		within 10 days after receipt of work order.	We kindly request to make it 21 days from the	
			date of issuance of the Letter of Award. Kindly	
			extend the duration execution of Contract	
			Agreement.	
3	Cl. No. 28.1	At the same time as the EMPLOYER notifies	We kindly request that the time line be extended	The "10 days" time given for
	ITB	the successful Bidder that its bid has been	to 21 days from the date of issuance of the Letter	executing the Agreement after
	Pg. No.24	accepted, Bidder has to execute Contract		

Date: 03.01.2025

Sl. No.	Ref	Original Clause	Query	Clarification
		Agreement with EMPLOYER at his cost	of Award for the execution of the Contract	receipt of work order may be read
		within 10 days after receipt of work order.	Agreement.	as "10 working days"
4	Cl. No.6.1	Within fifteen (15) days after receipt of	Kindly amend the clause accordingly:	The Performance Security shall be
	GCC Part-III	notification of award of the Contract, the	"Within twenty-one (21) days after receipt of notification	submitted within 10 working days
	Pg. No.30	Bidder shall furnish Performance Security to	of award of the Contract, the Bidder shall furnish	from the date of issue of work
		EMPLOYER for the amount specified in the	Performance Security to EMPLOYER for the amount	order.
		Special Conditions of Contract.	specified in the Special Conditions of Contract"	
			The allotted timeframe of 10 days is insufficient	
			and poses significant risks due to complete	
			dependency on banks or insurance companies.	
			Therefore, we kindly request make it 21 days	
			from the date of issuance of the Letter of Award.	
			Kindly extend the duration of submission of	
			Performance Security.	
5	Cl. No.6.1	Within fifteen (15) days after receipt of	Kindly amend the clause as follows:	The Performance Security shall be
	GCC Part-III	notification of award of the Contract, the	"Within twenty-one (21) days after receipt of the Letter	submitted within 10 working days
	Pg. No.30	Bidder shall furnish Performance Security to	of Award, the Bidder shall furnish Performance Security	from the date of issue of work
		EMPLOYER for the amount specified in the	to the EMPLOYER as specified in the Special	order.
		Special Conditions of Contract.	Conditions of Contract."	
			The current 10-day timeframe is insufficient due	
			to reliance on banks or insurance companies,	
			and we request an extension to 21 days.	
6	Cl. No.6.1	Within fifteen (15) days after receipt of	,	The Performance Security shall be
	GCC Part-III	notification of award of the Contract, the	The given time of 15 days is very short and we	submitted within 10 working days
	Pg. No.30	Bidder shall furnish Performance Security to	have to arrange for a performance security via	from the date of issue of work
		EMPLOYER for the amount specified in the	our bank after receiving the NOA. Kindly	order.
		Special Conditions of Contract.	extend the duration of submission of	
			Performance Security to 21 days to allow for	

Sl. No.	Ref	Original Clause	Query	Clarification
			sufficient time as there are several seasonal	
			holidays coming in between the allowable time.	
7	Cl. No.6.3	A sum equal to 10% of accepted contract value	We request a revision to the clause as follows:	Tender condition prevails.
	GCC Part-III	as illustrated in BOQ shall be deposited by the	"A sum equal to 5% (Five percent) of accepted contract	
	Pg. No.30	contractor by e-payment or by way of	value as illustrated in BOQ shall be deposited by the	
		irrevocable, unconditional Bank Guarantee/	contractor by e-payment or by way of irrevocable,	
		Insurance Surety Bond from Scheduled/	unconditional Bank Guarantee/ Insurance Surety Bond	
		Nationalized Indian Bank as Performance	from Scheduled/ Nationalized Indian Bank as	
		Security Deposit in favour of Dredging	Performance Security Deposit."	
		Corporation of India Limited payable at	This is in line with practices adopted by DCI in	
		Visakhapatnam and BG shall be as per	several tenders, recently many tenders floated	
		Proforma enclosed. Bank Guarantee/	has mentioned only 5% Performance Security, as	
		Insurance Surety Bond shall be valid till the	demonstrated by the enclosed tender	
		completion of the contract including extended	documents.	
		period if any, plus three months thereafter.	Additionally, as per Clause 4.12 of the CVC	
			Guidelines on Performance Guarantee:	
			"Performance security should be for an amount	
			of five (5) to ten (10) percent of the contract	
			value."	
			Adopting the lower limit of 5% will encourage	
			cost-effective bidding and ensure efficient	
			execution of shipbuilding and supply projects as	
			per tender requirements.	
			We kindly request you to consider this change.	
8	Cl. No.6.3	A sum equal to 10% of accepted contract value	We request revising the clause as follows:	Tender condition prevails.
	GCC Part-III	as illustrated in BOQ shall be deposited by the	The Performance Security for the project be set	- -
	Pg. No.30	contractor by e-payment or by way of	at 5% of the accepted contract value.	
	<del>-</del>	irrevocable, unconditional Bank Guarantee/	This is consistent with recent DCI practices,	
		Insurance Surety Bond from Scheduled/	where tenders have specified 5% Performance Security.	

Sl. No.	Ref	Original Clause	Query	Clarification
		Nationalized Indian Bank as Performance Security Deposit in favour of Dredging Corporation of India Limited payable at Visakhapatnam and BG shall be as per Proforma enclosed. Bank Guarantee/ Insurance Surety Bond shall be valid till the completion of the contract including extended period if any, plus three months thereafter.	Opting for the lower limit of 5% encourages cost-effective bidding and ensures efficient project execution.  We kindly request your consideration of this amendment.  Further, we request you to provide us the Insurance Surety Bond Format for the submission of Performance Security.	
9	Cl. No.6.3 GCC Part-III Pg. No.30	A sum equal to 10% of accepted contract value as illustrated in BOQ shall be deposited by the contractor by e-payment or by way of irrevocable, unconditional Bank Guarantee/ Insurance Surety Bond from Scheduled/ Nationalized Indian Bank as Performance Security Deposit in favour of Dredging Corporation of India Limited payable at Visakhapatnam and BG shall be as per Proforma enclosed. Bank Guarantee/ Insurance Surety Bond shall be valid till the completion of the contract including extended period if any, plus three months thereafter.	We request to kindly amend as follows:  "A sum equal to 5% (Five percent) of accepted contract value as illustrated in BOQ shall be deposited by the contractor by e-payment or by way of irrevocable, unconditional Bank Guarantee/ Insurance Surety Bond from Scheduled/ Nationalized Indian Bank as Performance Security Deposit."  Many tenders floated by DCI are having the PBG amounting to 5% of the accepted Contract value. Also, this will enable to have a better cash flow for the contract duration.  Additionally, as per Clause 4.12 of the CVC Guidelines on Performance Guarantee:  "Performance security should be for an amount of five (5) to ten (10) percent of the contract value."  We request you to kindly amend the clause as mentioned above for giving a competitive offer.	Tender condition prevails.
10	Cl. No.7.2 GCC Part-III Pg. No.30	The contractor shall without limiting his or the EMPLOYER's obligation and responsibilities, endorsement of Co-insurance and waiver of subrogation in favour of EMPLOYER and DPA to be issued.	It is expected that any third parties, including employer has to arrange their own insurance coverage during the site visit. Contractor won't be liable for the same.	Tender condition prevails.

Sl. No.	Ref	Original Clause	Query	Clarification
11	Cl. No. 8	Payment:	Kindly add a sub-clause under Clause-8:	Employer will explore the
	GCC Part-III		Payment on Account:	possibility to open Escrow
	Pg. No.31		"Tri-Party Escrow account to be opened	Account with Bidder subject to
			between DCI, DPA and the Contractor to	approval of DPA.
			facilitate payments to the Contractor."	
12	Cl. No. 8	Payment:	We request to DCI to amend the payment clause	Employer will explore the
	GCC Part-III		as follow:	possibility to open Escrow
	Pg. No.31		Kindly, provide a Sub-clause under Clause-8:	Account with Bidder subject to
			Escrow Mechanism:	approval of DPA.
			A Tri-Party Escrow Account shall be opened	
			between DCI, DPA, and the Contractor to	
			facilitate timely payments to the Contractor.	
			Without an escrow account, the Contractor	
			cannot ensure timely payments if thirty party is	
			financer. Based on previous experiences, many	
			contractors have faced delays in payments from	
			DCI.	
13	Cl. No. 8	Payment:	Kindly add a sub-clause under Clause-8:	1 1
	GCC Part-III		Payment on Account:	possibility to open Escrow
	Pg. No.31		The dredger has to operate for period of two	· · · · · · · · · · · · · · · · · · ·
			years (considering extension) round the clock	approval of DPA.
			and there is no Contract provision for any	
			payment towards mobilisation of the dredger. In	
			such circumstances and considering the capex	
			amount, we request for opening at escrow	
			account in between the DCI, DPA and the	
			contractor. Also payment to be done within 7	
			days from receipt of payment in the escrow	
			account. The swift will enable us to plan for all	
			dredging and site activities in a very smooth	

Sl. No.	Ref	Original Clause	Query	Clarification
			manner. In absence of this arrangement of an	
			escrow facility, we will not be in a position to bid	
			for this tender	
14	Cl. No. 8.3	The payment to be released in monthly bill	We request to DCI to amend the payment clause	Tender condition prevails.
	GCC Part-III	shall be back-to-back with respect to quantities	as follow:	
	Pg. No.31	certified by DPA and same shall be binding on	Payment shall strictly be made within 7 days	
		the Contractor. Payment shall be made by	from the date of submission of the bill.	
		DCIL, within 15 days from the date of receipt		
		of payment from DPA, subject to submission		
		of tax invoice with all relevant supporting		
		documentary proof and complete in all		
		respects.		
15	Cl. No.15 (d)	In the event of the contractor failing to	We request a reconsideration of the penalty	Tender condition prevails.
	GCC Part-III	complete the work in all respects within the	clause detailed in the tender document under the	
	Pg. No.34	time specified or within the extended time that	section:	
		may be allowed by the Engineer as per the	Considering the unexpected commencement	
		terms of the contract, hereof the contractor	date, complexities and potential unforeseen	
		shall pay to recover a sum equal to 0.5% per	challenges inherent in dredging operations, we	
		week or part thereof the total value of capital	kindly request that this penalty clause be deleted	
		dredging component of the contract subject to	or modified to ensure a more balanced risk	
		maximum of 10% of the contract value of	distribution between the contractor and the	
		capital dredging component as liquidated	client.	
		damages.( for Capital dredging Item No.05 &	The more flexible approach would encourage	
		06 of BoQ)	broader participation and ensure fair terms for	
			all bidders	
16	Cl. No.15 (d)	In the event of the contractor failing to	We request a Delete of the penalty clause	Tender condition prevails.
	GCC Part-III	complete the work in all respects within the	outlined in the tender document under the	
	Pg. No.34	time specified or within the extended time that	specified section.	
		may be allowed by the Engineer as per the		

Sl. No.	Ref	Original Clause	Query	Clarification
		terms of the contract, hereof the contractor	Given the uncertain commencement date, the	
		shall pay to recover a sum equal to 0.5% per	complexities of dredging operations, and	
		week or part thereof the total value of capital	potential unforeseen challenges, we kindly urge	
		dredging component of the contract subject to	that the penalty clause should be removed to	
		maximum of 10% of the contract value of	promote a more equitable distribution of risk	
		capital dredging component as liquidated	between the contractor and the client.	
		damages.( for Capital dredging Item No.05 &	Adopting a more flexible approach would foster	
		06 of BoQ)	greater participation and ensure fair terms for all	
			bidders.	
17	Cl. No.1.1	No idle time charges or loss of production shall	Delay encountered during the operation due to	Tender condition prevails.
	SCC	be paid to contractor in the event of any	event of obstruction underwater should be	
	Pg. No.39	obstruction being encountered, which	reimbursed by the employer. Please adjust this	
		obstructs the operation of the dredger.	clause accordingly.	
18	Cl. No.1.5	The contractor shall ensure that the	Please provide the information on shipping	Data is provided in Appendix-II.
	SCC	deployments of Contractor's equipment	traffic: average number of ships entering and	
	Pg. No.41	including dredgers and dredging operations in	leaving the port per day.	
		the channel are carried out in such a manner		
		that the shipping operations are not affected.		
19	Cl. No.1.6	Notwithstanding the requirements for	We request a revision to the clause as follows:	All joint pre/ bill / post surveys
	SCC	submission of method of work statement as	Surveying shall be start within 30 Days from the	will be carried out by Employer.
	Pg. No.41	part of the tender, the Contractor shall submit	date of issue of the work-order.	Check / progressive surveys
		details of working methods, including details of		required by the contractor for the
		Contractor's Equipment, survey and		guidance of their vessel shall be
		positioning equipment, etc. to be deployed to		carried out by Contractor.
		the Employer within 7 days from the date of		
		issue of Work Order.		
20	Cl. No.1.6	Notwithstanding the requirements for	We have learnt that there is an ongoing tender	As clarified above.
	SCC	submission of method of work statement as	for hiring of a survey launch along with all survey	
	Pg. No.41	part of the tender, the Contractor shall submit	equipment and personnel for a period of 3 years.	

Sl. No.	Ref	Original Clause	Query	Clarification
		details of working methods, including details of	It is requested to accommodate all hydrographic	
		Contractor's Equipment, survey and	surveys via the same survey launch to reduce the	
		positioning equipment, etc. to be deployed to	cost of keeping a survey launch at site and	
		the Employer within 7 days from the date of	unnecessarily increasing the overall cost put to	
		issue of Work Order.	tender.	
21	Cl. No.1.22	A launch shall be made available at site for the	The tender clauses do not mention the cost of	Separate / exclusive launch need
	SCC	Employer or for their authorized	hiring the launch to serve the employer or their	not be provided to the Employer.
	Pg. No.43	representative to access the dredger and for	authorized representative(s)/DPA appointed	However, in case Employer wants
		inspection of the Works in progress.	consultant who will available on board 24 hours	to visit the contractor's dredger,
			in a day during entire contract period.	contractor has to make
			Kindly include provisions for the cost of hiring	arrangement through his routine
			and fuel expenses for the launch, to be borne by	boat/ launch.
			the employer's account.	
22	Cl. No.1.22	A launch shall be made available at site for the	The tender clauses lack provisions regarding the	As clarified above.
	SCC	Employer or for their authorized	cost of hiring a launch to accommodate the	
	Pg. No.43	representative to access the dredger and for	employer, their authorized representatives, or	
		inspection of the Works in progress.	DPA- appointed consultants, who are required	
			to remain onboard 24 hours a day throughout	
			the contract period. We respectfully request that	
			the tender include provisions for the hiring costs	
			and fuel expenses of the launch, to be covered	
			by the employer.	
23	Cl. No.1.22	A launch shall be made available at site for the	We request to amend the said clause as follows:	As clarified above.
	SCC	Employer or for their authorized	A separate BOQ item has to be incorporated in	
	Pg. No.43	representative to access the dredger and for	the BOQ put to tender as this is an additional	
		inspection of the Works in progress.	cost to the Contractor.	
24	Cl. No.4.2	Volume Computation	It is expected that during the execution of	Tender condition prevails.
	SCC		dredging in case if we found any rocky material,	
	Pg. No.45		it should be excluded from the scope of dredging	
			contract.	

Sl. No.	Ref	Original Clause	Query	Clarification
25	Cl. No.35	Wreck removal:	Please confirm, if sunken equipment's or plant	Tender condition prevails.
	SCC	The Contractor shall forthwith and with due	floating or otherwise any boat or vessel or craft	
	Pg. No.61	dispatch raise and remove any plant floating or	or equipment found during the operation, the	
		otherwise or any boat or vessel or craft or	contractor will not be responsible for the same.	
		equipment belonging to them or to any sub-		
		contractor employed by them which may sink		
		in the course of the execution of works within		
		the limits of site or elsewhere within port limits		
		and until the same shall be raised and removed,		
		the Contractor shall set all such buoys and		
		display at night such lights and do all such		
		things for safety of navigation as may be		
		required by the Employer/ DPA.		
26	Item No. 3	Maintenance Dredging in the Kandla creek	Kindly confirm whether the capital dredging of	*
	BOQ	Inner between North of Buoy No. 15A to	the Kandla Inner Creek has been completed, as	No. 3 of BOQ is limited to
	Pg. No. 66	proposed Oil Jetty No.8 during the contract	the maintenance dredging scope included in the	maintenance dredging.
		period to maintain a depth of 10.0 m below CD	tender's BOQ appears to be based on it.	
		as per drawing including dispose off the	The entire timeline of the project will shift due	
		Dredged Material at dumping area as specified	to non-completion of the capital dredging in the	
		including Mobilization and Demobilizations of	Kandla Inner creek.	
		all equipment, Insurance costs and all other		
		incidental expenditure arising out of or in		
		connection with the Contract etc. The payment		
		shall be made on the basis of total in-situ		
		quantity dredged in the area.		
27	-	-	Please provide clarity for Ideal hopper capacity	Based on quantum of dredging
			for the dredger as it is not clearly mentioned any	and project timelines, contractor
			wherein the tender document.	may decide on capacity of dredger.
28	-	-	Regarding dredger demobilization, please	The dredger shall be deployed
			confirm if it's permissible to demobilize the	throughout the contract period.

Sl. No.	Ref	Original Clause	Query	Clarification
			dredger, E.g. Suppose our 5000 cubic meter	
			hopper capacity dredger completes the work	
			ahead of the scheduled completion date stated in	
			the tender document.	
29	-	-	Please provide soil data of the areas to be	Available information is already
			dredged, consisting of particle size distribution	provided in the tender document.
			curves, Atterberg limits, lab results.	
30	-	-	Please provide drawings of all the areas to be	
			dredged, including recent bathymetric survey	
			data in x,y,z / ASCII format.	
31	-	-	Please provide drawing showing the location of	
			the disposal area including recent bathymetric	
			survey data in x,y,z / ASCII format.	
32	-	-	We would like to draw your attention to the fact	Tender condition prevails.
			that such types of works should also be included	
			in the similar nature of work.	
			1. De-siltation work of Canal/Khal.	
			2. Earth work in construction of the Canal.	
			3. Construction of Low Height weir on the	
			Running River.	

Above clarifications alongwith Appendix- I & II shall form part of referred Tender and bidder shall submit/upload the same duly signed alongwith the bid. All other terms and conditions remain unaltered. Bidders/ tenderers are advised to visit tender website GeM Portal regularly till the due date of submission of bid for any updates.

For, Dredging Corporation of India Ltd.

General Manager (BD)

# Format of Insurance Surety Bond for Earnest Money Deposit

(To be executed on Non-Judicial Stamp Paper of Appropriate value)

	Insurance Surety Bond No
	Date:
(Name of Contract)	
To: (Name and address of Employer)	
WHEREAS (name of Bidder) (hereinafter called "the of bid) for the performance of the above named Cont	,
KNOW ALL PERSONS by these present that We (address of Insurance Company) (hereinafter c (Name of	called "the Surety"), are bound unto
Employer") for the sum of (and be made to the said Employer, the Surety binds it presents.	ount), for which payment well and truly to
THE CONDITIONS of this obligation are as follow	s:
. If the Bidder (a) withdraws or modifies its Bid duri	ing the period of bid validity, or (b) adopts

- 1. If the Bidder (a) withdraws or modifies its Bid during the period of bid validity, or (b) adopts corrupt or collusive or coercive or fraudulent practices or defaults under Integrity Pact.
- 2. If the Bidder, having been notified of the acceptance of its Bid by the Employer during the period of bid validity.
  - a. fails or refuses to sign the Contract Agreement when required, or
  - b. fails or refuses to submit the performance security in accordance with the Tender Documents.

We undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer will mention that the amount claimed by it is due, owing to the occurrence of one or both of the two above-named CONDITIONS, and specifying the occurred condition or conditions.

This Insurance Surety Bond will remain in force up to and including (date 45 days after the period of bid validity), and any demand in respect thereof must reach the Surety not later than the above date.

For and on behalf of the Insurance Company

in the capacity of

Common Seal of the Insurance Company with complete address including Tel. Nos./e-Mail Id. Staff Authority No. of the officer of the Insurance Company/Signatory

# <u>INSTRUCTIONS FOR EXECUTION OF INSURANCE SURETY BOND FOR</u> EANEST MONEY DEPOSIT

- 1. Insurance Surety Bond for Earnest Money Deposit should be executed on non-judicial Stamp papers of requisite value in accordance with the stamp Act if applicable to that particular state of Indian Union country of executing Insurance Company, where executed. In case the same is issued by an International Insurance Company (it should be registered under insurance Act 1938 or as amended from time to time and approved by the Insurance Regulatory Development Authority of India (IRDAI)) the law prevalent in the country of execution shall prevail for the purpose of Stamp Duty on the Insurance Surety Bond. However, in such a case, the Insurance Surety Bond for Earnest Money Deposit shall be got confirmed by the Bidder through any Indian Scheduled/Nationalized Insurance Company.
- 2. The executing officers of the Insurance Surety Bond for Earnest Money/Bid Security shall clearly indicate in (block letters) his name, designation, Power of Attorney No./Signing Power No. as well as telephone/ fax numbers with full correspondence address of the issuing Guarantee etc.
- 3. Each page of the Insurance Surety Bond for Earnest Money Deposit shall be duty signed/initialled by the executing officers and the last page shall be signed in full, indicating the particulars as aforesaid (sub-para 2) under the seal of the Insurance Company
- 4. Stamp paper shall be purchased in the name of Insurance Company counting the Insurance Surety Bond, after the date 'Notice Inviting Tender', not more than six months prior to execution/issuance of the Insurance Surety Bond. The name of the purchaser should appear at the back side of stamp paper in the Vendors Sing. The issuing insurance Company shall be requested independently for verification/confirmation of the Insurance Surety Bond issued, non-confirmation of which may lead to rejection of 'Insurance Surety Bond'.
- 5. Irrevocable, valid and fully enforceable Insurance Surety Bond in favour of the Employer (Name of Employer) issued by any Insurance Company registered under insurance Ac amended from time to time and approved by the insurance Regulatory Development Authority of India (IRDA) in Indian currency (INR) only is acceptable to the Employer.
- 6. Insurance Surety and for Bid security in original shall be submitted along with the Bid. However, the issuing Insurance Company shall submit an unstamped duplicate copy of Insurance Surety Bond directly by registered post (A.D.) to the Employer (authority inviting tenders) with forwarding letter.

# **Shipping Traffic:**

The Shipping operations are carried out round the clock taking advantage of the tide. The traffic handled and the number of shipping movements at the Deendayal Port for the 10 years is shown in the below Table:

S. No.	Year	Traffic Handled in	No. of Ships
		million tonnes	Calling at Kandla
1	2004-05	41.54	1957
2	2005-06	45.91	2124
3	2006-07	52.98	2318
4	2007-08	64.92	2598
5	2008-09	72.22	2517
6	2009-10	79.5	2776
7	2010-11	81.88	2692
8	2011-12	82.5	2714
9	2012-13	93.62	2734
10	2013-14	87.01	2304
11	2014-15	92.497	2216
12	2015-16	100.05	2513
13	2016-17	105.44	2568
14	2017-18	110.1	2747
15	2018-19	115.4	2903
16	2019-20	122.61	3095
17	2020-21	117.57	3047
18	2021-22	127.1	3141
19	2022-23	137.56	3315

The information furnished above are indicative and without any commitment on the part of employer. It is for the Contractor to make its own assessment and satisfy itself on the various aspects of technical, geographical, commercial aspects etc. before submitting their bid. No Claim whatsoever in this regard will be entertained by the Employer.





Bid Number/बोली क्रमांक (बिड संख्या)<sup>:</sup> GEM/2024/B/5755846 Dated/दिनांक : 27-12-2024

# Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण			
Bid End Date/Time/बिड बंद होने की तारीख/समय	10-01-2025 17:00:00		
Bid Opening Date/Time/बिंड खुलने की तारीख/समय	10-01-2025 17:30:00		
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	90 (Days)		
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Ports, Shipping And Waterways		
Department Name/विभाग का नाम	Dredging Corporation Of India Limited		
Organisation Name/संगठन का नाम	Dredging Corporation Of India Limited		
Office Name/कार्यालय का नाम	Dredge House Port Area Visakhapatnam		
क्रेता ईमेल/Buyer Email	hodmktg.dci@nic.in		
ltem Category/मद केटेगरी	Custom Bid for Services - Chartering of TSHD for carrying out Dredging in the Navigational Channel Kandla Creek Oil Jetties Cargo Berths at Deendayal Port		
Similar Category/समान श्रेणी	Support Services		
Contract Period/अनुबंध अवधि	1 Year(s)		
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	1092 Lakh (s)		
Years of Past Experience Required for same/similar service/उन्हीं/समान सेवाओं के लिए अपेक्षित विगत अनुभव के वर्ष	7 Year (s)		
Past Experience of Similar Services required/इसी तरह की सेवाओं का पिछला आवश्यक अनुभव है	Yes		
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No		
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छ्ट	No		

Bid Details/बिड विवरण		
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria, Bidder Turnover, Certificate (Requested in ATC), Additional Doc 1 (Requested in ATC), Additional Doc 2 (Requested in ATC), Additional Doc 3 (Requested in ATC), Additional Doc 4 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer	
Do you want to show documents uploaded by bidders to all bidders participated in bid?/	Yes	
Bid to RA enabled/बिंड से रिवर्स नीलामी सक्रिय किया	No	
Type of Bid/बिंड का प्रकार	Two Packet Bid	
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days	
Estimated Bid Value/अनुमानित बिड मूल्य	364100000	
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation	
Financial Document Indicating Price Breakup Required/मूल्य दर्शाने वाला वितीय दस्तावेज ब्रेकअप आवश्यक है	Yes	
Arbitration Clause	No	
Mediation Clause	No	

# EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाईजरी बैंक	State Bank of India
EMD Amount/ईएमडी राशि	1821000

# ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%)/ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months)/ईपीबीजी की अपेक्षित अवधि (महीने).	15

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के

दायरे से बाहर रखा गया है।

(b). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

#### Beneficiary/लाभार्थी:

General Manager (Business Development)
DREDGE HOUSE, H B Colony Main Road, Seethammadhara, Visakhapatnam - 530022
(Dredging Corporation Of India Limited)

# MII Compliance/एमआईआई अन्पालन

MII Compliance/एमआईआई अनुपालन	Yes
Mil Compilance/एमआइआइ अनुपालन	res

# MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	No
---	----

# **Details of the Competent Authority for MSE**

Name of Competent Authority	MD and CEO
Designation of Competent Authority	MD and CEO
Office / Department / Division of Competent Authority	General Manager
CA Approval Number	DCI/DPA/2024
Competent Authority Approval Date	26-12-2024
Brief Description of the Approval Granted by Competent Authority	CHARTERING OF TSHD FOR CARRYING OUT DREDGING IN THE NAVIGATIONAL CHANNEL KANDLA CREEK OIL JETTIES AND CARGO BERTHS AT DEENDAYAL PORT

Competent Authority Approval for not opting Micro and Small Enterprises Preference : View Document

- 1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
- 2. Years of Past Experience required: The bidder must have experience for number of years as indicated above in bid document (ending month of March prior to the bid opening) of providing similar type of services to any Central / State Govt Organization / PSU. Copies of relevant contracts / orders to be uploaded along with bid in support of having provided services during each of the Financial year.
- 3. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.
- 4. Past Experience of Similar Services: The bidder must have successfully executed/completed similar Services over the last three years i.e. the current financial year and the last three financial years(ending month of March prior to the bid opening): -
- 1. Three similar completed services costing not less than the amount equal to 40% (forty percent) of the estimated cost; or

- 2. Two similar completed services costing not less than the amount equal to 50% (fifty percent) of the estimated cost: or
- 3. One similar completed service costing not less than the amount equal to 80% (eighty percent) of the estimated cost.

### Additional Qualification/Data Required/अतिरिक्त योग्यता /आवश्यक डेटा

**Scope of Work:**<u>1735296772.pdf</u>

Payment Terms: 1735296778.pdf

GEM Availability Report (GAR): 1735296786.pdf

Undertaking of Competent Authority is mandatory to create Custom Bid for Services. Please download standard format document and upload: <a href="mailto:1735296832.pdf">1735296832.pdf</a>

Quantifiable Specification / Standards of The Service/ BOQ <u>1735296887.pdf</u>

#### Pre Bid Detail(s)

Pre-Bid Date and Time	Pre-Bid Venue
03-01-2025 15:00:00	Webex link https://dcil21.webex.com/meet/dotsectt

# Custom Bid For Services - Chartering Of TSHD For Carrying Out Dredging In The Navigational Channel Kandla Creek Oil Jetties Cargo Berths At Deendayal Port (1)

# Technical Specifications/तकनीकी विशिष्टियाँ

Specification	Values	
Core		
Description /Nomenclature of Service Proposed for procurement using custom bid functionality	Chartering of TSHD for carrying out Dredging in the Navigational Channel Kandla Creek Oil Jetties Cargo Berths at Deendayal Port	
Regulatory/ Statutory Compliance of Service	YES	
Compliance of Service to SOW, STC, SLA etc	YES	
Addon(s)/एडऑन		

# Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज़

#### Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	The quantity of procurement "1" indicates Project based or Lumpsum based hiring.	Additional Requirement/अतिरिक्त आवश्यकता
1	Ramesh Babu Moodavath	530022,Dredging Corporation of India, Dredge House, H B Colony Main Road, Seethammadhara, VISAKHAPATNAM	1	N/A

# Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

#### 1. Generic

OPTION CLAUSE: The buyer can increase or decrease the contract quantity or contract duration up to 25 percent at the time of issue of the contract. However, once the contract is issued, contract quantity or contract duration can only be increased up to 25 percent. Bidders are bound to accept the revised quantity or duration

#### 2. Buyer Added Bid Specific ATC

Buyer uploaded ATC document Click here to view the file.

# Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

- 1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
- 2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
- 3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
- 4. Creating BoQ bid for single item.
- 5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
- 6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
- 7. Floating / creation of work contracts as Custom Bids in Services.
- 8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for attached categories, trials are allowed as per approved procurement policy of the buyer nodal Ministries)
- 9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
- 10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
- 11. Creating bid for items from irrelevant categories.

- 12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
- 13. Reference of conditions published on any external site or reference to external documents/clauses.
- 14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
- 15. Any ATC clause in contravention with GeM GTC Clause 4 (xiii)(h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers / Service Providers are mandated to ensure compliance with all the applicable laws / acts / rules including but not limited to all Labour Laws such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972 etc. Any non-compliance will be treated as breach of contract and Buyer may take suitable actions as per GeM Contract.

This Bid is governed by the <u>General Terms and Conditions/सामान्य नियम और शर्त</u>, conditions stipulated in Bid and <u>Service Level Agreement</u> specific to this Service as provided in the Marketplace. However in case if any condition specified in General Terms and Conditions/सामान्य नियम और शर्ते is contradicted by the conditions stipulated in Service Level Agreement, then it will over ride the conditions in the General Terms and Conditions.

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो।बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---

# DREDGING CORPORATION OF INDIA LIMITED DREDGE HOUSE, H.B. COLONY MAIN ROAD SEETHAMMADHARA, VISAKHAPATNAM - 530022

Tender No. DCI/DPA/2024

# E-TENDER FOR

Date: 27.12.2024

CHARTERING OF TSHD FOR CARRYING OUT "DREDGING IN THE NAVIGATIONAL CHANNEL, KANDLA CREEK, OIL JETTIES & CARGO BERTHS AT DEENDAYAL PORT".





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Ref: DCI/DPA/2024 Date: 27.12.2024

# E-TENDER FOR CHARTERING OF TSHD FOR CARRYING OUT "DREDGING IN THE NAVIGATIONAL CHANNEL, KANDLA CREEK, OIL JETTIES & CARGO BERTHS AT DEENDAYAL PORT".

#### **DUE DATES:**

Availability of Bids in GeM portal and Employer's websites for downloading	:	27.12.2024 to 10.01.2025 upto 1500 Hrs.
8		
Last date for receipt of pre-bid queries by	:	02.01.2025 upto 1800 Hrs.
Employer from bidders.		1
Pre-bid meeting scheduled on	:	03.01.2025 at 1500 Hrs. through Webex link:
O		https://dcil21.webex.com/meet/dotsectt
Due date for submission of bids in GeM portal	:	10.01.2025 upto 1500 Hrs.
Opening of Technical bids on line GeM portal		at 1530 Hrs. on 10.01.2025 in GeM portal at
		DCIL, HO.

General Manager (BD)
Dredging Corporation of India Ltd.,
Dredge House, H B Colony Main Road
Seethammadhara, Visakhapatnam – 530 022
Andhra Pradesh (INDIA)
Ph No. (+)91-891- 2871-209/ 333/ 241

Mob: +91-99498 25222 E-mail ID: <u>hodmktg@dcil.co.in</u>



# SECTION -I- INVITATION FOR BIDS (IFB)/ NOTICE INVITING TENDER (NIT)

Ref: DCI/DPA/2024 Date: 27.12.2024

Electronic tenders (e-tenders) in the prescribed proforma are invited by Dredging Corporation of India Limited (DCI/ DCIL/ Employer) through Government e-Marketplace (GeM) portal, in single stage two cover bidding procedure [Techno Commercial Bid and Financial Bid] from experienced, resourceful and bonafide dredging firms with proven technical and financial capabilities for the work mentioned below:

1.	Name of Work	:	Chartering of TSHD for carrying out "Dredging in the Navigational Channel, Kandla Creek, Oil Jetties & Cargo Berths at Deendayal Port"
2.	Estimated Cost	:	Rs.36.41 Crore (Excluding GST)
	Period of Contract	:	01 (One) year and can be extendable at same rates, terms & conditions for a further period of one year at mutual discretion of Employer & Contractor
4.	Mobilization Period	:	30 days from the date of work order
5.	Earnest Money Deposit / Bid Security	-	Rs.18.21 Lakh The above EMD shall be paid through e-payment/ Bank Guarantee (BG) / Insurance Surety Bond. Bank details for e-payment are per details given below. In case of Bank Guarantee (BG)/ Insurance Surety Bond submission, original (hard copy) shall reach the Employer (DCI Head office) on or before the due date and time of bid submission, failing which, bid will not be considered for evaluation. BG shall be valid for forty five (45) days beyond the validity of the bid.
6.	Cost of Tender Documents	:	Rs.5,900/- including GST (Non-refundable) in the form of e-challan (copy to be uploaded along with technical Bid)
7.	Bank Account for submission of Tender Cost/EMD		Bank Name: CANARA BANK DCI Current account No. 35833070000014 Branch Name: DCI LTD., H B Colony Main Road, Seethammadhara, Visakhapatnam – 530022. IFSC/ RTGS No: CNRB0013583. (e-receipt to be uploaded along with Technical bid). Remittance of Tender document cost & EMD by NEFT/RTGS to DCI account shall be confirmed with treasury@dcil.co.in and confirmation email shall be submitted along with the bid.
8.	Availability of Bids in GeM portal and Employer's website for downloading	:	27.12.2024 to 10.01.2025 upto 1500 Hrs.
	Last date for receipt of pre-bid queries by Employer from bidders.	:	02.01.2025 upto 1800 Hrs.
10.	Pre-bid meeting scheduled on		03.01.2025 at 1500 Hrs. through Webex link: https://dcil21.webex.com/meet/dotsectt



11.	Due date for submission of bids in	:	10.01.2025 upto 1500 Hrs.
	GeM portal		_
12.	Opening of Technical bids on line	:	At 1530 Hrs. on 10.01.2025 in GeM portal at DCIL,
	GeM portal		HO.
13.	Bid validity period	:	90 days from the date of opening of the bids

#### 14. Pre Qualification Criteria:

#### **Pre-Qualification Criteria:**

The pre-qualification criteria has been fixed on the average annual estimated tender value.

- 1. The eligible bidder (Indian firms) should have successfully completed similar works during the last seven years, ending November 2024 (i.e. last day of month previous to the one in which tenders are invited) as follows:
  - a. Three similar completed works each costing not less than the amount of Rs.14.57 Crore exclusive of GST.

#### OR

b. Two similar completed works each costing not less than the amount of Rs.18.21 Crore exclusive of GST.

#### OR

- c. One similar completed work costing not less than the amount of Rs.29.13 Crore exclusive of GST.
- 2. Average Annual financial turn over during the last 3 years ending 31<sup>st</sup> March 2024 should be **at least Rs.10.92 Crore,** exclusive of GST.

#### Note:

- i) The Bidders are required to submit dredging work experience of having successfully completed similar works in INR (Indian Rupees) only. Where the Bidder has received consideration in a foreign currency for similar works, details of which need to be submitted to fulfill the Pre-Qualification Criteria shall be converted into INR (Indian Rupees) for ease of reference of the Employer. For conversion into INR (Indian Rupees), the conversion rates available on the website of the Reserve Bank of India at the end of the day prior to the submission of Bid Documents shall have to be adopted. Provided the reference date falls on a non-working day or public holiday, the rates as on the last working/ business day prior to submission of the Bid Documents shall be adopted.
- ii) Submission of copies of work order / letter of award and agreement alongwith work completion certificate from the client on its letterhead is mandatory.
- iii) An Indian firm shall be a company registered under the companies Act 1956 engaged in dredging work and having dredgers under Indian flag or vessels registered as Indian controlled tonnage ships in accordance with DGS order No.10 of 2014.
- iii) The Bidder shall submit necessary TDS (Tax deduction certificate) against the executed works as per work completion certificates proposed to meet the pre-qualification criteria.
- iv) If any firm is having running contract but partially completed period is meeting the above amount of eligibility criteria as on Dt. 30th November 2024, then the firm can



also participate in the tender. In such case, the bidder shall submit partial completion certificate from the Client.

3. The bidder shall possess by Absolute Ownership / Disponent Ownership / Charter / Hire at least one Trailing Suction Hopper Dredger (TSHD) of Minimum Capacity of 1500 Cum and capable of dredging upto a depth of 20 m below water level.

In case of chartering the dredgers, an "Irrevocable Letter of Authority" from the Owner of the dredger shall be produced by the bidder to the effect that the dredger so chartered shall not be withdrawn till completion of dredging work. However, the employer shall not entertain any consequential third-party claims whatsoever on account of the above LoA/Agreement between the bidder and the charterer.

In view of the limited width of the channel and restricted tidal window available, the Contractor is required to deploy efficient Trailing Suction Hopper Dredger fitted with twin screw propulsion with bow thrusters, preferably two suction pipes & dredge pumps capable of dredging up to 20 m depth below water level, jet pumps, dredge mixture density meter, draft load monitor with print facility, de-hoppering system and efficient dredge position control monitoring system for the dredging work in Navigational Channel and Kandla Creek.

The contractor can deploy a maximum of One trailer suction hopper dredger for deployment in dredging areas such as Navigational channel, Kandla creek, alongside Cargo berths / Oil jetties, etc. which should be as per the technical specifications/conditions as specified by the Employer to meet the requirement of width and depth to be achieved/maintained during the contract period, without hampering the shipping operations. Contractor has to adjust and re-adjust the program without hampering the day to day Port operation, for which no claim shall be entertained.

The Trailer Suction Hopper Dredger of minimum capacity of 1500 cum shall be available throughout the contract period. In case of breakdown / dry docking / major repairs to the main dredger; substitution shall be allowed without any extra additional cost. However, the Contractor has to submit proof of dry dock / afloat repair facility booked at the time of submitting permission to sail/replace the main dredger.

The Trailing Suction Hopper Dredger should be equipped with necessary onboard equipment such as DLM showing TDS, DGPS based Track Plotter, Echosounder, etc. to ensure effective dredging operations and the print outs of same for each load should be produced along with DDR (Daily Dredging Report). The trailer suction hopper dredger should carry technical specifications with good propulsion power and bow thruster(s) to enable effective capital / maintenance dredging in the tidal water on the navigational channel and alongside berths.

The dredger must be registered as 'Hopper Dredger'. Dredgers must be registered either under Inland Vessel Act, 2021 or under Merchant Shipping Act, 1958 and must have valid registration certificate from the designated authority under Inland Vessel Act, 2021 or MMD under Merchant Shipping Act, 1958.

Dredger must have valid Survey certificates from the designated authority under Inland Vessel Act, 2021 or MMD under Merchant Shipping Act, 1958. Valid Survey Report by Indian Register of Shipping (IRS) or any other classification society will also be considered valid.

The above valid certificates as on date of submission of bid shall be submitted with the technical bid.



\* Similar works means capital or maintenance dredging works carried out in ports and/or rivers using cutter suction dredgers and/or trailing suction hopper dredgers. (Dredging is a process of removal of sediments and debris from the bottom of water bodies (river, estuaries, sea, etc.) using special devices "dredgers" for facilitating the safe movement of ships.)

Note: The above PQ Criteria supersedes the criteria mentioned in the GeM Bidding Report, if any.

#### 15. Conflict of Interest:

Any Bidder found to have a Conflict of Interest shall be disqualified.

# 16. Restrictions under Rule 144(xi) of the General Financial Rules (GFR), 2017:

Bidders must comply with the requirements of Dept. of Expenditure (DOE) Order No. F.7/10/2021-PPD (1), dated 23.02.2023.

Dredgers to be procured or proposed to be hired from land border sharing countries including China, Bangladesh, Pakistan, Nepal, Bhutan & Myanmar etc. shall not be considered

Bidder in his bid shall submit a certificate stating that, "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on subcontracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority (as mentioned in above order) shall be attached.]"

# 17. Indian Flagged Vessel:

The dredger must be Indian Owned, Indian flagged, Indian manned and Indian controlled before commencement of work.

# 18. E-Tender

This is an E-Tender and Interested eligible Tenderers to download the bid documents from the e-tendering website- Government e-Marketplace (GeM) portal.

Instructions / Guidelines for tenders for electronic submission of the e-tender have been annexed for assigning the agencies to participate in e-Tendering:

- i) Any agencies willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e Marketplace (GeM) System.
- ii) The downloading of document shall be carried out strictly as per the provision provided on the website. No editing, addition, deletion of matter shall be permitted. If such action is observed at any stage, such proposals are liable for outright rejection.
- iii) Bids shall be submitted online only at GeM Portal. Manual bids shall not be accepted. Tenderer / Contractors are advised to follow the instructions provided in the 'Instructions to Bidders' for the e-submission of the bids before proceeding with the tender.
- iv) If any of the intending bidders wishes to withdraw from participation in the bid, he / she can freely withdraw from the participation before scheduled date and time of closure of the bid submission.
- v) DCIL reserves the right to cancel the bid without assigning any reason thereof.
- vi) The e-tender portal charges / registration charges / transaction charges / annual milestone charges or any applicable charges till completion of the work / finalization of payments /



release of performance security or security deposit, etc. shall be borne by the respective successful / unsuccessful bidder and the then L1 bidder / H-1 bidder on whom the work order is placed. A link to the Revenue Policy of GeM Portal is placed below for ready reference of the bidders:

https://assets-bg.gem.gov.in/resources/upload/shared\_doc/gem-revenue-policy1\_1690899325.pdf

However, the above link is only for reference of bidders and bidders are advised to visit the GeM portal for all relevant payment conditions. The bidders are solely responsible for all such payments/ claims / grievances related to e-tender (GeM) Portal. Employer / DCIL shall not entertain any claim in this regard.

NOTE: All corrigenda, addenda, amendments and clarifications to this Tender will be hosted in GeM portal only.

# 19. Integrity Pact (IP)

Integrity Pact shall cover this tender throughout its various phases, and IP would be deemed as a part of the contract though an appropriate provision. The bidders should sign and submit "Integrity Pact" (02 sets) to be executed to DCI on or before the due date and time of bid submission, in a closed envelope superscribed "Integrity Pact" along with Name of the Tendered work. If Original hard copy is not received within the stipulated time, such bid shall be liable for rejection. IP would be implemented through either of the following Independent External Monitors (IEM) for this tender.

1. Shri. Kishore Kumar Sansi,

B-301, Badhwar Apartments, Sector-6,

Plot No. 3, Dwarka,

West Delhi-110075

Mobile: +91-9686009000

Email- kishoresansi@hotmail.com

2. Shri. P. K. Dash, I.A.S. (Retd.)

203, Subh Niwas, 12-13-548,

Near Laharpur Dam, Bhopal

Mobile: +91-9425011441,

Email- pkdash81@gmail.com

For full details of the scheme of IP, you may visit the website of Central Vigilance Commission, New Delhi.

#### 20. Power of Attorney

Power of Attorney (PoA) duly notarized, alongwith letter of submission in a sealed cover shall be submitted at DCI Head Office in Original on or before the due date and time of the tender submission. Tenders without notarized power of attorney shall be considered irresponsive and are liable for rejection.

Original PoA should be submitted to the tendering authority in a closed envelope along with "Integrity Pact" and EMD in case of BG, superscribed with Name of the Tendered work, on or before the due date and time of the tender submission, failing which, such bid shall be liable for rejection.

# 21. Hard copies

Tenderers shall submit entire hard copy of the bid submitted online except EMD in case of BG, Integrity Pact, and Power of Attorney within 4 working days from the date of submission to this office. Financial/Price bid in hard copy should not be submitted.



#### 22. Price Bid

Bidders are advised to submit their Price Bid strictly as per the online based BoQ in line with the scope of work, layout, technical specifications, terms and conditions contained in the bid document after going through the prevailing conditions at site. Financial/Price bid (Bill of Quantities) in the provided format is to be submitted through e-tendering mode only on GeM portal before due date and time of submission as above. Electronic bids received after the stipulated last date and time for receipt of bids, due to any reasons will not be allowed/considered and in such cases hard copy submitted, if any will be returned.

# 23. Pre-bid Queries / Queries

Bidders may mail their bid related queries to the following e-mail ID and contact at the following address for clarifications regarding tender conditions and replies for which will be uploaded in GeM portal by this office within the due date specified in NIT.

General Manager (BD)
Dredging Corporation of India Ltd.,
Dredge House, H B Colony Main Road,
Seethammadhara, Visakhapatnam – 530 022
Andhra Pradesh (INDIA),
PhoneNo.+91-891-2871209/333

Mob: +91-99498 25222 E-mail ID: <u>hodmktg@dcil.co.in</u>

# 24. DCI Reserves the right

Notwithstanding anything stated anywhere in the tender, Dredging Corporation of India Ltd. / Employer reserves the right to:

- a. Accept or reject any or all Tenders without assigning any reason whatsoever.
- b. Cancel the tender enquiry at any stage without assigning any reason.
- c. Accept the tender in whole or part.
- d. Reject the tender received with counter conditions.

General Manager (BD)



# SECTION - II- INSTRUCTIONS TO BIDDERS (ITB)

Online bids are invited by Dredging Corporation of India Ltd. (DCIL) in Single Stage-Two cover system for Chartering of TSHD for carrying out "dredging in the navigational channel, kandla creek, oil jetties & cargo berths at Deendayal Port".

#### A. Introduction

# 1. Eligible Bidders

- 1.1 This Invitation for Bids is open to Indian Dredging Contractors only who satisfy the conditions stipulated in the bid document.
- 1.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Employer to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the services under this Invitation for Bids.
- 1.3 Government-owned enterprises in India may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Employer.
- 1.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Employer or any other Government agencies /Employer's Clients in accordance with ITB Clause 30.

#### 2. Cost of Bidding

2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Employer will in no way be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

### **B.** Bidding Documents

# 3. Content of Bidding Documents

- 3.1 The services required, bidding procedures and contract terms are prescribed in the Bidding Documents. In addition to the Invitation for Bids (IFB)/Notice Inviting Tender (NIT), the Bidding Documents include:
  - a) Instructions to Bidders (ITB)
  - b) General Conditions of Contract (GCC)Part I, GCC Part II Conditions of Particular Application (COPA)& GCC Part III- Additional Conditions
  - c) Special Conditions of Contract (SCC)
  - d) Technical Specifications (TS)
  - e) Sample Forms containing the following:
    - Bid Form
    - Price Schedule
    - Proforma For Bank Guarantee for Earnest Money Deposit
    - Agreement Form
    - Performance Security Form
    - Qualification Requirements
    - Details of the dredgers proposed for deployment
    - Integrity Pact
- 3.2 The bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in the rejection of its bid.



# 4. Clarification of Bidding Documents

A prospective bidder requiring any clarification on any of the bidding document may notify Employer by E-mail at the Employer's address indicated in the Invitation for bid in no case later than the due date prescribed in the IFB. Employer's response on the bid related queries will be hosted in GeM portal only on or before the date prescribed in IFB. Prospective bidders may visit the site and understand the site conditions and based on the same to quote accordingly in the bid.

Corrigendum, if any, also shall only be hosted in the above said website. No press notification for any amendment/ clarification will be issued. Bidders are advised to regularly visit GeM portal & Employer's website to keep themselves updated on the above.

# 5. Amendment of Bidding Documents

- 5.1 At any time prior to the deadline for submission of bids, Employer may, for any reason, whether on its own initiative or in response to a clarification requested by prospective bidder, modify the Bidding Documents by amendment.
- 5.2 The amendment will be hosted on above mentioned websites only. Respective bidders are requested to visit the website regularly.
- 5.3 In order to afford prospective Bidders reasonable time to take the amendment into account in preparing their bids, Employer may, at its discretion, extend the deadline for the submission of bids.

# C. Preparation of Bids

# 6. Language of Bid

6.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English only.

# 7. Documents Comprising the Bid (to be uploaded in GeM)

- 7.1 The bid for the work will be based on two cover system (Part-I: Techno Commercial Bid and Part-II: Financial Bid (Price Bid)) as mentioned below:
  - \* Techno Commercial Bid; and
  - ❖ Financial/ Price Bid
- 7.2 The "Techno Commercial Bid" prepared by the Bidder shall comprise the following components:
- 7.2.1 A Bid Form except the Price Schedule completed in accordance with ITB Clause 8
- 7.2.2 A list of works tendered for and in hand/being executed as on the date of submission of tender.
- 7.2.3 A detailed list of vessels/ equipment available with the tenderer and which is proposed for deployment for the work under consideration including their specifications.
- 7.2.4 Documentary evidence established in accordance with ITB Clause 11 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted including audited balance sheet for the last three years ending 31<sup>st</sup> March 2024 and Profit & Loss duly supported by ITR & GST returns.
- 7.2.5 Cost of tender deposit in the form of e-Challan (e- receipt to be enclosed).
- 7.2.6 The requisite Earnest money deposit for participating in the tender in the form of e-challan (e-receipt to be enclosed)/ Bank Guarantee furnished in accordance with ITB Clause 12.
- 7.2.7 Power of Attorney on stamp paper, in favour of the person authorized to sign the tender
- 7.2.8 The bidders should sign and submit "Integrity Pact" (2 copies) to be executed between the bidder and Employer.



Note: The documents mentioned at 7.2.6, 7.2.7 and 7.2.8 must reach in Original to this Office on or before the due date and time of bid submission mentioned in tender document. In case, these documents are not received as per the said schedule, the tender so submitted shall not be opened.

- 7.2.9 PAN Number issued by Income Tax Authorities and GST Registration Certificate.
- 7.2.10 Registration with Provident Fund Authorities.
- 7.2.11 Copies of original document defining the constitution or legal status, place of registration and principal place of business of the company or partnership.
- 7.2.12 Information regarding any current litigation in which the tenderer is involved.
- 7.2.13 Copies of original certificates of registration etc., of dredgers/ crafts proposed to be offered to Employer, including copy of the existing insurance policy covering H&M, DLM, Crew, Third Party, wreck removal/oil pollution, war risk etc., pursuant to Clause 7 of GCC.
- 7.2.14 Copy of clear title of the ownership of the TSHD including but not limited to number, make, date of manufacture / acquisition, capacity and other requisite dredging spread proposed for deployment. If the tenderer is not the owner of the dredgers/ crafts, necessary documents in support of the authorization or lease granted by the owner of the dredgers/ crafts to the tenderer to offer and operate the dredgers/ crafts by the tenderer to execute the intended work. This authorization or lease shall be executed on a stamp paper duly **notarized**. If the equipment to be deployed is within group companies, letter from the group company confirming chartering of vessel may be considered and the letter to be notarized.
- 7.2.15 Proof of regulatory Compliance, if required for operating in waters of Port.
- 7.2.16 The tenderer will have to give a certificate that he is not related to any officer of Employer (DCI) or any officer of the rank of Asst. Secretary or above in the Ministry of Shipping, Government of India. The Contractor should give a declaration along with his tender about the names of the relatives, who are employed with the Employer Dredging Corporation of India Ltd. (Annexure-I)
- 7.2.17 The Tenderer shall give an undertaking that they have not made any payment or illegal gratification to any person/ authority connected with the bid process so as to influence the bid process and have not committed any offence under the Prevention of Corruption Act in connection with the bid. (Annexure-II)
- 7.2.18 The Tenderer shall disclose any payments made or proposed to be made to any intermediaries (agents etc.) in connection with the bid (**Annexure-II**).
- 7.2.19 The Tenderer shall disclose any information regarding any current litigation in which the tenderer is involved (Annexure-III).
- 7.2.20 Vender Code Creation form (Annexure –IV)
- 7.2.21 Declaration by the Bidders as per Form No. 8.
- 7.2.22 Downloaded/ Purchased Tender Document duly signed on all the pages by tenderer.
- 7.2.23 Contractor has to submit detailed methodology for completing the work in aforesaid period in line with Scope of work with bar chart along with tender submission.
- 7.2.24 Documentary evidence to establish that the proposed TSHD is efficient as under:
  - a. It should be fitted with twin screw propulsion and with bow thrusters.
  - b. It should be fitted with Draft and Loading Monitor (DLM) with print facility.
  - c. It should have efficient Dredger position control monitoring system consisting of DGPS with RTK, necessary software capable of being loaded with survey data like Hypack or PDS 2000 software or similar software.
  - d. It should have the capability to maintain a minimum speed to complete the work within the stipulated period of time.

Employer reserves its right to inspect dredgers/ crafts proposed for deployment and seek any other details/ documents to ascertain the competence of the tenderer. Suitability of the



dredgers/ crafts as per tender conditions will be decided by Committee appointed to inspect dredgers/crafts. As per Committee report, if dredgers/crafts are not meeting the desired requirement for the intended work as per tender conditions, then the tender will be technically disqualified and offer of the Bidder will be rejected.

#### 8. Bid Form

8.1 The Bidder shall complete the Bid Form except the Price Schedule furnished in the Bidding Document alongwith the enclosures specified in Clause 7.2.1 of ITB, duly sign and upload the same online in the "Techno-Commercial Bid".

#### 9. Bid Prices

- 9.1 The Bidder shall indicate in the Price Schedule the unit prices (where applicable) and total bid price of the services it proposes to provide under the contract and upload the "rates/ file" online in the "Financial/ Price Bid."
- 9.2 The bidder shall quote his prices only in Price Schedule furnished in the bidding document and upload it online in the Financial/ Price Bid (BOQ). The bidder should not indicate the prices anywhere directly or indirectly in the "Techno Commercial Bid." Any such offer or indication shall disqualify the bidder. Similarly, the Price Bid (BOQ) should not contain any counter conditions. Conditional tenders or tenders with counter conditions are liable for summary rejections. Rate shall be valid during entire contract period including extension, if any.

#### 10. Bid Currencies

10.1 Prices shall be quoted in Indian Rupees only.

# 11. Bidder's Eligibility and Qualifications

- Pursuant to ITB Clause 7, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted. Tenderer can access tender documents on the website, fill them with all relevant information and submit the completed tender document into electronic tender in GeM Portal.
- The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Employer's satisfaction that the Bidder has the financial & technical capability and competency necessary to perform the contract as per Qualification Requirements Form No.6 in Section VI. All documents as per tender requirement should be uploaded online at tender portal and only hard copy of online submitted documents should be forwarded within 4 working days from the due date of submission of bids. No additional document submitted offline, which is not uploaded online will be entertained. Bidder not submitting any of the required documents online will summarily be rejected.
- 11.3 The bidder should furnish the details of the TSHD / any other equipment, proposed for hiring in Form No.7 (a) / (b) of Section VI of Sample Forms. Tenders and supporting documents should be uploaded through GeM portal.
- 11.4 The Bidders shall meet the following Qualification criteria: -
- Bidders should be registered in India under the relevant acts/rules as a company, a partnership firm or a proprietary firm, a Government/ Semi-Government/ Autonomous Body. Bidders that are government owned entity in the Employer's country may participate only if they can establish that they (i) operate under commercial law and (ii) are not dependent agencies of the Employer.
- 11.4.2 The Bidder shall meet the Qualification criteria of executing similar works of the value as mentioned in clause 14 of NIT. The Bidder shall indicate the value of the order executed by him together with the details of name of the party, order value, scope of work / component



- breakup, completion period stipulated in the order and actual completion period. In case the work was performed by the Bidder in a JV, the same shall be supported by a Client Certificate enumerating the claimant share also. In case the work was performed by the bidder as a subcontractor, the bidder shall submit similar completion certificate awarded to it by the main contractor and countersigned by the Employer/ Client of the main contractor.
- 11.4.3 Submission of copies of work order / letter of award and agreement alongwith work completion certificate from the client on its letterhead is mandatory.
- 11.4.4 Average Annual Turnover during the last three (03) years ending 31<sup>st</sup> March of the previous financial year should be as mentioned in Clause 14 of NIT. The Bidders shall provide financial turnover of the firm for the **last three years duly certified by statutory auditors**.
- 11.4.5 Bidder should not have been debarred / blacklisted during the last three years. However, hiding of the facts or non-compliance by the Bidder in this regard would be punishable under existing law and would lead to rescinding or termination of the work with appropriate action as per terms & conditions of Contract, if information relating to debarment or blacklisting is brought to knowledge of the Employer even during the currency of the contract brought forward at a later stage.
- 11.4.6 The similar work experience of Parent company / Subsidiary / Sister Company of the Bidder shall not be considered.
- 11.4.7 Bidder should have, during the last three years, neither failed to perform on any agreement, as evidenced by imposition of a penalty by an arbitral or judicial Employer or a judicial pronouncement or arbitration award against the Bidder, nor been expelled from any project or agreement nor have had any agreement terminated for proven breach by such Bidder.
- 11.4.8 The Bidder shall be income tax assesse and accordingly the Bidder shall submit copies of Form 26AS and Income Tax Return (ITR) filed by the Bidder for the last three financial years.
- i) The Bidder shall provide accurate information on the letter head and Annexure-III about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last seven years. A consistent history of court/arbitral awards against the Bidder may result in disqualifying the Bidder.
  - ii) The Employer shall exercise its discretion in evaluating the past performance and litigation, if any, of the bidders with DPA or any other Central / State / Statutory / Autonomous / Government organizations, etc. DPA/DCI reserves the right to satisfy itself and decide in the interest of the project and the organization as per extant Government guidelines.
  - iii) The Employer may use this information to seek further information or clarifications in carrying out its due diligence.



# Historical Contract Non-performance and Pending Litigation and Litigation history:

	Bidder eligibility Criteria			Requirements
No	Subject	Requirement	Single Entity	Submission requirement
Section –II (ITB 11.4.9)	History of Non- performing contracts	Non-performance of a contract did not occur as contractor since 1st January 2017 (past 7 years) (Declaration in this regard has been incorporate in Annexure-III)	Must meet requirement	Annexure-III
Section –II (ITB 11.4.9)	Suspension due to withdrawal pf the bid within bid validity	Not under suspension/debarred / blacklisted based on execution of a bid securing declaration pursual to withdrawal of the bid pursuant ITB 11.4.9 & 11.4.5 To be furnished by the bidder on its letter head and Declaration as incorporated in Form No. 1.	Must meet requirement	To be furnished by the bidder on its letter head.
Section –II (ITB 11.4.9)	Pending litigation	Bidder's financial position and prospective long term profitability sound and assuming that all pending litigation will be resolved against the Bidder. (Declaration in this regard has been incorporated in Annexure-III)	Must meet requirement	Annexure-III
Section –II (ITB 11.4.9)	Litigation History	No consistent history of court/ arbitral award decisions against the bidder since 1 <sup>st</sup> January 2017 (Past 7 years)	Must meet requirement	Annexure-III



## 12. Earnest Money Deposit (EMD)

- Pursuant to ITB Clause 7, the Bidder shall furnish, the Earnest Money Deposits by way of e-challan (NEFT/RTGS) as indicated in the tender to be submitted to the bank as detailed from any Scheduled or Nationalized Indian Bank or by way of unconditional, irrevocable Bank Guarantee/ Insurance Surety Bond drawn from any Scheduled or Nationalized Indian Bank as per enclosed sample. In case of bidders submitting Bank Guarantee/ Insurance Surety Bond towards Earnest Money Deposit for the tender, Original "Bank Guarantee" towards EMD shall be submitted to "General Manager (BD), Dredging Corporation of India Ltd., 'Dredge House', HB Colony Main Road, Seethammadhara, Visakhapatnam 530022" in a separate envelope superscribed "Earnest Money Deposit for Tender No. DCI/DPA/2024 dtd. xx.12.2024" on or before due date and time of bid submission. If the Original Bank guarantee towards EMD is not received by the said due date and time, the bids shall be liable for rejection. The Earnest Money Deposit shall not carry any interest.
- 12.2 The Earnest money is required to protect Employer against the risk of Bidder's conduct, which would warrant the earnest money forfeiture, pursuant to ITB Clause 12.8.
- 12.3 The earnest money deposit submitted by way of bank guarantee/ Insurance Surety Bond shall be valid for forty five (45) days beyond the validity of the bid.
- 12.4 Any bid not secured in accordance with ITB Clause 12.1 will be rejected by the Employer as non-responsive.
- 12.5 Unsuccessful/ Disqualified bidders' earnest money deposits will be discharged or returned as promptly as possible, but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Employer or 30 days after date of award of work, pursuant to ITB Clause 13, without interest.
- 12.6 The EMD submitted by successful bidder shall be returned within 30 days after submission of Performance Security.
- 12.7 The earnest money deposits may be forfeited:
  - (a) If a Bidder:
    - (i) Withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form, or
    - (ii) Does not accept the correction of errors pursuant to ITB Clause 21.2 or
  - (b) In the case of a successful Bidder, if the Bidder fails:
    - (i) To sign the contract in accordance with ITB Clause 28; or
    - (ii) To furnish performance security in accordance with ITB Clause 29.
- 12.8 Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or Start-ups as recognized by Department for Promotion of Industrial and Internal Trade (DPIIT) are exempted from submitting the Tender Fee and EMD on submission of documents to the extent as per the Government of India rules. However, such exemption / relaxation will not be given to MSMEs in terms of pre-qualification / eligibility criteria (Experience, turnover and equipment etc.,).

#### 13. Period of Validity of Bids

13.1 The Tenderer should keep open the **validity of the Bid for 90 days** from the date fixed for its opening or from the date of its opening whichever is later. It is also obligatory for the Tenderer to keep the validity open for another 30 days in case a request in writing or by e-mail/ Fax by Employer is made before the expiry of the initial validity period of **90 days** stated above. The date of receipt of the request from DCI



- should be acknowledged. Should any Tenderer withdraw his tender before validity period, EMD submitted by the Tenderer shall be forfeited automatically without prejudice to the other rights of the Employer.
- In case Employer asks for extension in validity of bid, the earnest money deposit provided under ITB Clause 12 shall also be suitably extended.

## 14. Format and Signing of Bid

- 14.1 Special care shall be taken to write/type the rates in the price schedule such a way that no interpolation is possible.
- Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

#### D. Submission of Bids

## 15. Separate Bids Viz. Technical Bid and Financial Bid/Bill of Quantities:

- 15.1 The Technical Bid containing all requisite enclosures are to be uploaded in pdf format under "Techno Commercial Bid" duly signed alongwith official seal.
- 15.2 The Financial Bid / Bill of Quantity (BOQ) containing only bid rates and amounts against each service are required to be uploaded under "Financial/ price Bid / Bill of Quantity (BOQ)".
- Both the above bids are to be uploaded at a time on or before the due date and time specified in the IFB. Tenderer should ensure that his tendered amount as per Financial/price Bid/Bill of Quantity (BOQ) are not mentioned in any other document directly or indirectly.
- 15.4 If any of the bids are not uploaded properly as required by GeM portal, the said bids cannot be decrypted/opened by the Employer and hence the bids cannot be considered. In such cases, Employer will assume no responsibility and hence the bidders shall take proper care and ensure that their bids are properly uploaded with all the requisite documents.

## 16. Deadline for Submission of Bids

- Online Bids must be uploaded in GeM portal specified under Invitation for Bids (IFB) not later than the time and date specified therein.
- Employer may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 5, in which case all rights and obligations of the Employer and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

#### 17. Late Bids:

17.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.

## 18. Modification of Bids

18.1 The Bidder cannot modify or withdraw its bid after due date & time of submission of the technical bids.



## E. Opening and Evaluation of Bids

#### 19. Clarification of Bids

During technical evaluation of the bids, Employer may, at its discretion, ask the Bidder for a clarification about its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

## 20. Preliminary Examination

- 20.1 Employer will examine the Techno Commercial/ Technical Bids to determine whether they are complete, whether required earnest money deposit have been furnished, whether the documents have been properly signed, and whether the bids are generally in order, in line with the pre-qualification criteria given in IFB/NIT.
- 20.2 Employer may waive any minor informality, non-conformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.
- 20.3 Prior to the detailed evaluation, pursuant to ITB Clause 21, the Employer will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one, which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions mentioned in the tender document, will be deemed to be a material deviation. Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence and shall be final and binding on the Bidder.
- 20.4 If a bid is not substantially responsive, it will be rejected by the Employer and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

## 21. Evaluation and Comparison of Bids.

- 21.1 The Financial/ Price bid / Bill of quantity (BOQ) of only those tenderers who have been qualified in the Technical Bid will be opened at a later date. The date and time of opening of Financial bid / Bill of quantity (BOQ) shall be notified in GeM portal.
- 21.2 Arithmetical errors will be rectified on the following basis:

  If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Contractor does not accept the correction of the errors, its bid will be rejected, and its bid security shall be forfeited.
- 21.3 The Dredgers/crafts proposed for deployment shall have all the amenities/ arrangements/ provisions to utilize at Navigational Channel, Kandla Creek & Cargo Berths / Oil Jetties of Deendayal Port Authority, as specified in the scope of work.
- 21.4 Bill of quantity (BOQ) shall be inclusive of all Port dues for plying in Port waters, mobilizing & demobilizing of dredgers/crafts, repairs, spares/stores, fuel including Lube oils and all consumable items for the Dredgers/crafts, etc. and bills should be submitted in duplicate, i.e., original with one copy.

#### 22. Contacting the Employer/ Dredging Corporation of India Ltd. (DCI)

- 22.1 From the time of Bid opening to the time of Contract award, if any Bidder wishes to contact Employer on any matter related to the Bid, it should do so in writing.
- 22.2 Any effort by a Bidder to influence the Employer/ its representatives in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.



#### F. Award of Contract

## 23. Post –qualification

- 23.1 In the absence of pre-qualification, the Employer will determine to its satisfaction whether the Bidder is qualified to perform the contract satisfactorily, in accordance with the criteria listed in the Bidding Document from the evaluation of the Techno-Commercial Bid.
- The determination will take into account the Bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information, as the Employer deems necessary and appropriate.
- 23.3 The Employer reserves the right to require any Bidder to submit a break-up of the submitted Price Bid with adequate justification for each component of the Price Bid. By downloading this Tender Document and/or agreeing to participate in the Tender, the Bidders agree to provide a breakup of the Price Bid submitted to the Employer at the instance or request of the Employer, failing which the Bid Documents qua such Bidder shall be considered non-responsive to the Tender and shall be liable to rejected.

#### 24. Award Criteria

Subject to ITB Clause 28, the Employer will award the contract to the successful Bidder whose bid has been determined to be the lowest evaluated bid. However, Employer reserves the right to accept or reject any bid as specified in Clause 26 of ITB.

## 25. Right to Vary Period of Contract at Time of Award

Contract period is one year and can be extendable for further one year at mutual discretion of Employer & Contractor for carrying out dredging at Deendayal Port excluding mobilization & de-mobilization period. Contractor has to execute the stipulated quantity within the given timeframe.

There will not be any change in the rate due to variation of quantity based on the requirement of DPA/ DCI, if any.

In case the contract is extended as per requirement, Employer may by written notice intimate the Contractor to extend the contract further depending on requirement. For all extensions given by Employer, Contractor has to execute the work as per original contract price and as per Contract Conditions laid in Tender Document. Employer reserves right regarding giving extension/curtailment, deciding period of extension/ curtailment and decision in the matter will be final, binding on the Contractor and will not be subjected to the Arbitration.

In case of curtailment of the contract period at any stage, the tenderer shall be informed of the same in advance by serving **one-month notice**. In this case the tenderer shall not have any additional claim whatsoever. During the contract period and extended period, Contract shall be terminated by giving **14 days' notice** by the DCI Project Office Kandla, if the services of the tenderer are found to be inadequate or unsatisfactory or in violation of the terms/ conditions of the contract, without prejudice to its rights and remedies.

The finalized rates should be valid and operative during entire contract period, including extension, if any.



## 26. Right to Accept Any Bid and to Reject Any or All Bids

26.1 The EMPLOYER reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without assigning any reason and without incurring any liability to the affected Bidder or Bidders.

#### 27. Notification of Award

- 27.1 Prior to the expiration of the period of bid validity, EMPLOYER will notify the successful Bidder in writing by registered letter or fax/e-mail, that its bid has been accepted.
- 27.2 The notification of award will constitute the formation of the Contract.

## 28. Signing of Contract

28.1 At the same time as the EMPLOYER notifies the successful Bidder that its bid has been accepted, Bidder has to execute Contract Agreement with EMPLOYER at his cost within 10 days after receipt of work order.

## 29. Performance Security

29.1 Within fifteen (15) days of the receipt of notification of award from the EMPLOYER, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the Bidding Documents. Failure of the successful Bidder to comply with the requirement of ITB Clause 29 or ITB Clause 30 shall constitute sufficient ground for the annulment of the award of contract and forfeiture of the bid security/EMD.

## 30. Corrupt or Fraudulent Practices

The EMPLOYER requires that the Bidders/Contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the EMPLOYER:

- 30.1.1. defines, for the purposes of this provision, the terms set forth below as follows:
- 30.1.2. "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
- 30.1.3. "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the EMPLOYER, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the EMPLOYER of the benefits of free and open competition;
- 30.1.4. Employer will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question

Employer will declare a firm or company ineligible, either indefinitely or for a stated period of time, to be awarded a contract by EMPLOYER if it at any time determines that the firm or company has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract with EMPLOYER.

#### 31. Punitive Provisions:

Without prejudice to and in addition to the rights of the Employer to other penal provisions as per the bid documents or contract, if the Employer comes to a conclusion that a (prospective) bidder/ contractor directly or through an agent, has violated the code of integrity in competing for the contract or in executing a contract, the procuring entity may take appropriate measures including one or more of the following:



- i) If his bids are under consideration in any procurement:
- a) Forfeiture or encashment of bid security;
- b) Calling off of any pre-contract negotiations; and
- c) Rejection and exclusion of the bidder from the procurement process
- ii) If a contract has already been awarded:
- a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the procuring entity;
- b) Forfeiture or encashment of any other security or bond relating to the procurement;
- c) Recovery of payments including advance payments, if any, made by the procuring entity alongwith interest thereon at the prevailing rate;
- iii) Provisions in addition to above:
- a) Banning/ debarment of the bidder from participation in future procurements of the Employer for a period not less than one year;
- b) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
- c) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

#### 32. General

- 31.1 Bid Documents are not transferable.
- Where the Bidder fails to enter a price or a rate in any, or part of the bills, then for the item or items for which no price or rate has been entered, the cost shall be deemed to be fully covered by the prices or rates entered into the other items in the Price Schedule.
- 31.3 The bidder shall produce documentary evidence for the technical data included in the tender, as far as possible.
- 31.4 All Tender Documents shall be treated as private and confidential.
- Canvassing in connection with this tender is strictly prohibited and the tenders submitted by the bidders who resort to canvassing will be liable for rejection.
- 31.6 All correspondences must be made to the General Manager (BD), Dredging Corporation of India Ltd., Head Office, HB Colony Main Road, Seethammadhara, Visakhapatnam-530 022, till placing of work order and to the Project Manager, DCIL, Project office, Kandla thereafter.



## SECTION - III GENERAL CONDITIONS OF CONTRACT (GCC)

## GENERAL CONDITIONS OF CONTRACT PART I

(SHALL BE)

GENERAL CONDITIONS OF CONTRACT OF FEDERATION INTERNATIONALE DES INGENIEURS CONSEILS (FIDIC)

CONDITION OF CONTRACT FOR DREDGING AND RECLAMATION WORKS "DREDGERS CONTRACT" SECOND EDITION, 2016

## GENERAL CONDITIONS OF CONTRACT PART II

# CONDITIONS OF PARTICULAR APPLICATION (COPA) Conditions of Contract

The Conditions of Contract shall be the foregoing PART I – GENERAL CONDITIONS of the **CONDITION OF CONTRACT FOR DREDGING AND RECLAMATION WORKS "DREDGERS CONTRACT" SECOND EDITION, 2016** prepared by the Federation Internationale Des Ingenieurs-Conseils (F.I.D.I.C) 2016 Edition given in First Cover Part I (hereinafter called the General Conditions) as modified or added to by the following PART II – CONDITIONS OF PARTICULAR APPLICATION which shall be read and construed with the General Conditions as if they were incorporated therewith.

In so far as any of the Conditions of PARTICULAR APPLICATION may conflict or be inconsistent with any of the General Conditions, Part I, the Conditions of Particular Application, Part II shall prevail.

## GCC PART II - CONDITIONS OF PARTICULAR APPLICATION

SECTION A:	Conditions modifying or amplifying General Conditions of the same
	Clause number:
C1 4 4 2	D. C. V.
Cl. 1.1.2.	Definitions:
	"Base Date" shall be considered as 19th March 2024.
Cl. 1.1.14	"Employer" means the person named in the agreement and the legal
	successors in title to this person.
	Also referred as "Dredging Corporation of India", "Dredging
	Corporation of India Limited", "DCI" & "DCIL" in the tender
	document.
Cl. 1.1.28.	Added Cl. 1.1.28 "The Port" shall mean Deendayal Port Authority
	(DPA) as the case may be.
Cl. 1.1.29.	Added Cl. 1.1.29. "The heading /Marginal Notes" in these General
	Conditions of Contract shall not be deemed to be part thereof or be taken
	into consideration in the interpretation or construction thereof or of the
	contract.
Cl. 1.7	Assignment:
	Contractor shall not assign the whole or part of the Contract without the



	prior approval of the Employer. Employer will award the contract to the successful Bidder whose bid has been determined to be the lowest evaluated bid for the entire work. However, EMPLOYER reserves the right to accept or reject any bid as specified in Clause 26 of ITB.		
Cl. 2.5	Clause stands deleted		
Cl. 4.4.	The wordings in the clause "28 days" and "21 days" shall be read as "10 days" and "three months" respectively.		
Cl. 11.2	Clause 11.2 stands deleted		
Cl. 11.4	Para 2 modified as "Payment shall be made promptly by EMPLOYER within 15 days from the date of receipt of payment from DPA subject to submission of tax invoice with all relevant supporting documentary proof and complete in all respects."		
Cl. 11.9	Clause 11.9 stands deleted		
Cl. 13.4.	Clause 13.4 stands deleted		
Cl. 15.1, 15.2	15. The Clauses 15.1, 15.2 & 15.3 are deleted and replaced by:		
& 15.3	15. Resolution of Disputes		
	15.1. If any dispute or difference of any kind whatsoever arises between Contractor and Employer in connection with or arising out of the Contract Agreement, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation. Departmental Resolution Committee nominated by Chief General Manager / Managing Director of DCI will try to resolve the		
	dispute in an amicable way with the consent of DCI Management.  15.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either Contractor or Employer may give notice to the other party of its intention to commence arbitration/ judicial process, as hereinafter provided, as to the matter in dispute, and no arbitration/ judicial process in respect of this matter may be commenced unless such notice is given.		
	15.3. All disputes upto Rs.10.00 Cr (value of the dispute, but, not the value of the contract) shall be settled by arbitration under the provisions of Indian Arbitration and Conciliation Act-1996.		
	15.4. Each party shall appoint an arbitrator and Arbitrators so appointed shall appoint a third Arbitrator who shall be the Presiding Arbitrator and the award of Arbitrators shall be final and binding upon the parties hereto, subject to the provisions of the Arbitration and Conciliation Act, 1996 (Act 26 of 1996). The Arbitrators shall give a reasoned award within six months from the date of the appointment of the 3 <sup>rd</sup> Arbitrator. The contract shall be governed by Indian Laws.  The dispute arising out or under the contract will be subject to the exclusive jurisdiction of the Courts at Visakhapatnam only.  15.5. The Arbitrator shall give a reasoned Award and it shall be in accordance with the provisions of Arbitration & Conciliation Act, 1996 or any statutory modifications or re-enactment thereof.  15.6. Disputes of above Rs.10.00 Cr (value of the dispute, but, not the		



15.7.	value of the contract) shall be settled by the Court of Law. The venue for the Arbitration shall be Visakhapatnam and the Court at Visakhapatnam shall have exclusive jurisdiction on all
	matters with reference to this contract.

#### GENERAL CONDITIONS OF CONTRACT PART III -ADDITIONAL CLAUSES:

#### 1. General

Apart from above part-II amendments to FIDIC conditions, the following clauses shall also form part of contract and whenever in conflict shall prevail over Part-I FIDIC conditions and Part-II COPA

## 2. Application

These General Conditions shall apply to the extent that provisions in this and other parts of the Contract (Except GCC Part I & GCC Part II COPA) do not supersede them.

#### 3. Standards

The services provided under this contract shall conform to the Standards mentioned in "Technical Specifications".

## 4. The Contract & General Obligations of Contractor

# 4.1. Applicability of Laws on the Contract

The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of the High Court at Andhra Pradesh, India, including the following Acts.

- 4.1.1 The Indian Contract Act, 1872
- 4.1.2 The Major Port Authorities Act, 2021
- 4.1.3 The Employees Compensation Act, 1923
- 4.1.4 The Minimum Wages Act, 1948
- 4.1.5 The Contract Labour (Regulation & Abolition) Act, 1970.
- 4.1.6 The Dock Workers' Act, 1948
- 4.1.7 The Indian Arbitration and Conciliation Act (1996)

# 4.2. Contractor to Execute Contract Agreement

Within 10 days of receipt of work order, the Contractor shall, at his own expense, enter into and execute a Contract Agreement in Duplicate, to be prepared by him in the form annexed hereto. Until such Contract Agreement is executed, the other documents referred to in the definition of the term "Contract" here in before, shall collectively be the Contract.

# 4.3. Interpretation of Contract Document - Engineer's Power

Several documents forming the contract are to be taken as mutually explanatory of one another. Should there be any ambiguity, the Engineer shall have the power to correct the same and his decision shall be final and binding on the parties to the Contract. And, failure to comply with such decisions shall attract actions as per Termination Clause No. 16.1.

#### 4.4. Contractor Cannot Sub-let the Work

The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the Engineer. Even if such permission be granted, the Contractor shall remain responsible for:

(a) the acts, defaults and neglect of any sub-contractor, his agents, servants, or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen, and



(b) his full and entire responsibility of the contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "Piece rate" basis shall not be deemed to be subletting under this clause.

## 4.5. Contractors' Price is Inclusive of All Costs.

Unless otherwise specified, the Contractor shall be deemed to have included in his Tender/ Offer all his cost of man power, spares, stores with lubes, repairs, port dues, Taxes to the appropriate authorities and other things of every kind required for the completion of work.

## 4.6. Safety

Contractor is Responsible for safety of the dredgers/crafts including men and material: The Contractor shall be solely responsible for all adequacy, stability and safety of all site operations, even if any prior approval thereto has been taken from the Engineer or his Representative.

## 4.7. Contractor to Supervise the Works

Necessary and adequate supervision shall be provided by the contractor during execution of contract. The contractor or his competent and authorized agent or representative shall constantly be at site and instructions given to him by the Engineer or his Representative in writing shall be binding upon the Contractor subject to limitation specified in the Contract. The Contractor shall inform the Engineer or his Representative in writing about such representative / agent of him at site.

## 4.8. Damages

Contractor is Responsible for all Damages to Other Structures/ Persons, Caused by him in Executing the Work. The Contractor shall at his own protect and take all precautions in regard to the personnel or structure or services or properties belonging to the DPA / Employer and shall indemnify and keep indemnified the DPA/Employer against claim for injury, loss or damage caused by the Contractor in connection with the execution of the work to the aforesaid properties, structures and services and / or to any person including the Contractor's workmen. Cost of insurance Cover, if any, taken by the Contractor shall not be reimbursed by the EMPLOYER, unless otherwise stipulated in the Contract. Contractor is deemed to indemnify DPA and the Employer for any of claim/loss/ damage to anybody including third party on account of his operations in the port waters as the case may be.

## 4.9. Fossils, Treasures, Troves etc. are EMPLOYER's property

The contractor shall immediately inform the Engineer's representative if any fossil, coins, articles of value or antiquity and structures and other remains or things of geological or archeological importance be discovered at site which shall remain the property of the EMPLOYER/ the Port and protect them from being damaged by his workmen and arrange for disposal of them at the Contractor's expense as per the instruction of the Engineers representative.

#### 5. Indemnity

The Contractor shall indemnify and hold harmless the Employer / DPA, their personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:



- a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the execution and completion of the Works and the remedying of any defects, unless directly attributable to any negligence, willful act or breach of the Award by the Employer/ DPA, their personnel, or any of their respective agents, and
- b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:
  - i) arises out of or in the course of or by reason of the execution and completion of the Works and the remedying of any defects, and
  - ii) is attributable to any negligence, willful act or breach of the Tender by the Contractor, the Contractor's personnel, their respective agents, or anyone directly or indirectly employed by any of them.

## 6. Performance Security

- 6.1. Within fifteen (15) days after receipt of notification of award of the Contract, the Bidder shall furnish Performance Security to EMPLOYER for the amount specified in the Special Conditions of Contract.
- 6.2. The proceeds of the Performance Security shall be payable to the EMPLOYER as compensation for any loss resulting from the Bidders failure to complete its obligations under the Contract.
- 6.3. A sum equal to 10% of accepted contract value as illustrated in BOQ shall be deposited by the contractor by e-payment or by way of irrevocable, unconditional Bank Guarantee/ Insurance Surety Bond from Scheduled/ Nationalized Indian Bank as Performance Security Deposit in favour of Dredging Corporation of India Limited payable at Visakhapatnam and BG shall be as per Proforma enclosed. Bank Guarantee/ Insurance Surety Bond shall be valid till the completion of the contract including extended period if any, plus three months thereafter.
- 6.4. At the option of contractor, if EMD amount is paid to DCI by e-payment, same can be converted as part of Performance Security and balance performance security shall be submitted in the form of BG/e- payment to DCIL as per account details given.
- 6.5. In case the contract is further extended, sum equal to 10% of the contract value for the extended period of contract shall be deposited within 10 days after receiving a letter of extension of contract from EMPLOYER. Performance Security Deposit will not carry any interest. The same will be returned after completion of work duly certified by Project Manager. If Bank Guarantee is submitted against Performance Security, it should be valid till the completion of the contract including extended period if any, plus three months thereafter.
- 6.6. The performance security will be discharged by the EMPLOYER and returned to the Contractor not later than three months following the date of completion of the Contractor's performance obligations, including any warranty obligations, clearance of final bill, under the Contract.

#### 7. Insurance

- 7.1. Insurance of deployed equipment, men and material is completely on Contractor's responsibility.
- 7.2. The contractor shall without limiting his or the EMPLOYER's obligation and responsibilities, endorsement of Co-insurance and waiver of subrogation in favour of EMPLOYER and DPA to be issued.



- 7.3. The Contractor shall have insurance for the contractor's equipment and other things brought on to the site by the contractor for the sum sufficient to provide for their replacement at the site.
- 7.4. The Contractor shall have insurance against liabilities for death of or injury to any person or loss of or damage to any property arising out of the performance of the contract (P&I / Third Party Insurance including Wreck removal / Oil pollution).
- 7.5. The Contractor shall have insurance against any liability in respect of any damages or compensation payable to any workmen or other person in the employment of the contractor or any sub-contractor (Insurance against Accident to Workmen)
- 7.6. The dredgers/crafts shall have required number of life jackets, safety devices, fenders, anchors etc. The dredgers/crafts along with crew shall be insured for any mishaps.
- 7.7. The contractor shall provide evidence to EMPLOYER, prior to the start of the work at site, that the insurances required under the contract have been affected.
- 7.8. The contractor shall notify the insurers of changes in the nature, extent or program for the execution of the works and ensure the adequacy of the insurance at all times.
- 7.9. If the contractor fails to effect and keep in force any of the insurances required under the contract or fails to provide the policies to the EMPLOYER, then and in any such case the EMPLOYER may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from the any monies due or become due to the contractor and recover the same as a debt due from the contractor.
- 7.10. In the event that the contractor fails to comply with conditions imposed by the insurance policies affected pursuant to the contract, the contractor shall indemnify EMPLOYER against all losses and claims arising from such failure.

## 8. Payment:

- 8.1. The Contractor's request(s) for payment shall be made to the Project Manager, DCIL, Kandla in writing, accompanied by an invoice describing, as appropriate, the services performed and upon fulfillment of other obligations stipulated in the Contract.
- 8.2. The Bill for Services rendered will be scrutinized by Project Manager, Kandla for releasing the same on monthly basis. No cash payment or Advance for the work done or any other advance whatsoever will be payable to the Contractor.
- 8.3. The payment to be released in monthly bill shall be back-to-back with respect to quantities certified by DPA and same shall be binding on the Contractor. Payment shall be made by DCIL, within 15 days from the date of receipt of payment from DPA, subject to submission of tax invoice with all relevant supporting documentary proof and complete in all respects.
- 8.4. No interest will be payable on disputed payments, for any reason what-so-ever.

#### 9. Prices

Prices charged by the Contractor for Services performed under the Contract shall not vary from the prices agreed by the Contractor.

## 10. Change Orders

- 10.1. The Employer may, at any time by a written order or an email given to the Contractor, make changes within the general scope of the Contract for the services to be provided by the Contractor.
- 10.2. If any such change causes an increase or decrease in the cost of or the time required for the Contractor's performance of any part of the work under the Contract, whether changed or not changed by the order, an equitable adjustment shall be made in the Contract Price or



time for completion, or both and the Contract shall accordingly be amended. Any claims by the Contractor for adjustment under this clause must be asserted within thirty (30) days from the date of the Contractor's receipt of the Employer's change order.

## 11. Contract Amendments

Subject to GCC Part III Clause 10, no variation or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

# 12. Assignment

The Contractor shall not assign, in whole or in part, its obligations to perform under the Contract except with the Employer's prior written consent.

## 13. Subcontracts

The Contractor shall not subcontract any part of the work without prior written permission from Employer.

## 14. Delays in the Contractor's Performance.

- 14.1. The performance of Services shall be made by the Contractor in accordance with the time schedule prescribed by the Employer.
- 14.2. If at any time during performance of the Contract, the Contractor or its subcontractor(s) should encounter conditions impeding timely performance of Services, the Contractor shall promptly notify the Employer in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the Employer shall evaluate the situation and may at its discretion extend the Contractor's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 14.3. Except as provided under GCC Part III Clause 17, a delay by the Contractor in the performance of its service obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to GCC Part III Clause 15, unless an extension of time is agreed upon pursuant to GCC Part-III Clause 14.2 without the application of liquidated damages.

#### 15. Liquidated Damages

- 15.1. (a) The Contractor shall complete the whole of the work within the Time for Completion for the Works or Section (as the case may be) i.e., achieving / maintaining the depths, and completing all works which are stated in the Contract as being required for the works or Section to be considered to be completed for the purposes of taking over.
  - (b) Time period for completion of work:

	Tentative Commencement & Completion Schedule (for one year)			
Sl. No.	Description	Commencement month	Completion month	
1	Maintenance Dredging in Navigational channel of Kandla Port between Buoy No. 2 to 4 (Zone-IA) at minimum depth of 10.0 m below CD and disposing off the dredged material in the disposal area as shown in the drawing including mobilization and demobilization of all equipment, insurance costs and all other incidental expenditure arising out of or in connection with the contract, etc.	Tentatively Feb'25	1st week of Aug'25	



2	Maintenance Dredging in the Kandla Creek Outer to maintain a depth of 10.0 m below CD during the contract period as per drawing including dispose off the Dredged Material at dumping area from the Dredging area including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total insitu quantity dredged in the area.	From the date of Commencement i.e. after 30 days from Mobilization Period	12th Month
3	Maintenance Dredging in the Kandla creek Inner between North of Buoy No. 15A to proposed Oil Jetty No.8 during the contract period to maintain a depth of 10.0 m below CD as per drawing including dispose off the Dredged Material at dumping area as specified including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total in-situ quantity dredged in the area.	From the date of Commencement i.e. after 30 days from Mobilization Period	12th Month
4	Maintenance Dredging at cargo berths/ Oil Jetties during the contract period and disposing off the dredged material in the disposal area as shown in the drawings. The maintenance dredging is to be carried out up to the designed depths below CD from the existing depths of the specified areas during and dumping at designated dumping ground. The payment shall be made on the basis of total in-situ quantity dredged in the area; however the exact quantity shall be worked out on the Joint Pre and Post Dredged Survey of the area.	From the date of Commencement i.e. after 30 days from Mobilization Period	12th Month
5	Capital Dredging at OJ 9 in the berth pocket area to make available draft of 13m and alongside the jetty to achieve depth of 14.1. m below CD and capital dredging in manuevering area of OJ 9 to achieve depth of 10.0 m below CD respectively including dispose off the Dredged Material at dumping area as specified including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total in-situ quantity dredged in the area.	From the date of Commencement i.e. after 30 days from Mobilization Period	06th Month
6	Deepening the Navigational Channel of Deendayal Port between Buoy No. 2 to 1 (Zone IB) from existing depth to achieve a depth of 10.0m BCD with side slopes of 1:5 including disposing off the dredged material at dumping area as specified including mobilization and demobilizations of all equipment, insurance costs and all other incidental expenditure arising out of or in connection with the contract etc. The payment shall be made on the basis of total in-situ quantity dredged in the area, however the exact quantity shall be worked out on the Joint Pre and Post dredged survey of the area.	Tentatively Feb'25	1st week of Aug'25



7	Maintenance Dredging in Navigational channel of Kandla	Tentatively by	1st week
	Port between Buoy No. 4 to 1 (including Zone IA and	Aug'25	of Feb'26
	<b>IB)</b> at minimum depth of 10.0 m below CD and disposing	_	
	off the dredged material in the disposal area including		
	mobilization and demobilization of all equipment, insurance		
	costs and all other incidental expenditure arising out of or in		
	connection with the contract, etc.,		
	Note: In the event of the dredging at Zone IB (item no. 6		
	<b>above)</b> is delayed or taken over in advance from the period		
	as mentioned in the tender, the period mentioned for item		
	no.7 shall be varied accordingly.		

- (c) The compensation for not maintaining the depth/width during the contract period including extended period will be applicable as per tender conditions.
- (d) In the event of the contractor failing to complete the work in all respects within the time specified or within the extended time that may be allowed by the Engineer as per the terms of the contract, hereof the contractor shall pay to recover a sum equal to 0.5% per week or part thereof the total value of capital dredging component of the contract subject to maximum of 10% of the contract value of capital dredging component as liquidated damages.( for Capital dredging Item No.05 & 06 of BoQ)
- (e) In case part / portions of the work can be commissioned and port operates the portion for commercial purposes, the rate of LD will be restricted to the uncompleted/ undelivered value of work, the maximum LD being on the entire contract value.
- (f) Notwithstanding the payment of liquidated damages if any, this shall not relieve the contractor from his obligation to complete the work or from any other obligations / liabilities under this contract.

## Termination for Default

- 16.1. If the Contractor fails to carry out any obligation under the Tender, the Engineer-In-Charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.
- 16.2. The Employer shall be entitled to terminate the Tender if the Contractor:
  - c) fails to comply with the provision of Performance Security
  - d) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract;
  - Without reasonable excuse fails:
    - i) to proceed with the Works on the Works Commencement Date
    - ii) to comply with a notice issued within 28 (twenty eight) days after receiving it
  - f) subcontracts the whole of the Works or assigns the Tender without the required agreement
  - becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against the Contractor, compounds with its creditors, or carries on business under a receiver, trustee or manager for the benefit of its creditors, or if any act is done or event occurs which (under Applicable Laws) has a similar effect to any of these acts or events, or



- h) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
  - i) for doing or forbearing to do any action in relation to the Contract, or
  - ii) for showing or forbearing to show favour or disfavour to any person in relation to the Tender; or
  - iii) if any of the Contractor's personnel, agents or subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f); provided however that lawful inducements and rewards to Contractor's personnel shall not entitle termination.
- i) if a Force Majeure Event subsists for a period exceeding 180 (one hundred and eighty) days within a continuous period of 365 (three hundred and sixty-five) days.
- 16.3. In any of these events or circumstances, the Employer may, upon giving further 7 (seven) days' notice to the Contractor, terminate the Tender vis-à-vis the Contractor and expel the Contractor from the Site. However, in the case of sub-paragraph (d) above, the Employer may, by notice, terminate the Tender immediately.
- 16.4. The Employer shall be entitled to terminate the Tender, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 14 (fourteen) days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security (after making adjustments, if any). The Employer's election to terminate the Tender shall not prejudice any other rights of the Employer, under the Tender or otherwise.
- 16.5. Upon termination of the Tender under Clause 16.3 or 16.4 above, the Contractor shall: (i) cease all further work, except for such work as may have been instructed by the Engineer for the protection of life or property or for the safety of the Works; (ii) leave the Site and deliver any required Contractor's Equipment, all Contractor's Documents, and other design documents made by or for the Contractor to the Engineer.

  However, the Contractor shall use its best efforts to comply immediately with any reasonable instructions included in the notice (i) for the assignment of any sub-contract, and (ii) for the protection of life or property or for the safety of the Works.
- 16.6. After termination, the Employer may complete the Works itself and/or arrange for any other entities to do so. The Employer and/or these entities may use any Contractor's Equipment, Contractor's Documents and other design documents made on behalf of the Contractor for the purposes of completion of the Works.
- 16.7. After completion of the Works, the Employer shall give notice that the Contractor's Equipment will be released to the Contractor at or near the Site. The Contractor shall promptly arrange the removal of such Contractor's Equipment, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Employer, the Contractor's Equipment may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.
- 16.8. As soon as practicable after a notice of termination under Sub-Clause 16.3 or 16.4 has taken effect, the Engineer-In-Charge shall proceed to determine the value of the Works and any other sums due to the Contractor for work executed in accordance with the Tender.
- 16.9. After a notice of termination under Sub-Clause 16.3 or 16.4 has taken effect, the Employer may:
  - a) withhold further payments to the Contractor until the Costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other Costs incurred by the Employer, have been established, and/or
  - b) recover from the Contractor any losses and damages incurred by the Employer and any extra Costs of completing the Works, after allowing for any sum due to the Contractor



under Clause 16.8 above. After recovering any such losses, damages and extra Costs, the Employer shall pay any balance to the Contractor.

## 17. Force Majeure

- 17.1. "Force Majeure" means an event beyond the control of the Contractor and the Employer and not involving the Contractor and the Employer's fault or negligence and which is not foreseeable. Such events may include, but are not restricted to (i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies; (ii) rebellion, terrorism, revolution, insurrection, military or usurped power or civil war; (iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor's personnel and other employees of the Contractor and subcontractors; (iv) munitions of war, explosive materials, ionising radiation or contamination by radioactivity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and (v) natural catastrophes such as earthquake, tsunami, hurricane, typhoon or volcanic activity.
- 17.2. However, Force Majeure should not be used by a Party to attempt to escape liability for bad performance. If there is delay in performance or other failures by the Contractor to perform its obligation under the Tender due to event of a Force Majeure, the Contractor shall not be held responsible for such delays/failures.
- 17.3. If a force majeure situation arises, the Contractor shall promptly notify the Employer in writing of such conditions and the cause thereof within 21 (twenty one) days of occurrence of such event with reasonable evidence thereof. The Contractor shall, upon given notice, be excused performance of such obligations for so long as such Force Majeure prevents it from performing them. Unless otherwise directed by the Employer in writing, the Contractor shall continue to perform its obligations under the contract as far as reasonably practical and shall seek all reasonable alternative means of performance not prevented by the Force Majeure Event. The Contractor shall give notice to the Employer when it ceases to be affected by the Force Majeure Event.
- 17.4. Notwithstanding anything contained herein, if the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of force majeure for a period exceeding 180 (one hundred and eighty) days or more within a continuous period of 365 (three hundred and sixty-five) days, the Employer shall have the right to terminate the Tender qua the Contractor without any financial repercussion.

## 18. Governing Language:

The contract shall be written in English. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English only.

# 19. Applicable Law

The Contract shall be interpreted in accordance with the laws of India.

## 20. Compliance with Statutory Requirements:

The contractor shall at all times during the continuance of the contract comply fully with all existing acts, regulations and bye-laws including all statutory amendments and re-enactment of state or central government and other local authorities and any other enactments and acts that may be passed in future either by the state or the central government or local authority including Indian Employees Compensation Act, Contract Labour (Regulation and Abolition) Act 1970 and Equal Remuneration Act 1976, Factories Act, Minimum Wages Act, Provident Fund Regulations, Employees Provident Fund Act, Merchant Shipping Act and other Maritime Legislations / Rules / Regulations etc. in so far as they



are applicable to this contract. The Contractor shall indemnify and keep the Employer indemnified in case any proceedings are taken or commenced by any authority against Employer for any contravention of any of the Laws, Bye-laws or scheme by the Contractor. If as a result of Contractor's failure, negligence, omission, default or non-observance of any provisions of any laws, the Employer is called upon by any authority to pay or reimburse or require to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any monies due or that may become due to the contractor under this contract or any other contract or otherwise recover from the contractor any sums which the Employer is required or called upon to pay or reimburse on behalf of the contractor.

#### 21. Taxes and Duties

- 21.1 The contractor shall pay all taxes, levies, duties, etc. excluding applicable GST which he/she may be liable to pay to the State Government or Government of India or any other authority under any law for the time being in force as on the date of submission of tender in respect of or in accordance with the execution of contract.
- 21.2 If any new taxes and/or increase/ decrease in existing taxes and duties are imposed subsequently by Central/State Government, the same will be applicable to this contract. Any change in legislation during the contract period with regard to taxes, same will be applicable to this contract.
- 21.3 Bills/Invoices will be settled including GST and paid upon submission of proof of payment of GST for the previous bill and filling of returns.
- 21.4 GST registration number of the contractor & DCIL shall be printed on the bill voucher. GST component should be shown separately on the bill which is only payable by DCIL.

## 22. Income Tax Deduction/Tax deducted at source:

Deduction of Income Tax shall be made from any amount payable to the contractor as per the relevant provisions of the Income Tax Act or as applicable from time to time.

## 23. Employment of Relatives:

The bidder shall enclose a certificate that "he/she is not related to any officer of the Dredging Corporation of India Limited or any other officer of the rank of Under Secretary or above in the Ministry of Shipping, Government of India". The bidder shall also furnish a declaration alongwith his tender enclosing the names of the relatives who are employed in DCI.

## 24. Notice to Contractor

Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor, if the same is posted or sent by hand to the address given in the tender or to the Contractor's Site Office or in case of EMPLOYER's enlisted Contractor to the address as appearing in the EMPLOYER's Register or to the Registered Office of the Contractor. The time mentioned in these conditions for doing any act after direction or notice shall be reckoned from the time of such posting or dispatch. Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor if it is sent through email. Contractor shall not change his email id from what he has notified in the Vendor Code Creation Form and EMPLOYER shall not be responsible for any consequences for any change of email id by the Contractor.



#### 25. Notices

- 25.1. Any notice given by one party to the other pursuant to the Contract shall be sent in writing or by e-mail or Fax and confirmed in writing to the address specified for that purpose in the Special Conditions of Contract.
- 25.2. A notice shall be effective when delivered (email) or on the notice's effective date, whichever is later.
- 26. If the contractor abandons the contract or fails to commence the work without valid reasons or unable to maintain sufficient progress as per the agreed program, Employer may after giving 5 days' notice in writing to the contractor, carry out the remaining work in full or part as deemed necessary at the cost and risk of the contractor. The cost incurred due to the contractors default as above or any other sum pending/ to be recovered, will be deducted/ recovered from any payment/sum due or becomes due to the contractor from this contract or from any other contract without prejudice to any other method of recovery.

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## SECTION - IV -SPECIAL CONDITIONS OF CONTRACT (SCC)

#### General

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions is indicated in parentheses.

## 1. Scope of Work:

1.1 Employer intends to charter Trailer Suction Hopper Dredger (TSHD) for carrying out the dredging works as mentioned below for a period of one year and can be extendable for further one year at same rates, terms & conditions as per the requirement and at the mutual discretion of Employer & Contractor. The dredging shall be commenced within 30 days at Deendayal Port from the date of work order.

The maintenance dredging of navigational channel includes achieving and maintaining / maintaining the depths as below and disposing off the dredged material in the disposal area as specified.

The proposed dredging work involves carrying out the capital/maintenance dredging in the navigational channel, Kandla creek and berth pockets at Deendayal Port and to continuously maintain the required depths at navigational channel and berth pockets. The work includes maintenance dredging in front of cargo berths, oil jetties No. 1 to 8, maintenance jetty, zero panel, Bunder Basin, Flotilla Jetty, SNA jetty, Kandla Creek-Outer & Kandla Creek-Inner, and in the Navigational channel (Zone IA & IB). The work also includes capital dredging at Oil Jetty No. 9 and Zone-IB of navigational channel. The Dredging work shall involve removal of sand, silt, clay, and admixtures thereof.

It is likely that under water obstructions might be encountered within the various dredging areas. No idle time charges or loss of production shall be paid to contractor in the event of any obstruction being encountered, which obstructs the operation of the dredger. If, however, during the execution of the works the contractor encountered physical obstructions or physical conditions, other than climatic conditions on the site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer, with a copy to the Employer. On receipt of such notice the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and the Contractor, determine, and shall notify the Contractor accordingly, with a copy to the Employer. Such determination shall take account of any instruction, which the Engineer may issue to the contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer, which the Contractor may take in the absence of specific instructions from the Engineer.

The general layout of harbour facilities at Deendayal Port are shown in the Layout Plan of the Port DRG. NO: KPH/2019 placed in Appendix-A.



# 1.2 Areas to be dredged:

Dredging shall be carried out by deploying 01(one) number of suitable capacity Trailer Suction Hopper Dredger (TSHD) with required ancillaries and disposing off the dredged material in the disposal area as specified.

## Maintenance dredging:

Maintenance dredging in the navigational channel shall be carried out to achieve & maintain the design depths as specified below:

Sl. No.		Width to be Achieved & Maintained in m	Depth below Chart Datum to be Maintained in m	Length of the channel in m	Ouantity in
01.	Zone IA (between Buoy No. 2 to 4) for a period of 6 months	300	10	2250	0.455
02.	Zone IA & Zone IB (between Buoy No. 4 to 1) for a period of 6 months	300	10	6420	0.74

Regional General Manager (WRO), DCIL may assign additional zones of navigational channel such as Zone-I / Zone-II based on the requirement for any specific period at mutually agreed rates.

The maintenance dredging alongside Cargo Berths & Oil Jetties includes achieving and maintaining the depths and slopes as below and disposing off the dredged material in the disposal area as specified.

Sl. No.	Location	Design Depths (below CD)	Side Slopes
01.	Cargo berth - 1 to 5	11	Natural slope upto 1:3
02.	Cargo berth - 6 to 10	12.5	Natural slope upto 1:3
03.	Cargo berth - 11 to 16	14.1	Natural slope upto 1:3
04.	Tug / Flotilla Jetty	6	Natural slope upto 1:3
05.	Oil Jetty 1 and 3	11.8	Natural slope upto 1:5
06.	Oil Jetty 2 and 4	11.5	Natural slope upto 1:5
07.	Oil Jetty 7, 8 and 9	14.1	Natural slope upto 1:5
08.	Maintenance Jetty	6	Natural slope upto 1:3
09	Zero Panel	4	Natural slope upto 1: 3



10	Bunder Basin	0	Natural slope upto 1: 3
11.	SNA Jetty	6	Natural slope upto 1:3

The above dredging areas at Sl. No. 1 to 11 will be handed over in part to contractor to execute the dredging work as per the priority and availability of vacant berths/ jetties by Employer. No idle time charges shall be paid on account of non-availability of vacant berths/jetties.

## Capital dredging:

Capital dredging in the Oil Jetty OJ 9 and Zone-IB of navigational channel shall be carried out to achieve the design depths as specified below:

Sl. No.	Location	Depth to be achieved (below CD)	Side Slopes
01.	Proposed Oil Jetty No. 9	14.1	Natural slope upto 1:5
02	Navigational Channel between Buoy 2 to 1 (Zone-IB)	10.0	-

In event of non-completion of quantities of capital dredging (item No. 5 & 6 of BOQ) by contractor in the time period specified, the liquidated damages shall be applicable as specified.

- 1.3 The Contractor has to ensure that at no point of time the depths deteriorate to less than the pre dredging depth or the depths already achieved by the Contractor, due to any reasons whatsoever including withdrawal of dredger for routine maintenance, machinery breakdown, etc.
- 1.4 The trailer suction hopper dredger of minimum 1500 cum capacity shall be available throughout the contract period. In case of breakdown / dry docking / major repairs to the main dredger; substitution shall be allowed. However, the Contractor has to submit proof of dry dock / afloat repair facility booked at the time of submitting permission to sail/ replace the main dredger.
- 1.5 The contractor shall ensure that the deployments of Contractor's equipment including dredgers and dredging operations in the channel are carried out in such a manner that the shipping operations are not affected. For removal of any doubt it is clarified that the shipping movements will take priority over dredging work and the contractor shall be deemed to have considered the same while submitting its bid.
- 1.6 Notwithstanding the requirements for submission of method of work statement as part of the tender, the Contractor shall submit details of working methods, including details of Contractor's Equipment, survey and positioning equipment, etc. to be deployed to the Employer within 7 days from the date of issue of Work Order.



- 1.7 The dredging methods shall be such as to ensure that no damage is caused to marine structures/floating buoys in the vicinity of the dredging area/Dumping area.
- 1.8 The contractor is required to deploy maximum of one Trailing Suction Hopper Dredger in dredging areas. Further, it shall be the sole responsibility of the contractor to assess on his own, the requirement of dredgers to meet the actual site requirements. In case if any higher hopper capacity is required to maintain the assured depths in the navigational channel, same shall be deployed at no extra cost.
- 1.9 The contractor shall carryout repeated maintenance dredging alongside berths, if found necessary for maintaining the specified depths. Monthly quadruplicate survey shall be carried out along berths for assessing the extent of siltation. The Employer shall decide on the requirement of maintenance dredging for a particular month based on the monthly survey data.

#### 1.10 **Mobilization**

- 1.10.1 The period of mobilization for trailer suction hopper dredger(s) and other equipment shall be 30 days from the date of issue of Work Order.
- 1.10.2 In case of delay in deployment of dredger / commencement of work beyond 15 days from the scheduled date of commencement, the Contract may be rescinded by the Employer. In case the Contract is rescinded, the Performance Guarantee Bond or the Security Deposit shall be forfeited, and the contract will be executed through other contractor at the risk and cost of the original Contractor. However, even if the Contract is not rescinded, the sum payable by the Contractor for the delay beyond 15 days will be at the rate not less than Rs.7,10,000/- per day.
- 1.11 Continuous non-deployment of dredger on site for more than 7 days shall require a substitution of the dredger equivalent to the performance parameter of the dredger.
- 1.12 In case of continuous non-deployment of dredger for more than 30 days, the Contractor shall substitute the dredger with a single dredger equivalent to the performance parameters of the deployed dredger and also resume the total dredger capacity deployed before the withdrawal of the deployed dredger, failing to do which the Employer reserves the right to call for termination of the contract as per the applicable Clauses. Shortfall penalty and other penalties will also be applicable during the period, as per the tender conditions.
- 1.13 The Contractor shall be deemed to have taken in to account or allowed in its programme and the amount quoted in the Bill of Quantities for loss of time and/or revenue due to tidal working or for all delays due to weather conditions including wave action/lack of flotation, etc. of Contractor's Equipment including Dredger and in his programme and the amount quoted in the Bill of Quantities.
- 1.14 The Contractor shall extend full co-operation and facilities required to the employer to carry out monitoring / research of the dredging process from time to time free of cost.

1.15 During execution of the work, the Employer may engage / depute PMC, third party inspection agency or any other Government authorized agencies in matters related to monitoring of dredging activity. The Contractor is bound to extend all cooperation and share data with such authorized agencies. Any costs towards collection of samples and related testing of material shall be borne by the Contractor. The results of such tests are binding on the Contractor. In this regard, it is clarified that the Employer will not entertain any claim whatsoever from the Contractor.

## 1.16 **Tolerance**:

The vertical tolerance will be 0.10 m below design depth for the maintenance dredging. Vertical tolerance up to 0.10 m below design depth is permitted for capital dredging component of the work. There is no horizontal tolerance allowed. However, no payment will be made for the over dredging done beyond the design depth.

- 1.17 Marine Geotechnical investigation was carried out in 2016-17. Extract from the report of March 2017 pertaining to 21 Marine Bore Logs in Kandla Creek, Navigational Channel & Oil Jetty No. 7 and their periphery are placed in the Appendix-A(2). While providing the above soil data, the Employer draws the attention of the bidder, that bidder has to make their own assessment with respect to the soil present in the areas covered under the scope of work for capital and maintenance dredging and submit the bid. Further, it is hereby clarified and categorically stated that during execution of dredging work, if any variation in the soil data provided herein vis-à-vis the dredged soil occurs; in such cases, no claim whatsoever from the contractor will be entertained by the Employer.
- 1.18 Information on Under Water Objects:
  - DPT/DPA had organized the study of Geophysical Investigations (GPI) like Side Scan Sonar (SSS), Sub Bottom Profiler (SBP) & Magnetometer (MMT) survey for identification of underwater objects at DPT in July 2019. The details of the locations and particulars of the underwater objects with location and other details are placed at Appendix-A(3).
- 1.19 DPA may appoint a Consultant (an independent third party) for auditing the dredging work during the entire Tender Period. For the purpose of auditing the dredging work, a representative of the Consultant shall remain onboard each of the dredgers deployed 24 hours a day during the entire Tender Period.
- 1.20 The Consultant's representative on board dredger shall oversee dredging operations, shall have access to all dredging operation records, survey charts etc. The Consultant's resident engineer and deputy resident engineer shall have access to all dredging machineries for improvement of dredging efficiency of the dredger as and when necessary.
- 1.21 The Employer or his representatives shall have at all times access to the Contractor's Equipment and the Contractor shall provide necessary water transport facilities at its own cost for them from the waterfront to the Site.
- 1.22 A launch shall be made available at site for the Employer or for their authorized representative to access the dredger and for inspection of the Works in progress.



## 1.23 Acceptance:

The Contractor shall notify the Employer in writing, when it considers the Works as completed. Within fifteen days of receipt of such notice, the Employer/Engineer shall survey the areas jointly with the Contractor in the presence of the Employer and a third independent outside agency to be nominated by the Employer. The dredging work shall not be considered as complete nor shall the same be taken over by the Employer until confirmed by a survey that the seabed is dredged to specified levels and profiles.

1.24 Idle time charges are not payable for idling of any dredger or other equipment including the men and machinery for reasons whatsoever under this contract and no such claims shall be entertained even at a later date.

## 2. Payment Terms

- 2.1 Contractor shall submit the correct dredging bills for the relevant BOQ items, complete in all respects, at the end of every Calendar month and Employer shall make payment within 15 days of receipt of payment from DPA. The bill should include all relevant documents/invoices including Daily Dredging Reports duly certified by the Master of the dredger, DPA's authorized representative onboard and DCI's representative, alongwith survey charts, quantity calculations, ruling shortfall calculations, etc.
- 2.2 The payment in Indian Rupees shall be released to the designated Bank Account of the Contractor maintained in any nationalized / scheduled bank in India.
- 2.3 The Contractor shall be required to submit Tax Invoice complying with the requirement of GST Law, time being in force along with all relevant details and workings as per advice of the Engineer of the Contract. If required by Employer, the Contractor would be obliged to submit documentary evidence of remittance of GST and other taxes claimed through the Invoice, to Govt. Tax Deduction at Source (TDS) as per law in force in India (both on account of Income Tax and GST), shall be made by Employer from the payment released to the Contractor.

## 3. Measurement of Volume of dredged materials

Except as otherwise stated in the Contract and notwithstanding local practice:

- (a) Measurement shall be made on joint Quadruplicate Bathymetry survey to arrive the in-situ quantity basis dredged quantity.
- (b) The method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

#### 4. Hydrographic Surveys

The joint quadruplicate / quintuplicate pre-dredge, post dredge and monthly bill surveys shall be arranged by Employer. Contractor shall depute his representative to witness those surveys, which will form the basis for payment. However, all intermediate check surveys / progressive surveys shall be carried out by Contractor with suitable equipment, on its account.



Soundings shall be taken across the cross sections of 50 m intervals along the channel with depth along the cross section of 25 m intervals or such other spacing as DPA may direct. Soundings shall be taken rounded off to the nearest meters and decimeters.

## 4.1 Survey Personnel, etc.:

The Contractor shall, at its own cost charges and expense, engage well qualified, experienced and competent hydrographic surveyors to witness all the necessary surveys, measurements and setting out of the works. The names, qualifications, and experience of such surveyors shall be submitted to the Engineer for his approval before they are engaged or deployed for the survey. The Contractor shall, for the purpose of checking the survey and setting out, provide to the Engineer all the assistance which he may require. The Surveyor shall be selected having appropriate experience, and as far as possible, the same surveyor shall be provided throughout the Contract Period.

# 4.2 Volume Computation

In order to calculate volumes in dredging surveys, the methodology would be determined by following factors:

- (a) Technique of Sounding i.e. Single Beam or Multi Beam.
- (b) Nature of seabed i.e. smooth (sand or mud), harsh (rocky).
- (c) Shape of the channel i.e. vertical walls. The volume will be computed considering the depths up to the toe-lines on either side of the channel and the horizontal tolerance will be nil. Similarly, the volume will be computed up to design depth only.

Based on above factors, one of the following methodologies in any hydrographic software may be adopted:

- (a) TIN Volumes: Triangulated Irregular Network (TIN) Volumes are based on the true positions of depths to calculate the volume of a surface. This calculation involves modelling the surface as a collection of small planes. TIN's can either be derived from a gridded bathymetry source i.e. surface) or from a point cloud. One advantage in using the TIN method (particularly for point data) is that the true position of the source depths will be utilized in the volume calculation. Entire sounding data within the area in question can be considered. This is the historically preferred method for most dredging type applications where volume is critical.
- **(b) Hyperbolic Volumes:** For this method, a hyperbolic cell is created from the centres of every four adjacent grid cells. The depths from the grid cells are used as the depths for the corners of the hyperbolic cell. For this calculation, the surface is modelled as a collection of hyperbolic paraboloid sections, with a hyperbolic paraboloid created to smoothly pass through the points of each hyperbolic cell. This gives a smooth approximation of the surface and good volume results but is processing intensive and time consuming.
- (c) Rectangular: In this method, a single depth value from each cell (or bin) in the



surface is used to calculate the volume. The surface is modelled as a collection of disjointed rectangular prisms, with the depth for each grid cell becoming the depth of the prism. In comparison to the previous hyperbolic method, this results in a much more 'simple' volume calculation which is processed much faster, however the accuracy of the computed volume may not be as reliable. One limitation on the rectangular volume method is the inability to perform a volume calculation against a sloped or non-horizontal surface in a reference model (for example the bank of a channel). This is because by definition, a rectangular prism cannot have a sloped edge, so only horizontal reference surfaces are supported.

## 4.3 Volume Comparisons:

As previously outlined, there are a number of different methods available to the Hydrographic Surveyor or Engineer for volume determination. Depending on the technology available to conduct the survey, different methods may be adopted to calculate and derive the volumes, but one approach may produce a more realistic solution. If the user only has access to a single beam echo sounder, they will be limited to end area volumes and TIN volumes. For a full density multi-beam survey, rectangular and hyperbolic volumes can also be taken into consideration.

The nature of the seafloor (or riverbed/reservoir) could be another factor in determining the most suitable volume method to be used. If the bottom topography is smooth (such as with sand), hyperbolic volumes, which produce a smooth estimate of the terrain using constructed hyperbolic paraboloids could yield the best results. For a harsher, rocky terrain, TIN volumes utilizing the true positions of each depth may be the most robust answer. It's necessary to test and validate the possible solutions on a number of data sets to assess their merit.

Prior to arriving as the dredged volume adequate attention is to be paid vis-à-vis provision on the contract in terms of over dredge allowance permissible and other factor that would have a bearing on dredged volume to be computed.

## 5. Monitoring of the Dredging Process

The Contractor shall for the purpose of ensuring that the work is executed as per schedule and with a view to control and verification of operations, ensure continuous monitoring and recording of the dredging process. The Contractor shall provide at its own expense, the electronic dredger positioning and control systems including necessary instrumentation, sensors, calibration, data storage and displays and shall ensure the continuous operations thereof. The Contractor shall daily make available to the Engineer the data collected by the Contractor fully decoded and processed, and the same shall at all times be open for inspection by the Engineer or his representatives. The Contractor shall allow the Engineer or his representative to check the data/ dredging process onboard on request/ whenever required.

The Contractor shall provide/submit the DLM prints, track plot charts to the engineer everyday showing the areas where dredging operations are carried out including the areas



where dredged material is disposed of. All data and evaluation thereof made available by the Contractor to the Employer shall remain in the custody of the Employer.

## 6. Deposition of Dredged Soil

All the soil and other dredged material excavated by the Contractor under this Contract shall be deemed to be the property of the Employer and deemed to belongs to the Employer and shall be disposed of only in such manner as directed by the Employer. The dredged material from the proposed dredging work shall be disposed at the specified disposal grounds as explained below:

- (a) The dredged material by trailer suction hopper dredger from the maintenance dredging of Navigational channel, Kandla Creek and Oil Jetties 1 to 4 and Oil Jetty No. 7 to 8 shall be disposed at the designated dumping ground East of OTB within 1 km radius of the location at (i) Latitude 22° 51' N and Longitude 70° 10' E and (ii) Latitude 22.8376 N and Longitude 70.187 E (as per CWPRS Report).
- (b) The dredged spoil from Capital dredging for OJ-9 & its maneuvering area shall be disposed at designated dumping ground East of OTB within 1 km radius of the location at Latitude 22<sup>o</sup> 51' N and Longitude 70<sup>o</sup> 10' E.

Note: All the coordinates given in this tender are WGS 84 Coordinates System.

The position of the designated dumping ground as stated above (East of OTB) for the trailer suction hopper dredger is the present position and indicative in nature and subject to variation as per physical conditions and morphological changes. Therefore, the Employer/Engineer reserves the right to relocate the above dumping ground to any other location approximately within the distances of 3 km of the Southern boundary of the above dumping grounds. Any change in the location of the dumping site shall not entitle the Contractor to make any claim against the employer either for extra time or money. The contractor shall systematically dump the material in various dump boxes in the designated dumping area so that the material is well distributed in the entire dumping area and disperses. The contractor has to carry out periodical surveys in the dumping area and monitor the quantity of material dumped vis-à-vis the reduction in the reduced depths at the dumping area. The Contractor shall ensure that no soil is dumped beyond or outside the dumping areas. In the event it is noticed by or brought to the notice of the Engineer or Engineer-incharge or Engineer's Representatives that the contractor is dumping the dredged material at places other than designated areas specified by the Engineer, the Contractor shall be liable to pay an amount of Rs. 5,00,000/- per load and the same shall be recovered from the amount due to the contractor.

The material to be dredged in the channel shall be disposed of at the dumping ground at the location shown in the survey chart enclosed.

#### 7. Tolerance for Dredging

The dredging shall be carried out to the designated levels shown on the drawings or such modified levels as may be notified by the Employer to the Contractor in writing.



The vertical tolerance will be 0.10 m below design depth for the maintenance dredging. Vertical tolerance up to 0.10 m below design depth is permitted for capital dredging component of the work. There is no horizontal tolerance allowed. However, no payment will be made for the over dredging done beyond the design depth.

## 8. Measurement for Payment

## 8.1 Maintenance dredging as per item no. 1 of BOQ:

The payment for depth guaranteed maintenance dredging shall be made monthly to the contractor based on quadruplicate survey at the rate quoted by them for item no. 1 of BOQ for maintaining the existing depth and width. The maintenance dredging for the 6- month period is based on maintaining the guaranteed depth of 10.0 m below CD. The employer shall release the above monthly payments after recovery of the amount based on ruling shortfall, if any and other the conditions of the Contract.

During the course of the contract, if it is not possible to carry out monthly survey due to bad weather conditions / other reasons due to extraordinary events or circumstance beyond human control such as an event described as act of God (such as a natural calamity) or the quadruplicate survey chart results technically found not realistic/ satisfactory, for which if the Employer has obtained a certificate in writing from the DPA, the amount payable for that particular month will be  $2/3^{\rm rd}$  of the amount due for that particular month. The balance  $1/3^{\rm rd}$  amount will be paid whenever the Employer submits the result of a satisfactory survey carried out thereafter to DPA.

## 8.2 Maintenance dredging as per item no. 2,3,4 of BOQ:

The payment for dredging against Item No 2, 3 & 4 of BOQ shall be made on the actual in-situ quantity removed by contractor based on quadruplicate survey at the rate quoted by them for the above items respectively of BOQ. The actual quantity shall be worked out from pre-dredged, interim and post dredged survey work and volume shall be computed by Survey software generated TIN model-based volume/ Simpson's Rule calculation or any other approved method as approved by DPA. The Employer shall release the above monthly payments after recovery of the amount, if any, as per the conditions of the Contract.

(Note: If required, Maintenance dredging at proposed Oil Jetty No.09 -berth pocket and its approach will be carried out after completing the capital dredging on as and when required basis/ as per the instruction of employer under tender item No.04 of BoQ).

## 8.3 Capital Dredging as per item no. 5 of BoQ

The capital dredging for deepening to be carried out in proposed OJ 9 berth pocket and its approaches and the target depth and width to be achieved as mentioned in the drawings. The payment for dredging for item no 5 of BOQ shall be made on the actual in-situ quantity



removed by contractor based on the quadruplicate survey at the rate quoted by them for the above item of BOQ. The actual quantity shall be worked out from pre-dredge, interim and post dredge survey work and volume shall be computed by survey software generated TIN model-based volume calculation or any other approved method as approved by DPA. The Employer shall release the above monthly payments after recovery of the amount, if any, as per the conditions of the Contract.

## 8.4 Dredging as per item no. 6 of BoQ

Dredging the Navigational channel of Deendayal Port from buoy no. 2 to 1 (Zone IB) from the existing level to 10m BCD. The payment for dredging for item no 6 of BOQ shall be made on the actual in-situ quantity removed by contractor based on the quadruplicate survey at the rate quoted by them for the above item of BOQ. The actual quantity shall be worked out from pre-dredge, interim and post dredge survey work and volume shall be computed by survey software generated TIN model-based volume calculation or any other approved method as approved by DPA. The Employer shall release the above monthly payments after recovery of the amount, if any, as per the conditions of the Contract.

If the contractor completes the deepening as per Items Nos. 6 of BOQ earlier than the target period of 6 months; the following will be applicable:

- (a) Upon achieving 10 m below CD at navigational channel from buoy no. 2 to 1 (Zone IB), the contractor shall submit in writing to the Engineer that the target depth of 10 m below CD has been achieved in entire length and width of the respective Zones / area described above.
- (b) The Employer shall consider the above submission and organize a joint quadruplicate hydrographic survey in the above mentioned Zone of the navigational channel. If the hydrographic survey establishes that the target depth has been achieved in the above mentioned Zone, DPA shall certify the same in writing.
- (c) The Employer will implement payment against Items No. 7 of the BOQ and payment against BoQ for item no. 6 & 1 will cease.
- (d) No other incentive / claim whatsoever from the contractor will be entertained by the Employer for early completion of the deepening at navigational channel from buoy no. 2 to 1 (Zone IB).
- (e) However, in case of non-maintenance of 10 m depth below CD, during subsequent months after achieving the depth of 10 m below CD, relevant recoveries shall be applicable.

# 8.5 Maintenance dredging as per item no. 7 of BOQ

The payment for depth guaranteed maintenance dredging at Zone- IA & IB (between buoy Nos. 4 to 1) shall be made monthly to the contractor based on quadruplicate survey at the rate quoted by them for item no 7 of BOQ for maintaining the existing depth and width. The maintenance dredging as per schedule is based on maintaining the guaranteed depth of

10.0 m below CD. The Employer shall release the above monthly payments after recovery of the amount towards ruling shortfall, if any and other the conditions of the Contract.

During the course of the contract, if it is not possible to carry out monthly survey due to bad weather conditions / other reasons due to extraordinary events or circumstance beyond human control such as an event described as act of God (such as a natural calamity) or the quadruplicate survey chart results technically found not realistic/ satisfactory, for which if the Employer has obtained a certificate in writing from DPA, the amount payable for that particular month will be  $2/3^{rd}$  of the amount due for that particular month. The balance  $1/3^{rd}$  amount will be paid whenever the Employer submits the result of a satisfactory survey carried out thereafter to DPA.

## 8.6 Compensation for not maintaining the target depths and widths:

As per joint quadruplicate pre-survey sounding chart shows ruling shortfall is nil or predetermined. The successful bidder should maintain minimum depth of 10m BCD of channel for maintenance dredging under guarantee depths and widths.

The dredging shall be carried out in such a way that the depths should not fall down below the pre dredging soundings and the same shall be maintained as specified.

Ruling shortfall statement shall be applicable from the 1<sup>st</sup> RA Bill onwards for item nos. 1 & 7 of BOQ.

The contactor shall carry out maintenance dredging in **Zone-IA** and **Zone IB** (from **Buoy no. 4 to 1**) during the specified periods to maintain the required depths/widths as indicated in the tender documents failing which the recovery of amount from the bills of the contractor for ruling shortfall in depths shall be made from 1st Month of the date of commencement of the proposed maintenance dredging work for the item nos. 1 & 7.

For any reason whatsoever if the contractor is not able to maintain the required depth and width in the channel in **Zone-IA** and **Zone 1B** (from Buoy no. 4 to 1) during the specified periods, the Employer shall be entitled to recover from the Contractor for such non-performance/failure an amount not exceeding the amount calculated on the basis for the non-performance based on the higher ruling short fall value determined on the basis of the joint Quadruplicate monthly soundings as provided in the Contract.

Penalty Terms for Ruling Shortfall in Depth

Ruling	Penalty as percentage of the Total monthly amount quoted
shortfall in	by the contractor for either Item No. 1 or 7 of BoQ as relevant
depth (in	(Item No. 1 for first 6 months and Item No. 7 for later period,
metres)	including extension period, if any) for every month of existence
	of non- performance / failure in Zone-IA/ Zone-IA & IB
0.2	10%
0.3	15%
0.4	20%
0.5	25%
0.6	30%



0.7	35%
0.8	40%
0.9	45%
1	50%

#### Shortfall: -

Recovery of shortfall will be considered as a specified depth of 10.0 m below CD minus actual depths available in each of the Zones, i.e. Zone IA (Buoy No. 4 to 2) / Zone IA & IB (buoy no. 4 to 1). If the sounding depths available are more than the specified depths of 10.0 m below CD in the channel it will be considered by restricting to the specified design depth of 10.0 m below CD for calculating the short fall in depth.

Note:- In case regular monthly bill survey (which shall be carried out at 30± 4 day interval) could not be conducted in any month(s), due to bad weather or any other reasons in any areas of Zone IA / Zone IA & IB, the recovery for such month(s) will be made, at the same percentage of shortfall in depth, in succeeding month, in which monthly bill surveys are conducted. However, recovery for the shortfall in depth, in which monthly bill survey is carried out, will also be made.

The soundings will be rounded off to 0.1 m. The fraction of soundings / values less than 0.05 will be rounded down and the fraction of soundings / values equal to or greater than 0.05 will be rounded up. The shortfall shall be determined as per the following formula:-

Ruling shortfall is the shortfall value such that the number of shortfall values including the grid points where soundings are missing which exceeds this value shall be 10% of the total number of shortfall values of all soundings in the channel.

An example for calculation of Ruling shortfall is furnished as under:

Total number of grid points, N = 100

Total number of grid points where the soundings missing in the channel = 2

Ruling Shortfall shall be  $\{(N/10)+1\}$  - the number of grid points where soundings are missing in the channel th value =  $100/10 + 1 - 2 = 9^{th}$ 

For example, following are the shortfall values (i.e. 10.0 m- actual depth as per the quadruplicate monthly survey chart) in the descending order.

1<sup>st</sup> grid point 2.5 m

2<sup>nd</sup> grid point 2.2 m.

3<sup>rd</sup> grid point 2.1 m.

4<sup>th</sup> grid point 1.9 m.

5<sup>th</sup> grid point 1.6 m.

6<sup>th</sup> grid point 1.2 m.

7<sup>th</sup> grid point 1.0 m

8<sup>th</sup> grid point 0.8 m

9<sup>th</sup> grid point 0.6 m.



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10<sup>th</sup> grid point 0.3 m.
11<sup>th</sup> grid point 0.2 m.
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12<sup>th</sup> grid point 0.1 m.

i.e. from the above, the ruling shortfall will be 0.6 m. and the employer shall recover the compensation for the ruling shortfall as per the percentage shown in the tender document. Above shortfall soundings is not allowed 10 m either side.

In case the contractor has not achieved the depth of 10.0m below CD within 100 m width on either side of the center line of the channel from 1<sup>st</sup> RA Bill, the monthly bill / chart shall not be accepted by the Employer and the contractor has to achieve the depths within 15 days and resubmit the monthly bill alongwith the resurveyed chart of the respective zone.

The recovery of every month ruling shortfall if any is applicable from the 1<sup>st</sup> RA bill to 11<sup>th</sup> month or upto pre-final payment in case of any extension granted by the employer. However, the recovery of 12<sup>th</sup> month or final month will be applicable as under:

At the end of the contract period, the contractor has to hand over the dredging area to the employer with the width and depth as specified, failing which penalty for the left-over quantity shall be made at Rs 300/- per Cum, based on the final quadruplicate / quintuplicate survey result. The recovery will be in lieu of the penalty recoverable for shortfall due at the time of the final survey.

Note-1: The grids where sounding is missing will be recorded first in the descending order table, meaning that the shortfall values corresponding to these grids are considered to be higher than the highest shortfall value of the soundings taken.

If the ruling shortfall in depths exceeds more than 1.0 m the contractor shall be given one month notice to improve the depths failing which the Employer may terminate the contract and the balance pending work may be executed by the Employer at the risk and cost of the contractor.

#### 9. Port Rules

The Contractor shall observe the conservancy rules relating to the Harbour and shall always take such necessary additional steps to keep the harbour waters free of noxious or unhygienic matters coming from his works as are required by the Employer. Under no circumstances shall inflammable material be allowed to spill to the Harbour area.

The Contractor shall always observe and comply with the working rules and regulations of the Port Authority in force or as issued from time to time.

## 10. Existing Services

Drains, pipes, cables, overhead-wires and similar services encountered in the course of the work shall be guarded from injury by the Contractor at his own cost so that may continue in full and uninterrupted use to the satisfaction of the owners thereof or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.



Should any damage be done by the Contractor to any drains, pipes, cables or lines (whether above or below ground), whether or not & shown on the drawings the Contractor must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer and of the owners.

## 11. Entry on private or other property

The Contractor shall not enter upon or commence any work in or upon, across or through any land, building or place being private property until authorized in writing by the Engineer or other competent authority to do so.

## 12. Security and Safety

The Contractor shall comply with all regulations imposed by the Customs and Deendayal port Security Authorities in respect of the passage of Plant, Vehicles, materials and personnel through Customs and Port barriers.

The Contractor shall take all possible precaution to prevent out breaks of fire on the site and in all offices, stores, camps and other places and things connected therewith and especially with respect to the safe storage of petroleum products, explosives and all other dangerous or hazardous goods. He shall comply with all rules, regulations and orders of any Statutory Authority and of the Engineer at no extra cost to the Employer.

The Contractor shall obtain from the Employer details of any restricted areas in or around the site and shall have prominently and clearly displayed for the information of his staff and work people notices defining any such restricted areas. Such notices shall be provided at his own expenses.

The Contractor will be required to take entry passes to the restricted area of Port for all personnel labourers and vehicle. No claim whatsoever on this account will be entertained.

#### 13. Returns and Drawings

All reports, statement, returns, diagrams, photographs or drawings, etc. which the contractor is required to submit to the Engineer are unless otherwise directed, to be furnished in the triplicate.

- 14. Contractor has to quote his rates for all the items in BOQ and quoted rates are inclusive of Mobilization & Demobilization, Fuel, Lube oil, men and material, watch keeping, repair cost, spares cost, all taxes, inclusive of all except GST.
- 15. Contractor has to obtain all plying licence/necessary permissions for his dredging spread & other supporting crafts from DPA/any statutory authority as necessary, at his own cost. DCI will provide only documentary assistance if any required, in obtaining the same.
- 16. All the crafts, plants and machinery to be deployed at DPA by the contractor(s) shall strictly adhere to the relevant IMO regulations, MARPOL convention 79/78 and other statutory regulations in addition to the DPA regulations. And the proposed deployed



dredgers shall have valid insurances as per statutory norms and contractor to indemnify Employer and DPA from any damages, losses to properties of DPA, Employer or any third party.

- 17. Adequate radio/ VHF communication system, all statutory requirements such as lifesaving appliances, fire fighting appliances, etc. as per relevant rules should be available onboard at any given time.
- 18. Contractor has to arrange all logistics such as boat, car supply, agency, running repairs/workshop at his own cost. Boat & car services have to be provided/arranged on as and when required basis as per instructions of Employer/ DPA to visit the site and dredgers, at free of cost.

# 19. Bunkering and Fresh Water

Contractor has to make his own arrangement for bunkering and supply of fresh water as well as obtaining berths from DPA at his own cost.

#### 20. Site data

The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on subsurface and hydrological conditions at the Site, including environmental aspects.

The Employer shall similarly make available to the Contractor all such data, which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- (a) the form and nature of the Site, including sub-surface conditions, the hydrological and climatic conditions
- (b) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects
- (c) the Laws, procedures and labour practices of the Country' and
- (d) The Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

#### 21. General Site Information

As per Technical specifications/ site information given in the intending tenderers are expected to visit the site and satisfy themselves on the actual site conditions, meteorological and oceanographic data, soil/subsoil strata to be dredged and the areas identified for disposal of dredged material, before tendering. Whatever information regarding surface and subsurface strata, climatologically, oceanographic data given in the tender documents are only intended as a general guidance for the contractor and no warranty is given for the correctness of the same.



# 22. Contractor's equipment

The Contractor shall be responsible for all Contractor's equipment. When brought on to the Site, Contractor's equipment shall be deemed to be exclusively intended for the execution of the works and shall be retained at the site till the completion of the work. The Contractor shall not remove from the Site any major items of Contractor's equipment without the consent of the Engineer/ DPA. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

#### 23. Environmental Control

As an ISO 14001:2015 (Environmental Management System) certified company, DCI committed for prevention of pollution by implementing Environmental friendly operational procedures. Hence, the contractor shall comply with all statutory and regulatory requirements pertaining to Environmental protection. Also, the contractor shall adopt the Environmental friendly procedures for execution of the work to the maximum possible extent.

All oil and greasy wastes onboard contractor's equipment, floating vessels, crafts etc. shall be collected in containers and disposed away on land as directed by DPA/Employer and shall not be let into sea.

Environmental Management Plan (EMP) shall be drawn, as per the MoEF&CC guidelines, by the successful bidder in such a way that all reasonable precautions shall be undertaken so that the dredging operations does not result in any adverse impact on the water quality and marine productivity in the vicinity and submit the same for the prior approval of the Employer. The Environmental Management Plan shall deal with impacts resulting from the dredging and offshore dumping which concerns sea water pollution and impacts resulting from the drainage of onshore reclamation. The Environmental Management Plan shall reflect the standards for environmental protection specified by the Ministry of Environment and Forest while issuing environmental clearance for the project.

It is the responsibility of the contractor to comply with all rules and regulations in connection with the dredging contract in general, complying with EC & CRZ norms. The bidder shall consider all the environmental protection cost along with applicable norms in the relevant quantities of BoQ.

The Environmental Management Plan will also reflect measures to be taken by the successful bidder to mitigate and protect the environment against impacts resulting from the dredging and reclamation and offshore dumping operations.

The general form of the Environmental Protection Plan shall include and not be limited to

- Objective
- Work Plan
- Implementation schedule
- Man power requirement



# Monitoring procedure

#### Note:

All dredgers and other floating crafts of the contractor shall follow MARPOL regulations.

In addition to various stipulation of this contract documents with regard to dredging, the Contractor shall comply with the specific conditions, other standard conditions and general clauses applicable for dredging as stipulated by MoEF&CC, Environmental and CRZ Clearance dated 20.11.2020 and prepare the EMP and strictly adhere the same during dredging operations.

# **Environment protection**

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values indicated in the Specification and shall not exceed the values prescribed by applicable Laws.

Dredging works shall be undertaken such a way as to ensure that these operations do not deteriorate the surface water quality. Adequate anti-pollution measures should be taken so that environmental quality is maintained.

The Contractor shall observe the conservancy rules relating to the Harbour and shall always take such necessary additional steps to keep the harbour waters free of noxious or unhygienic matters coming from his works as are required by the Employer.

Under no circumstances shall inflammable material and untreated Sewage be allowed to spill to the Harbour area.

Any services rendered by Employer/ DPA during the execution of contract will be chargeable as per DPA scale of rates.

# 24. Performance Security

- Within fifteen (15) days after receipt of the notification of award of the contract/ work order, the Contractor shall furnish Performance Security to the Employer.
- 24.2 The proceeds of the Performance Security shall be payable to the Employer as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Contract.
- A sum equal to 10% of the contract value as indicated in the work order shall be deposited by the contractor as Performance Security Deposit by e-payment or in the form of Bank Guarantee (BG) as per Pro-forma enclosed or Insurance Surety Bond to Employer, with a validity upto three months beyond work completion including extension if any. The same will be returned by Project Manager after completion of entrusted work.
- 24.4 In case of extension of contract, BG or Insurance Surety Bond shall be submitted for sum equivalent to 10% of additional contract value with validity up to three months beyond completion of work including extension.



- 24.5 Performance Security Deposit will not carry any interest.
- 24.6 BG or Insurance Surety Bond submitted against performance security will be discharged by the DCI and returned to the Contractor not later than three months following the date of completion of the Contractor's performance obligations, including any warranty obligations, clearance of final bill, under the Contract. To process the return/refund of Performance Security, contractor has to submit "No Dues No Claim" Certificate to Project Manager, after completing the contract in all respects & receipt of final payment.
- 24.7 In case Contractor fails to fulfill the contractual obligations, in addition to encashing the Performance Security Bank Guarantee / Insurance Surety Bond, the Employer reserves the right to debar / blacklist the bidder from participating in their future tenders.
- The Bidder quoting more than 15% below the cost of work put to tender shall have to pay an 'Additional Performance Security Deposit' (APSD) for the amount in short of '15% below the cost of work put to tender' separately. APSD wherever applicable will be collected from the successful bidder along with the Performance Security Deposit. APSD may be accepted in any form applicable for Performance Security. Back-out from the offer by the participating bidder after opening of Technical Bid (in case of two stage bid) OR non-deposit of APSD by the successful bidder will liable for forfeiture of EMD and suitable action shall be taken up against the bidder as per decision of competent authority of Employer.

# 25. Berth for Bunkering Maintenance

For the purpose of bunkering, repairs, maintenance, etc. the contractor will be provided necessary anchorage, mooring in Kandla creek or berth will be provided subject to availability. However, when the contractor requires an independent berth for the purpose, berth hire charges as applicable in the Scale of Rates will be charged to the contractor. The contractor shall pay the Port dues and vessel related charges including pilotage for initial entry to Deendayal Port and departure after completion and all other dues will be exempted during the period of the contract.

# 26. Electric Power Supply

The Contractor shall make its own arrangements for all electrical supply for lighting, marking, etc. and for power supply for all its floating plant and craft and shall bear all costs for the same.

### 27. Accommodation

Contractor will not be permitted to establish its labour camp and residential accommodation for its staff on Employer's land unless given specifically for the purpose. Necessary accommodation shall be provided as per availability and on payment of necessary charges prevailing from time to time.

#### 28. Harbour facilities:

Harbour facilities as per availability will be provided to the contractor as per the rates given in the Deendayal Port Scale of Rates and notification thereof from time to time.



### 29. Variations and Adjustment

# 29.1 Right to Vary

The Employer shall make any variation in the quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the contractor to do and the contractor shall do any of the following.

- (a) Increase or decrease the quantity up to  $\pm$  30%.
- (b) Omit any such work (partially or fully).
- (c) Change the character or quality or kind of any such work.
- (d) Change the levels, lines, position and dimension of any part of the work.
- (e) Execute additional work of any kind necessary for the completion of the work
- (f) Change any specified sequence or timing of dredging of any part of the works.
- (g) The quantity in BOQ is for estimation only. However, actual quantity for dredging will be decided as per pre-joint quadruplicate joint Quadruplicate survey.

No such variation shall in any way vitiate or invalidate the contract, but the effect, if any, of all such variations shall be valued and paid to the Contractor, provided that where the issue of an instruction to vary the works is necessitated by some default of or breach of contract by the contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the contractor

The contractor shall not make any variation without an instruction of the Employer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this clause but is the result of the quantities exceeding or being less than those stated in the **Bill** of **Quantities**.

# 30. Price adjustment

The fuel escalation charges shall be paid to the contractor based on the following formula.

If the price of main fuel by the dredger required for execution of the work increases, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the Contract shall accordingly be varied, subject to the condition that such compensation for escalation in prices shall be available only for the work done during stipulated period of the contract including such period for which the contract validly is extended.

The contract price will be subjected to adjustment on account of variation of price of diesel according to the formula below: -

$$V = 0.85 \times Q \times R (P-Po)$$
Po



V= Variation in price on account of **main fuel** during the month under consideration.

Po = Actual price of **main fuel** fixed by the IOCL in the concerned area / Port, as on date **19.03.2024**.

P = Average price of **main fuel** fixed by the IOCL in the concerned area / Port, for the month under consideration.

Q = Fuel element factor has been predetermined as 0.25

R = Value of the work during the month under consideration as per relevant item of Bill of Quantities excluding mobilization and de-mobilizations fees.

Similarly, if the price of **main fuel** by the dredger required for execution of the work decreases; de-escalation shall be applied for such decrease as per provisions detailed above and the amount of the Contract shall accordingly be adjusted through deduction. Thus, the benefit of reduction in fuel price, if any, shall be passed to the Employer.

The fuel escalation / de-escalation bills will be paid/ recovered on monthly basis as per claim preferred by the contractor. The claim for the month will be submitted latest by  $20^{th}$  day of subsequent month failing which applicable interest will be charged in the case of deescalation.

Base Rate of Fuel and Adjustment for subsequent Price Variation:

- (i) Whenever there is variation in the price of **main fuel**, the Contractor shall forthwith in writing and in any event not later than 7 days from the date of such variation inform the Engineer about such variation to enable the Engineer to verify the same.
- (ii) The variation in prices of main fuel to be considered for payment as aforesaid shall be the price charged by M/s. IOCL/HPCL/BPCL/RIL from time to time at their local delivery point at Deendayal Port at Kandla.
- (iii) Compensation for price variation in main fuel shall be worked out and paid/adjusted as the case may be, subject to the condition that Contractor shall be entitled to such variation in prices only during the Contract Period or any extension thereof as provided in the Contract.
- (iv) No escalation other than the price adjustment provided under cl. i to iii above shall be payable by the Employer for reasons whatsoever, and the quoted rate is deemed to cover these aspects also.

#### 31. Settlement of Disputes / Arbitration Clause

- 31.1 Ref Cl. 15.1, 15.2 & 15.3 of GCC part II COPA.
- 31.2 Further, the Arbitrator/ Arbitral Tribunal is precluded from awarding any interest for the pre-reference period and pendente-lite period. The cost of Arbitral Tribunal will be borne equally by both parties. The Legal expenses including, but not limited to Advocate's professional fees, will be borne by the respective parties only.



### 32. Compliance with Statutory Requirements

The contractor shall at all times during the continuance of the contract comply fully with all existing acts, regulations and bye-laws including all statutory amendments and re-enactment of state or central government and other local authorities and any other enactments and acts that may be passed in future either by the state or the central government or local authority including Indian Workmen's Compensation Act, Contract Labour (Regulation and Abolition) Act 1970 and Equal Remuneration Act 1976, Factories Act, Minimum Wages Act, Provident Fund Regulations, Employees Provident Fund Act, Merchant Shipping Act and other Maritime Legislations / Rules / Regulations etc. in so far as they are applicable to this contract. The Contractor shall indemnify and keep the Employer indemnified in case any proceedings are taken or commenced by any authority against Employer for any contravention of any of the Laws, Bye-laws or scheme by the Contractor. If as a result of Contractor's failure, negligence, omission, default or non-observance of any provisions of any laws, the Employer is called upon by any authority to pay or reimburse or require to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any monies due or that may become due to the contractor under this contract or any other contract or otherwise recover from the contractor any sums which the Employer is required or called upon to pay or reimburse on behalf of the contractor.

#### 33. Provident Fund Contributions:

The bidder shall process an independent PF Code number obtained from the PF Commissioner concerned and submit the photocopy of the same alongwith the tender. If the same is not submitted with the tender the bidder shall obtain the same and produce to Employer before the issue of the work order.

#### 34. Notices (GCC Clause 25)

Contact address for notice purposes:

(i) Employer/ Dredging Corporation of India Limited, till placing of Work order:

GENERAL MANAGER (BD)
DREDGING CORPORATION OF INDIA LTD.
"DREDGE HOUSE", H B COLONY MAIN ROAD,
SEETHAMMADHARA, VISAKHAPATNAM-530 022.
ANDHRA PRADESH (INDIA)
TELEPHONE No. 91-0891-2871209/333

Mob: +91-99498 25222

E-mail: hodmktg@dcil.co.in

After placing work order:

PROJECT MANAGER,
DREDGING CORPORATION OF INDIA LTD.,
1st Floor, Plot C-46, NU-10/B,
Gayatri Mandir Road, Shaktinagar,
Gandhidham, Kutch, Gujarat – 370 201
Mob: +91-89787 09004

Email: pokandla@dcil.co.in

(ii) Bidder:

As provided in the Vendor Code Creation Form



#### 35. Wreck removal

The Contractor shall forthwith and with due dispatch raise and remove any plant floating or otherwise or any boat or vessel or craft or equipment belonging to them or to any sub-contractor employed by them which may sink in the course of the execution of works within the limits of site or elsewhere within port limits and until the same shall be raised and removed, the Contractor shall set all such buoys and display at night such lights and do all such things for safety of navigation as may be required by the Employer/ DPA. In the event of the Contractor not carrying out the obligations imposed on it by this clause, the Employer may, through some other agency, raise and remove such sunken plant, boat, vessel or craft and buoy and light the same and the Contractor shall reimburse to the Employer all costs in connection therewith, which the Employer shall be at liberty to recover as debt due.

# 36. Integrity Pact

The Integrity Pact has been included to this subject Tender and to be signed on Rs.100/- non-judicial stamp paper and submitted by the Bidders in 2 (two) sets of original as per the **Annexure- V.** This Integrity Pact will form part of the Tender Document.

REPRESENTING MATTER TO INDEPENDENT EXTERNAL MONITORING IN CASE OF TENDERS/ CONTRACTS WHICH ARE OF Rs.1 CRORE AND ABOVE VALUE: Signatories to the Integrity Pact with regard to a Tender/ Contract can represent a matter with regard to the tender / Contract to the Independent External Monitors (IEMs), under the Integrity Pact Provisions), as mentioned in Clause No.16 of IFB. Persons signing the Integrity Pact shall not approach for Negotiations/ Conciliation/ Arbitration/ Adjudication while representing matters to the IEMs and he/ she will await their decision in the matter.

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# SECTION - V TECHNICAL SPECIFICATIONS

As specified in Scope of Work under Special Conditions of Contract (SCC)

\*\*\*\*

#### **SECTION - VI SAMPLE FORMS**

# Notes on the Sample Forms

The Bidder shall complete and submit with its Techno-Commercial bid the <u>Bid Form</u>.

The <u>Price Schedules</u> shall be submitted <u>only</u> along with the Financial/ <u>Price Bid (BOQ)</u>.

The <u>Proforma for Bank Guarantee for Earnest Money Deposit</u> duly filled in should be submitted along with the Techno-Commercial Bid.

The <u>Contract Form</u>, when it is finalized at the time of contract award, should incorporate any corrections or modifications to the accepted bid resulting from price corrections, acceptable deviations etc.

The <u>Performance Security</u> form should not be completed by the bidders at the time of their bid preparation. Only the successful Bidder will be required to provide performance security in accordance with one of the forms indicated herein or in another form acceptable to the DCI.

The <u>Qualification Requirements</u> form should specify, for example, requirement for a minimum level of experience in providing services in a similar type of activity for which the Invitation for Bids is issued.

The <u>Details of the Dredgers/crafts proposed for deployment</u> duly filled in should be submitted along with the Techno-Commercial Bid.

Vender Code Creation Form (Pan No. GST No. & Bank details, etc.)

Integrity Pact

[signature]

	Form No. 1	: Bid Form
		Date:
To:		
The Dredging Corporat		
Dredge House, HB Col		
Seethammadhara, Visak	hapatnam – 530 022.	
Gentlemen:		
Having examined	the bidding documents in	ncluding Addenda Nos. [insert numbers], the receip
of which is hereby duly	acknowledged, we, the ur	ndersigned, offer to supply and deliver [description
of services in conformit	y with the said bidding do	ocuments for the sum or such other sums as ma
be ascertained in accord	lance with the Schedule of	of Prices submitted separately as a Price Bid an
made part of this Bid.		
We undertake, if	our Bid is accepted, to	provide the services in accordance with the
schedule specified in the	e Schedule of Requiremen	nts.
If our bid is accept	pted, we undertake to pro	ovide a performance security in the form, in the
	e times specified in the Bio	
$\mathcal{C}$	•	Validity Period specified in the document and
0 .	oon us and may be acce	epted at any time before the expiration of that
period.		
	1 1	executed, this Bid, together with your writte
1	•	d, shall constitute a binding Contract between us
	, ,	and severely responsible for the due performance
	- ·	firm has not been banned or blacklisted by an
		gency or Public Sector Undertaking. Any suc
	• •	er / contract may result in disqualification of the
firm or cancelation of the		
		ccept the lowest or any bid you may receive.
	m that we comply with	the eligibility requirements as specified in th
bidding documents.		
Dated this	day of	2024.

[in the capacity of]

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_



# Form No. 2. PRICE SCHEDULE

#### PREAMBLE TO PRICE BID

- 1. The items given in the Bill of Quantities are for "Chartering of Chartering of TSHD for carrying out "Dredging in the Navigational Channel, Kandla Creek, Oil Jetties & Cargo Berths at Deendayal Port".
- 2. The payment would be made for relevant items of Bill of Quantities as detailed in Payment Clause.
- 3. No other charges, other than those specified in the tender conditions shall be payable.
- 4. The rates to be quoted should be inclusive of Fuel, Lube oil, men and material, watch keeping, repair cost, spares cost, idle time charges, all taxes but excluding GST.
- 5. To enable ease of bidding among the bidders, a single Excel sheet BOQ has been prepared for uploading financial/price bid at GeM portal.



# **BILL OF QUANTITIES**

Name of the work: Chartering of TSHD for carrying out "Dredging in the Navigational Channel, Kandla Creek, Oil Jetties & Cargo Berths at Deendayal Port".

Sl. No.	Description	Quantity	Unit	Rate (INR)	Amount (INR)
1	Maintenance Dredging in Navigational channel of Kandla Port between Buoy No. 2 to 4 (Zone-IA) at minimum depth of 10.0 m below CD and disposing off the dredged material in the disposal area as shown in the drawing including mobilization and demobilization of all equipment, insurance costs and all other incidental expenditure arising out of or in connection with the contract, etc.	6.00	Lump sum per Month		
2	Maintenance Dredging in the Kandla Creek Outer to maintain a depth of 10.0 m below CD during the contract period as per drawing including dispose off the Dredged Material at dumping area from the Dredging area including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total insitu quantity dredged in the area.	50,000.00	Cum		
3	Maintenance Dredging in the Kandla creek Inner between North of Buoy No. 15A to proposed Oil Jetty No.8 during the contract period to maintain a depth of 10.0 m below CD as per drawing including dispose off the Dredged Material at dumping area as specified including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total insitu quantity dredged in the area.	70,000.00	Cum		



Sl. No.	Description	Quantity	Unit	Rate (INR)	Amount (INR)
4	Maintenance Dredging at cargo berths/ Oil Jetties during the contract period and disposing off the dredged material in the disposal area as shown in the drawings. The maintenance dredging is to be carried out up to the designed depths below CD from the existing depths of the specified areas during and dumping at designated dumping ground. The payment shall be made on the basis of total insitu quantity dredged in the area; however the exact quantity shall be worked out on the Joint Pre and Post Dredge Survey of the area.	228,334.00	Cum		
5	Capital Dredging at <b>OJ 9</b> in the berth pocket area to make available draft of 13m and alongside the jetty to achieve depth of 14.1. m below CD and capital dredging in manuevering area of OJ- 9 to achieve depth of 10.0 m below CD respectively including dispose off the Dredged Material at dumping area as specified including Mobilization and Demobilizations of all equipment, Insurance costs and all other incidental expenditure arising out of or in connection with the Contract etc. The payment shall be made on the basis of total insitu quantity dredged in the area.	189,350.00	Cum		
6	Deepening the Navigational Channel of Deendayal Port between <b>Buoy No. 2 to 1 (Zone IB)</b> from existing depth to achieve a depth of 10.0m BCD with side slopes of 1:5 including disposing off the dredged material at dumping area as specified including mobilization and demobilizations of all equipment, insurance costs and all other incidental expenditure arising out of or in connection with the contract etc. The payment shall be made on the basis of total insitu quantity dredged in the area, however the exact quantity shall be worked out on the Joint Pre and Post dredged survey of the area.	373,820.00	Cum		



Sl. No.	Description	Quantity	Unit	Rate (INR)	Amount (INR)
7	Maintenance Dredging in Navigational channel of Kandla Port between Buoy No. 4 to 1 (including Zone IA and IB) at minimum depth of 10.0 m below CD and disposing off the dredged material in the disposal area including mobilization and demobilization of all equipment, insurance costs and all other incidental expenditure arising out of or in connection with the contract, etc. Note: In the event of the dredging at Zone IB (item no. 6 above) is delayed or taken over in advance from the period as mentioned in the tender, the period mentioned for item no. 7 shall be varied accordingly.	6.00	Lump sum per Month		
	Total Amount (Excl. GST)				
	(Ru	pees in Words)			
	Note: 1) The quoted rate shall exclude the GST component. However, the actual GST amount paid by the contractor shall be reimbursed upon production of the paid receipt/ invoice. 2) The submission of Price Bid / quoted amount / indication of any financial amount along with technical bid will be considered rejected. Prices will be quoted only on GeM website.				

# Form No. 3. BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

Bank Guarantee No.		Date:
To The Dredging Corporation o Dredge House, HB Colony M Seethammadhara, Visakhapatnam – 530 022.		
called "the Tender") in fav	(hereinafter) called "the Tend execution of (name of work) your of DREDGING CORPORATIO Main Road, Seethammadhara, Visakha N".	(hereinafter ON OF INDIA LIMITED,
KNOW ALL MEN by these	presents that we, (Bankers full address)	
(Rupees	"is bound unto the Corporation for th only) for which payment onk binds itself, its successors and assigns	t will and truly to be made to
THE CONDITIONS of this	s obligation are:	
(b) having been the period of 2. Fails or refuses to sul We undertake to pay to the C demand, without the Corporation will note that of one or both of the conditions the conditions of the conditions are the conditions to the conditions of the conditions are the conditions of the conditions are the conditions of the conditions of the conditions are the conditions of the conditions are the conditions of the conditions of the conditions are the conditions of th	or notified of the acceptance of his Tender Tender Validity, omit the Performance Security / execute Corporation up-to the above amount up ation having to substantiate his demand at the amount claimed by him is due to ons, specifying the occurred condition of	er by the Corporation during the Agreement. con receipt of his first written by provided that in his demand him owing to the occurrence or conditions.
Rs/- (Rupees (30) days beyond the validity not later than the date of ex	nerein contained, our liability underonly) and will of the bid, and any demand in respect piry of this guarantee failing which all forfeited and the Bank shall be deemed	remain in force up to thirty thereof must reach the Bank the rights of the Corporation
	Datedday of For	
	(Indicate Name of the I	

# Form No. 4: FORM OF CONTRACT AGREEMENT

	nis agreement made thisday of, 2025 BETWEEN the DREDGING ORPORATION OF INDIA LIMITED, a body corporate under the Companies Act, 1956
	ving its registered office at Core No2, First Floor, SCOPE MINAR, Plot No. 2A&2B.
	exmis Nagar District Center, DELHI – 110 091, India (Hereinafter called "the Employer";
	which expression shall unless excluded by or repugnant to the context, be deemed to include
	eir successors in office) of the One Part
A.	ND
(n	ame and address of the CONTRACTOR if any individual and of all partners if a Partnership
	th all their addresses) (Hereinafter called the "CONTRACTOR" which expression shall unless
	cluded by or repugnant to the context, be deemed to include his/their heirs, executors,
	ministrators, representatives and assigns or successors in office) of the Other Part.
W	HEREAS the "Employer" is desirous of
_	and the Contractor has offered to
_	
A.	ND WHEREAS the CONTRACTOR has deposited a sum of Rsas Performance
	curity in the form offor the due fulfillment of all the Conditions of
th	e Contract:
NT.	OW THIS AGREEMENT WITNESSETH as follows:
IN	OW THIS AGREEMENT WITNESSETH as follows:
1	That in this agreement words and expression shall have the same meanings as are respectively
1.	assigned to them in the Conditions of Contract ( <i>Tender No.</i> , <i>dtd.</i> )
	hereinafter referred to.
2.	That the following documents shall be deemed to form and be read and construed as part of
	this agreement viz:
	- The Contract Agreement dated
	- The Letter of Acceptance / Work Order
	- The Tender submitted by the Contractor
	- Instructions to Tenderer
	- Conditions of Contract
	- Specification for the Works
	- Price Bid
	- Integrity Pact
	- Correspondence exchanged before the issue of letter of acceptance by which the
	Conditions of Contract are amended, varied or modified in any way by mutual consent
	(to be enumerated).
3.	That the Contractor hereby covenants with the Employer to complete the Contract in
	conformity, with the provisions of the Contract in all respects.
4.	That the Employer hereby covenants to pay the Contractor in consideration of such
	completion of the Contract, the "Contract Price" of Rs



(Rupees_	<u>)</u> at	the	times
and in the manner prescribed by the Contract.	,		

IN WITNESS whereof the parties hereunto have set their hands and seals the day and year first above written.

Signed and sealed by:

CONTRACTOR
Signature:
Signature:
Name
:
Name
:
Designation
:
Seal
:
Seal
:

In the presence of

Witness

Signature Signature

Name & Address: Name & Address:

Encl: Contract data



# Format for Contract Data

# This Contract Data forms part of the Agreement.

[Note: with the exception of the items for which the Employer's requirements have been inserted, the Contractor shall complete the following information before submitting his offer.

Item	Sub-Clause (FIDIC)	Data
Commencement Date	1.1.3	30 days from the date of work order
Documents forming the Contract	1.1.4 & 1.3	
listed in the order of priority		
Document (delete If not applicable)		Document Identification
(a) The Agreement		
(b) General Conditions of		
Contract		
(c) Special Conditions of contract		
(d) Technical Specifications		1
(e) Instructions to Bidders		As per tender conditions
(f) The Drawings		1
(g) The bill of quantities		1
(h) Formats, Forms and		1
Annexures		
(i) Other tender related		
documents		
Name and address of the Engineer	1.1.15	Project Manager of Project Office Kandla, DCI Ltd.
Time for Completion for the Works	1.1.25	Refer to NIT
Dredging Works	1.1.13	The extent of dredging works- Ref. relevant
		clauses of SCC
Law Governing the Contract	1.4	Law of the Country
		Indian Law.
		Courts at Visakhapatnam will have exclusive
		jurisdiction for the contract.
Language	1.5	English
Methods of communication	1.5	Delivered by hand (against receipt), sent by
		mail or courier, or transmitted by using any
		of the electronic transmission Systems such
		as email and facsimile
Addresses for communication	1.5	Employer: as stated in Agreement*
		GENERAL MANAGER(BD)
		DREDGING CORPORATION OF
		INDIA LTD., DREDGE HOUSE,
		H B COLONY MAIN ROAD,
		SEETHAMMADHARA, VISAKHAPATNAM-530 022.
		ANDHRA PRADESH (INDIA)
		TELEPHONE No. +91-891-2871209/333
		MOBILE No. +91-99498 25222
		E-mail: <u>hodmktg@dcil.co.in</u>
		- ·······



		Contractor:
		Engineer: Project Manager of Project Office Kandla, DCI Ltd.
Notices, fees and other charges to	1.6	The Employer shall be responsible for those
be given or paid by the Employer		ticked below:
		Tick box
		Import dues <u>Contractor's</u>
		Wharfage <u>responsibility</u>
		Package
		Harbour dues
		Dredging and
		dumping fees
		dumping rees
		Royalties for
		sand extraction
		Other
		Employer to tick to indicate provision by
		Employer- <u>Nil</u>
Provision of Site	2.1	On the Commencement Date
Employer's authorized person	2.4	Will be intimated during agreement stage
Limits on Engineer's authority	3.1 & 10.1	Will be intimated during agreement stage
Performance security (if any)		
Amount	4.4	10% of contract value
Form	5.1	As per form No. 5
Requirements for Contractor's		Specification Clauses
design (if any)		Refer Clauses of SCC and Drawings
Time for submission	7.2	Within 7 days' of the Work order issue date
Form of programme	7.2	As per contractors format or as per
		instructions of the Engineer
Amount payable due to failure to	7.4	1/2 % per week or part thereof up to a maximum
complete the Works		of 10% of the capital dredging value.
-		Compensation for not maintaining the target
		depths and widths - as per terms &
		conditions of contract
Working Hours restrictions (if any)		
Dredging works	9.2 & 11.5	Not applicable
Reclamation and other works	9.1 & 11.6	]
Advance Payment		N.A.
Percentage of retention money	11.4	N.A.
Currency of payment	11.8	Indian Rupees



# Form No. 5: FORM OF BANK GUARANTEE

(in lieu of Performance Security)

	Bank Guarantee No.: Date:
To Dredging Corporation of India Limited	
In consideration of Dredging Corporation under the Companies Act, 1956 and having its Seethammadhara, Visakhapatnam – 530 022 India (to exempt M/s	herein after called the "DCI") having agreed
we	only), reinafter referred to as "the Bank" (indicate (Contractor) do t exceeding
(Indicate the flame of Bank)	
do hereby undertake to pay the amounts due and paymerely on a demand from the DCI without referenthat the amount claimed is due by way of loss or suffered by the DCI by reason of breach by the said contained in the said Agreement or by reason of Agreement. Any such demand made on the Bank s and payable by the Bank under this guarantee. However, the payable by the Bank under this guarantee. However, the payable by the Bank under this guarantee.	ce to the Contractor and the demand stating damage caused to or would be caused to or Contractor of any of the terms or conditions the Contractor's failure to perform the said hall be conclusive as regards the amount due wever, our liability under this guarantee shall reding
3. We undertake to pay to the DCI any mone or disputes raised by the Contractor in any suit of Tribunal relating thereto our liability under this payment so made by us under this bond shall be a there under and the Contractor shall have no claim a	resent being absolute and unequivocal. The a valid discharge of our liability for payment
4. We	further



agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the DCI under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till DCI certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor and accordingly discharge this guarantee. Unless a demand or claim in writing under this guarantee has been received by us on ....., we shall be discharged from all liability under this guarantee thereafter.

unacı m	is guarantee therea	Itt.				
5.		ate name of the Ban			further agree	
manner or to extraord time Contract Agreeme extension part of the thing was an annual contract of the contract	our obligations her tend time of perform to or from time to tor and to forbeat ent and we shall no in being granted to the DCI or any income	the fullest liberty with reunder to vary any remance by the said to time any of the part or enforce any of the relieved from the said Contracted dulgence by the DC under the law relationship.	of the terms Contractor powers exerce of the terms our liability or or for an	and conditions from time to the isable by the and condition by reason of y forbearance, Contractor or	of the said Agr me or to postpo DCI against to as relating to the any such varia- act or omission by any such ma	reement one for the said tion, or on the atter or
than 60(	Sixty) days following	will be discharged by ng the date of comp gations, clearance o	eletion of the	Contractor's pe	erformance oblig	
6. or the C	This guarantee wontractor.	vill not be discharged	d due to the	change in the co	onstitution of th	ie Bank
7.		ate name of the Ban		y undertake no	t to	
revoke tl	his guarantee durin	ig its currency excep	ot with the pr	evious consent	of the DCI in w	riting.
or by C under	cantee must be made ourier against acknowled this	will remain in force de in writing and di nowledgement. N guarantee	ispatched to Notwithstandi will	us by Registere ng what is star be	d Post, Hand I	Delivery
	(			•,	of 2025	
			1,7316	1 IIIC (121V)	OT 2.U2.3	

# Form No. 6: Qualification Requirements

# A) Financial Qualification:

The bidder should furnish

i) Audited balance sheet and Profit & Loss Account for the last three years as required under ITB.

# B) Technical Qualification:

The documentary evidence of bidder's technical competence should include the Certificates from Employers for having successfully completed works of similar nature. The certificate should include the following information:

- Brief description of the work
- Actual executed contract amount
- Period of work / date of completion of contract
- C) Registration & Other Certificates of Dredgers / Equipment

# Form No. 7: (A) Details of the Trailer Suction Hopper Dredger proposed for Deployment

7.1 a) Name of the Trailer Suction Hopper : Dredger (TSHD)

b) Hopper capacity in CuM

7.2 Name of the owner

7.3 Builder's name and Address :

7.4 Year of built

7.5 Main dimensions

a) Lengthb) Breadthc) Depthd) Draft

7.6 Particulars of registry of TSHD and year of registry.

7.7 Place where the TSHD/craft is presently available

7.8 Any other specifications :

NOTE: (1) If the Tenderer is not the Owner, hire agreement/willingness of the Owner of the Dredger(s) should be submitted on stamp paper duly notarized alongwith Tender.

# Form No. 7: (B) Details of the Dredger/Craft proposed for Deployment

7.1	Name of the Dredger/Craft	:
7.2	Name of the owner	:
7.3	Builder's name and Address	:
7.4	Year of built	:
7.5	Main dimensions a) Length b) Breadth c) Depth d) Draft	: : :
7.6	Particulars of registry of Dredger/Craft and year of registry.	:
7.7	Place where the dredger/craft is presently available	:
7.8	Any other specifications	:

NOTE: (1) If the Tenderer is not the Owner, hire agreement/willingness of the Owner of the Dredgers/crafts should be submitted on stamp paper duly notarized along with Tender.

# Form No. 8: Declaration by the Bidders

	Date:
To:	
General Manager (BD)	
Dredging Corporation of India Limited,	
Dredge House, HB Colony Main Road,	
Seethammadhara, Visakhapatnam – 530 022.	
Dear Sir,	
Sub: Declaration from the Bidder.	
Ref: Tender Reference No	

This is with reference to the above mentioned Tender document.

We hereby make the following declarations:

1.	No alteration has been made in any form in the downloaded Tender document.
2.	I / We have not been banned or delisted by any Government or quasi Government agency or public sector undertaking.
3.	I / We accept the payment terms of General & Special Conditions of Contract.
4.	I / We provide our acceptance to all Tender Terms and Conditions.
5.	I / We confirm that neither we have failed nor we have been expelled from any project or agreement during the last 05 years.
6.	I / We agree to disqualify us for any wrong declaration with respect to the submissions made by us for this tender and reject my/our tender summarily.
7.	I / We agree to disqualify us from this tender and black list us for tendering in DCIL projects in future, if it comes to the notice of Employer that the documents/submissions made by me/us are not genuine and or incomplete information.

Yours faithfully,

(Signature of the Bidder with Official Seal)

#### SECTION - VII CHECK LIST FOR TECHNO-COMMERCIAL BID

- 1. A Bid Form <u>except</u> the Price Schedule
- 2. A list of works tendered for and in hand/being executed as on the date of submission of tender.
- 3. A detailed list of vessels / equipment available with the tenderer and which are proposed for deployment for the work.
- 4. Details of TSHD or any other kind of equipment/dredgers with suitable dredging methodology.
- 5. Documentary evidence to establish that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted consisting of
  - Audited balance sheet and Profit Loss Account for the last three years;
  - Certificate from Employers for having successfully completed works of similar nature.
- 6. Earnest money deposit in the form of
  - e- challan or
  - Bank Guarantee or
  - Insurance Surety Bond
- 7. Payment challan of Tender document fees.
- 8. PAN Number
- 9. Registration with Provident Fund Authorities
- 10. Vender Code Creation Form
- 11. Integrity Pact: The Integrity Pact has been included to the subject Tender and is to be signed on Rs.100/- non-judicial stamp paper and submitted by the Bidders in 02 (Two) sets as per the Format given. This Integrity Pact will form part of the Tender Document.
- 12. Power of Attorney on stamp paper, in favour of the person authorized to sign the tender document.
- 13. Copies of original document defining the constitution or legal status, place of registration and principal place of business of the company or firm or partnership.
- 14. Information regarding any current litigation in which the tenderer is involved.
- 15. Copies of original certificates of registration, etc. of the Dredgers/crafts proposed to be offered to DCI including copy of the existing insurance policy covering the Hull, crew and third party.
- 16. Copy of clear title of the ownership of the Dredgers/crafts. If the tenderer is not the owner of the Dredgers/crafts, necessary documents in support of the authorization granted by the owner of the Dredgers/crafts to the tenderer to offer and operate the Dredgers/crafts by the tenderer. This authorization shall be executed on a stamp paper duly notarized.
- 17. The bidder shall have to submit Annexures in firm's letter head, duly signed with office seal.
- 18. Downloaded Tender Document duly signed on all the pages by tenderer.

\*\*\*\*\*



# **SECTION - VIII DRAWINGS**

Attached separately



# Annexure-I-PROFORMA - Declaration of Relatives

Date:

Channel
d as per d to any the Asst nment of Oredging
ration of
nistry of
aithfully

\*Strike out 'A' or 'B', whichever is not applicable.



# Annexure-II -PROFORMA- Confirmation of having not made any payment

Date: То The General Manager (BD), Dredging Corporation of India Limited, Dredge House, H.B.Colony Main Road, Seethammadhara, VISAKHAPATNAM- 530022 Si Sir, Sub: Chartering of TSHD for carrying out "Dredging in the Navigational Channel, Kandla Creek, Oil Jetties & Cargo Berths at Deendayal Port" - Reg. With reference to your Tender No. \_\_\_\_\_ A. \_\_\_\_ dated \_\_\_\_\_ and as per Instructions to Bidders of Contract, we hereby undertake that, we have not made any payment or illegal gratification to any person/ authority connected with the bid process so as to influence the bid process and we have not committed any offence under the Prevention of Corruption Act in connection with the bid. В. As per Instructions to Bidders of Contract, we hereby certify that we have nothing to disclose any payments made or proposed to be made to any intermediaries (agents etc.) in connection with the bid. Thanking you,

Yours faithfully,



# Annexure-III – PROFORMA –Historical Contract Non-Performance, Pending litigation and Litigation History

The following table shall be filled in for the bidder and for each member of a joint venture

Bidder's Name:[insert full name] Date:[insert day, month, year]

Joint venture party name:[insert full name]

No. and title: [insert number and title]

Page [insert page number] of [insert total number] pages

Non-performed contracts in accordance with section III, qualification criteria and requirements

□Contract non-performance did not occur during the (number) years specifies in qualification criteria and bidder's eligibility requirements.

□Contract(s) not performed during the (number) of years specified in qualification criteria and bidder's eligibility requirements.

Year	Non performed portion of contract	Contract identification	Total contract amount (in Indian rupees)
[Insert year]	[Insert amount and percentage]	Contract identification: [indicate complete contract name /number, and any other identification]  Name of employer:[insert full name]  Address of employer:[insert street/city/country]  Reason(s) for non-performance: [indicate main reason(s)]	[insert amount]

Pending litigation, in accordance with qualification criteria and requirements

□No pending litigation in accordance with Bidder's eligibility requirements.

□Pending litigation in accordance with Bidder's eligibility requirements as indicated below.



Year of	Amount in	Contract identification	Total
dispute	dispute		contract
	(Rupees)		amount
			(Rupees)
[Insert year]	[Insert	Contract identification: [indicate complete contract	[insert
	amount]	name /number, and any other identification]	amount]
		Name of employer:[insert full name]	
		Address of employer:[insert street/city/country]	
		Matter in dispute:[Indicate main issues in dispute]	
		Party who initiated the dispute :[indicate "Employer	
		"or "Contractor"]	
		Status of dispute: [indicate if it is being treated by the	
		adjudicator, under arbitration or being dealt with by	
		the judiciary]	

# Litigation History in accordance with tender conditions

□No litigation history in accordance with Bidder's eligibility requirements.

<sup>□</sup>Litigation history in accordance with Bidder's eligibility requirements as indicated below.

Year of	Amount in	Contract identification	Total contract
dispute	dispute		amount
	(Rupees)		(Rupees)
[Insert year]	[Insert amount]	Contract identification: [indicate complete	[insert amount]
		contract name /number, and any other	
		identification]	
		Name of employer:[insert full name]	
		Address of employer:[insert street/city/	
		country]	
		Matter in dispute:[Indicate main issues in	
		dispute]	
		Party who initiated the dispute :[indicate	
		"Employer "or "contractor"]	
		Reason(s) for litigation and award decision(s)	
		[indicated main reason(s)]	
		Status of dispute:[indicate if it is being treated	
		by the adjudicator, under arbitration or being	
		dealt with by the judiciary]	



# Annexure –IV - VENDOR CODE CREATION FORM

1.	Vender Details		
a)	Name of the Vendor	:	
b)	Address	:	
c)	Place of Registration	:	
d)	Principal place of business	:	
e)	Email ID	:	
f)	Contact No.	:	
2.	Taxation and Other Registra	tio	n Details (Supporting copies need to be attached)
a)	PAN No.	:	
b)	GSTIN	:	
c)	Type of Vendor	:	Registered / Unregistered / Composite Dealer (Tick whichever is applicable)
3.	Bank Details (Copy of canc	elle	ed cheque needs to be attached)
a)	Bank Name, Branch & City		
b)	Bank Account Number	:	
c)	IFSC	:	



# Annexure V - INTEGRITY PACT

#### INSTRUCTIONS FOR EXECUTION OF THIS INTEGRITY PACT

As per ITB, GCC and SCC Clauses of the Bidding Documents, the accompanying 'Integrity Pact' is to be executed in two (02) originals.

Indian Bidder shall submit the Integrity Pact on a non-judicial stamp paper of Rs.100/- duly signed by the person(s) signing the bid. Foreign Bidder may submit the Integrity Pact on its company's Letter Head, duly signed by the person(s) signing the bid.

The non-judicial stamp papers are to be purchased on the name of the Bidder or EMPLOYER and the date of purchase should not be earlier than six months of date of execution. The same is to be attached with this bound volume mentioning the following on the stamp paper:

"This stamp paper is an integral part of the Integrity Pact executed by us for \_\_\_\_\_\_[Insert the name of the package] Package and Specification Number [Insert Specification Number: package]" [Sample is given overleaf]

In case of a foreign bidder, the Letter Head is to be attached with this bound volume mentioning the following on the Letter Head:

"The Integrity Pact executed by us for [Insert the name of the package] Package and Specification Number [Insert Specification Number of the package] is enclosed herewith" [Sample is given overleaf]

Bidders are required to clearly indicate the name of the package and its specification number on the stamp paper/covering letter and first page of the Integrity Pact.

All the pages of the integrity pact are to be signed by the Bidder. If the Bidder is a partnership or a JV, the Integrity Pact shall be signed by all the partners or JV members.

Bidders are required to clearly indicate the name and designation of the signatory(ies) as well as the name and address of the witnesses.

The Bidder shall not change the contents of the Integrity Pact.

Bidder may note that Bidder's failure to submit the Integrity Pact duly signed along with the Bid shall lead to outright rejection of the Bid.

Note: The word EMPLOYER has been used in place of PIA short name. The same may be changed accordingly.

(These are instructions for execution and does not form part of the Integrity Pact)



# (Rs. 100/- Non-judicial Stamp paper) INTEGRITY PACT

etween
redging Corporation of India Limited (DCIL) hereinafter referred to as "The
incipal",
nd Table 1
) hereinafter referred to as "The
dder/Contractor"
eamble
ne Principal intends to award, under laid-down organizational procedures,
ntract(s) for the tender No, dated The principal values
ll compliance with all relevant laws of the land, rules, regulations, economic use of
sources and of fairness/transparency in its relations with its
dder(s)/Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

# Section I - Commitments of the Principal:

The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:

No employee of Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or other benefit which he/she is not legally entitled to.

The Principal will, during the tender process treat all Bidder(s) with equity and fairness. The principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

The Principal will exclude from the process all know prejudiced persons.

If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or it there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

# Section 2 - Commitments of the Bidder(s) / Contractor(s)

The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:

The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer promise or give to any of the Principal's employee involved in the tender



process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage during the execution of the contract.

The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or actions to restrict competitiveness or to introduce cartelization in the bidding process.

The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC / PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purpose of competition or personal gain, or passion to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of Foreign Principals, if any. Further details as mentioned in the "Guidelines of Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the India Agent / representative have to ne in Indian Rupees only.

The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

# Section 3: Disqualification from tender process and exclusion from future contracts:

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section - 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender processor take action as per the procedure.

### <u>Section 4:- Compensation for Damages.</u>

If the Principal has disqualified the Bidder from the tender process prior to the award according to Section-3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid security.

If the Principal has terminated the contract according to Section-3, the Principal is entitled to terminate the contract according to Section-3, the Principal shall be



entitled to demand and recover from the Contractor Liquidated Damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

### Section 5: Previous Transgression.

The Bidder shall declares that no previous transgressions occurred in the last three with any other company in any country confirming to the anti-corruption approach or with any Public Sector Undertakings / Enterprises in India that could justify his exclusion from the tender process.

If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

### Section 6: Equal treatment to all Bidders/Contractors/Subcontractors.

The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment inconformity with this Integrity Pact, and to submit it to the Principal before contract signing.

The Principal will enter into agreements with identical conditions as this one with all Bidders, contractors and subcontractors.

The principal will disqualify from the tender process all bidders who does not sign this Pact or violate its provisions.

#### Section 7: Criminal charges against violation Bidder(s)/Contractor(s).

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer (CVO).

#### Section 8: Independent External Monitor(s).

The Principal appoints competent and credible Independent External Monitors (IEMs) for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Managing Director, DCIL.

The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all the project documents of the principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under



contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.

The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and Contractor. The parties Offer to the Monitor the option to parties in such meetings.

As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

The Monitor will submit a written report to the Managing Director, DCIL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit Proposals for correcting problematic situations.

The Monitor shall be entitle to compensation on the same terms as being extended to / provided to Independent Directors on the DCIL Board.

If the Monitor has reported to the Managing Director, DCIL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the Managing Director, DCIL has not, within the reasonable time taken visible action to proceed against such offence or report it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

The word 'Monitor' would include both singular and plural.

#### Section 9: Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 08 Months after the last payment under the contract, and for all other Bidders 08 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged /determined by the Chairman of DCIL.

#### Section 10: Other provisions.

This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e., New Delhi.

Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

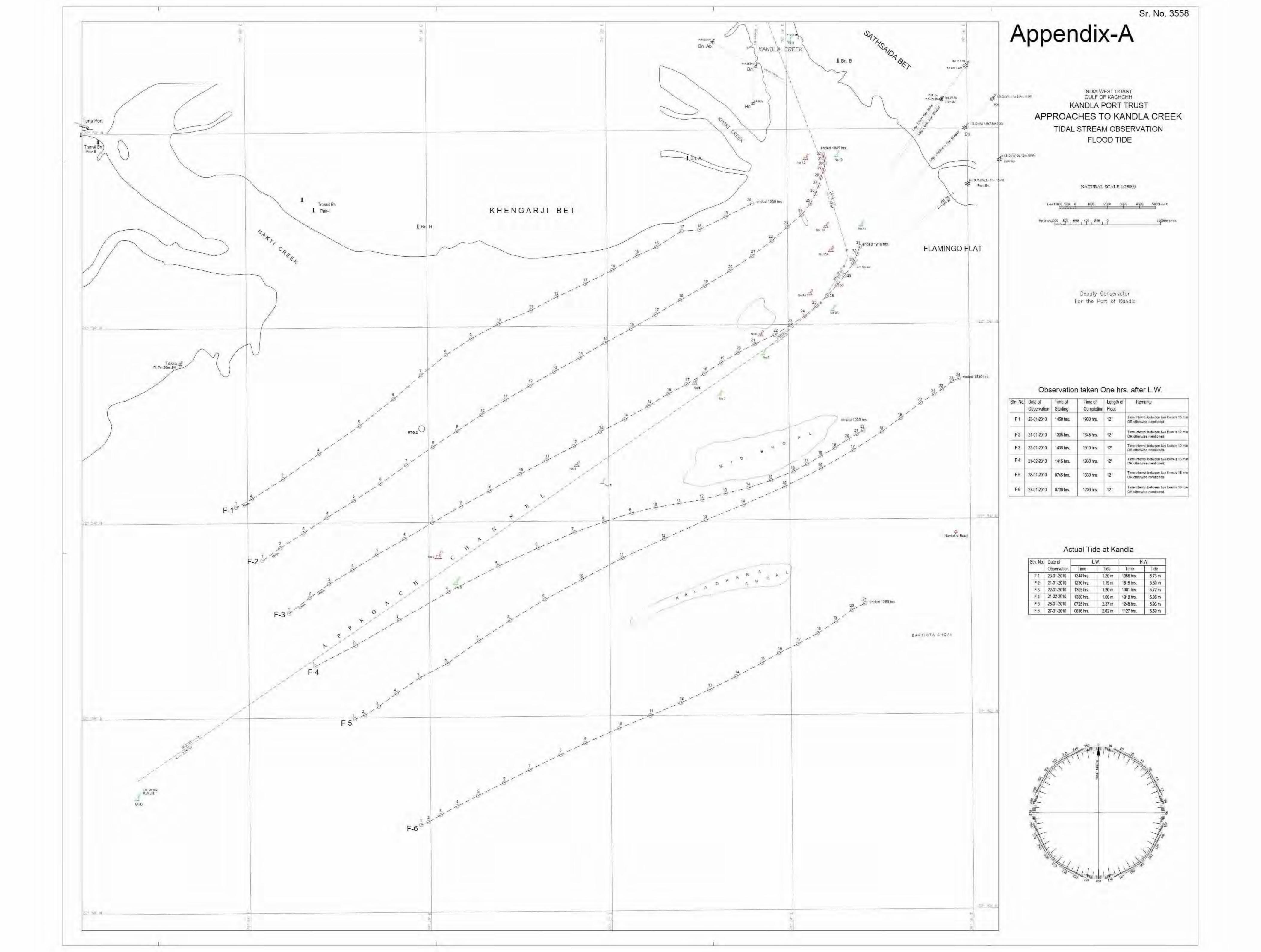
If the Contractor is a partnership firm or a JV, this agreement must be signed by all partners or JV members.

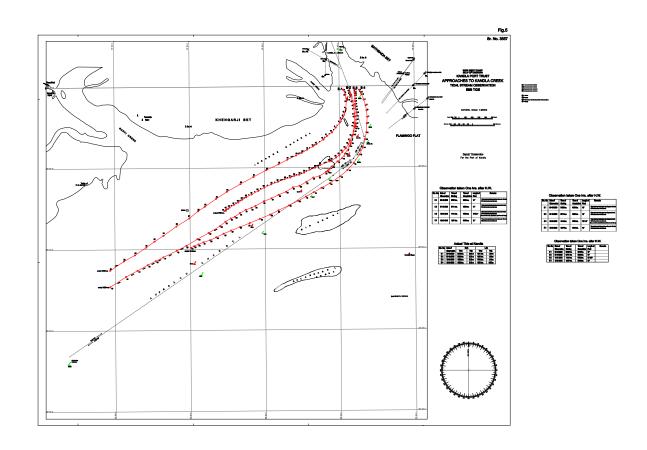


Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

Issues like warranty/Guarantee etc. shall be outside the purview of Monitors In the event of any contradiction between the Integrity Pact and its Annexure, the clause in the Integrity Pact will prevail.

(For & On behalf of Principal)	(For & On be	ehalf of Bidder,	/Contractor)
(Office Seal)	(Office Seal)		
Diversi	Witness 1:		
Place:	(Name	&	Address)
Date:			
	Witness 2:		
	(Name	&	Address)







RENUKA CONSULTANTS, SHOP NO. I, MEERA MOHAN,

OPP. KRANTI TOWER, SECTOR NO. 3,

Borclos

Job No : 16-145

Page Not 1 of 1

As per IS 1892 : 2002 SHREE NAGAR, THANE - 400 604. Project :- Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandia Port. Client :- Kandla Port Trust, Gandhidham - Kutch, Pin - 370201. ts:- E - 0625125 m, N - 2548887 m Borc Hole No. 5 (OJ7-5) R. L .: -12.190 m Depth of Boro Hole: 10.45 m Location: As per Location Sketch Depth of Casing 1 10.45 m Date of Commencement & completion: 03/01/017 to 04/01/017 Depth Group SCR TCR ROD Rock SPT 'N' Value Scale R.L. (m) Material Description Type Depth (m) Symbo (94) (96) (%) ratings (m) 0.00 -12.190 From 15 30 45 60 N 0,00 Dark brownish inorganic clays of high plasticity. 0.50 0.00 1 DS 0.50 1.00 1.00 2,00 CH DS 1.00 1.50 50 1.50 1.73 R SPT 20 Brownish inorganic clays of high plasticity, fat D9 1.73 2.00 clays. 2.00 14,190 Dark brownish silty sands, pourly graded sand-2.00 2.50 DS 1.00 3.00 Dark brownish inorganic clays of high planteity, SPT 3.00 10 23 50 3.37 R fint clays. DS 3.37 4,60 Light grayish and brownish inorganic clays of DS 4.00 4.50 3.70 high plasticity, fat clays. CH DS 4.50 5.00 5.00 Light brownish inorganic clays of high plashoity, 3 SPT 5.00 5.34 19 50 R fat clays. DS 5.34 5.50 10 5.50 DS 6.00 6.00 18.890 Light brownish silty sands, poorly graded sand-SP1 6.70 7.15 13 18 1.00 SM 7.00 DS 12 7.15 7.70 19,890 Light brownish inorganic clays of high plassicity, SPI 7.70 8.15 5 14 31 fat clays, 8.00 DS 14 DS 8.50 9.00 2.75 15 DS 9.00 10.00 CH 10.00 Light trownish and dult white inorganic clays of SPT 10.00 10.45 12 40 19 21 high plasticity, fat clays.

Disturbed Sample Undisturbed Sample UDS SPT Standard Propertation Test : Wash Sample

Drawn By

Reens

WS

Site Enga

Mahesh

Mandape

Checked By Sandip S. Destipande ROD: Rock Quality Designation PR : Rate of Penetration VST: Vane Shear Test

: Core Recover

Client Rept,

PT : Packer Permeability Test

Bore Termination Depth; 10.45 m



SHOP NO. I, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Berelog

Job No : 16-145

As per IS 1892 : 2002 Page No: 1 of 1

Project - Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandia Port, Client - Kandia Port Trust, Gandhidham - Kutch, Pin - 370201.

Co - ordinates - E - 6625109 m, N - 2548866 m

Bore Hole No. 5 (O37-6)

R. L.: +12.060 m

Location: As per Location Sketch

Bare Hole No. 5 (007-6)

Depth of Bore Hole : 10.45 m Depth of Casing : 10.45 m Date of Commencement & completion : 05/91/017 to 06/01/017

Depth/ Scale (m)	-	R.L. (m)	Log	Material Description	Group Symbol	Sample	Туре	Dep	th (m)		SPI	N' N	/alue		TCR (%)	SCR (%)	RQD (%)	Roc
10	0.00	-12,060	m					From	To	15	30	65	60	IN				7.
0.00	0.5	13		Light brownish morganic clays of high plusticity,		1	DS	0.00	9.50				17	10		7-4		-
				fat clays.		2	DS	0.50	1.00						117			
							New.	100	0.00								ЫB	
1.00				5 W. C. C. C. A.		3	DS	1.00	1.50			П						
	3.00			Brownish increamic clays of high plasticity, fat.	CH	T.	SPT	1.50	1.95	0	13	18	3	31				
2.60	**					4	DS	1.95	3.00									
3.00		-15.060		Dark brownith and dull white silty sands, poorly		1	SPT	3,00	3.37	13	20	50		R		Ц		
			m	graded sand-silt mixtures.		5	D5		100	13	eu.	30		K				
				Light brownish silty sands, poorly graded sand- silt mixtures.		6	DS	3,37	4.00									
4,00						7	DS	4.00	4,50									
	3.00			Dark brownish sility sands, poorty graded sand- allt mixtures.	SM	à	SPT	4.50	4.95	8.	10	12	2	22				
5.00						*	D5	4,95	5.50									
		-18,060		Light brownish nilty sands, poorly graded sand- siti mixtures.		9	DS	5.50	6.60						į			
6.00	- 1	10,000		Brownish integratic clays of high plasticity, fat clays		4	SPT	0.00	6.45	6	8	10	7	18		-	7	
						10	DS	6.45	7,50				81					
7.00										Ų,								
				Dark brownish and dull white morganic clays of high plasticity, fat clays		5	SPT	7,50	7,75	30	50		Ť	R				
8.00	4.43					tt	DS	7,75	9.00									
					ĊН												1	
9.00						6	SPT	9.00	9.45	9	20	19		49				
Ш				Brownish inorganic clays of high plasticity, the clays.		12	DS	9,45	10.00									
(0,0)				100,00		7	SPT	10,00	10.45	2	6	8	÷	14	3			
		-22.510			-										1			
S	Distur	ned Samp	le.		_	CR	Core 9	tecavery		-		-		M	Danie	bility T	and the	_

: Standard Penetration Test

Drawn By

SPT : Wash Sample

Site Engg.

RQD: Rock Quality Designation

PR Rate of Penetration VST : Vane Shear Tost Client Rept.

Bore Termination Depah: 10.45 m

PT : Packer Permeability Test

Mahesh Reens Sandip S. Deshpunde Mandape

Checked By



SHOP NO. I, MEERA MOHAN, OFF, KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

Joh Na : 16-145

As per IS 1892 : 2002

Page No: 1 of 1

Project - Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Pott,

Chent: - Kandha Port Trust, Gandhidhum: - Kutch, Pin - 37020). Co - ordinates: - E - 0625153 m, N - 2548782 m

R. L.: -12.050 m Location : As per Location Sketch

Bore Hele No. 7 (OJ7-7)

Depth of Bore Hole : 10.45 m Depth of Casing : 10.45 m

Date of Commencement & completion: 18/01/017 to 19/01/017	Date of Commencement a	& completion :	18/01/017 to	19/01/017
---	------------------------	----------------	--------------	-----------

-15.5	550	Dull light and light yellowish inorganic clays of high plasticity, fat clays.  Light brownish morganic clays of high plasticity, fat clays.  Reddish brown inorganic clays of high plasticity, fat clays.  Light brownish to dark brown silty sands, poorly-graded sand-silt mixtures.	Group Symbol CH	1 3 1 4 5	DS DS SPT DS SPT	9.00 9.30 1.00 1.50 1.95 2.50 3.60 3.50	To 0.50 1.00 1.50 1.95 2.50 3.00 3.50 3.96	4	11:	45	60	N 57				
-15.5		high plasticity, fat clays.  Light brownish inorganic clays of high plasticity, fat clays.  Reddish brown inorganic clays of high plasticity, fat clays.  Light brownish to dark brown silty sands, poorly graded sand-silt mixtures.		3 1 4 5	DS DS DS DS	0.50 1.00 1.50 1.95 2.50	1.00 1.50 1.95 2.50 3.00					57				
-15.5		tight brownish inorganic clays of high plasticity, fat clays.  Reddish brown inorganic clays of high plasticity, fat clays.  Light brownish to dark brown silty sands, poorly graded sand-silt mixtures.		5 5 5 2	DS SPT DS DS	1,00 1,50 1,95 2,50	1.50 1.95 2.50 3.00			46		57				
-15.5		far clays.  Reddish brown inorganic clays of high plasticity, far clays.  Light brownish to dark brown silty sands, poorly graded sand-silt taixtures.		5 6 2	DS DS	1.50 1.95 2.50	1.95 2.50 3.00			46		57				
		Reddish brown inorganic clays of high plasticity, for clays.  Light brownish to dark brown silty sands, poorly graded sand-silt mixtures.		5	DS DS	2.50	3,00	18								
		for clays.  Light brownish to dark brown silty sands, poorly graded sand-silt taixtures.	SM	6	DS	3.00	3.50	1.8								
		graded sand-silt mixtures.	SM	2				18	-17		M					
		graded sand-silt mixtures.	SM	2				18	142	- 4					4.5	1
	550	graded sand-silt mixtures.	SM		11.7		21/10		46	50	6-1	95			2.27	
-16,5	550	Brownish inorganic clays of high plasticity, fat		7	DS	3.95	4.50									
		Brownish inorganic clays of high plasticity, fat			9.3		2	10	-		Ш					
	V/////	clays.		8	DS	4.56	5.00			K						
				0	bs	5,00	5:50			LY.	QT.					
		Light brownish inorganic clays of high plasticity, for clays.	1	3	SPT	5,50	5.95	18	10	23	4	59				
				9	DS	5,93	6.50				ľ				Ш	-
		Dull white and light brownish inorganic clays of high plasticity, clays.		10	DS	6.50	7.06									
	- W///			10	hs	7.00	7.50				١,					1
5		Light brownish inerganic clays of high plasticity,	-	4	SPT	7.50	7.95	Ď	12	16	L	28				
		tal clays.	CH	12	DS	7,95	8.30									
				13	DS	8,50	9.00									
				14	DS	9.00	10.00			k					9	
				5	SPT	10.00	10.45	12	16	21	191	37				
		422,500	Fat clays.	Est clays. CH	13 14 5 5	Light brownish inerganic clays of high plasticity, CH 12 DS 13 DS 14 DS 14 DS 15 SPT	Light brownish inerganic clays of high plasticity, fat clays.  CH 4 SPT 7.50  12 DS 7.05  13 DS 8.50  14 DS 9.00  5 SPT 10.00	Light brownish inerganic clays of high plasticity, TH 4 SPT 7.50 7.95 R30 II DS 7.95 R30 II DS 9.00	Light brownish inorganic clays of high plasticity. CH 12 DS 7.95 8.30  13 DS 8.50 9.00  14 DS 9.00 10.00  5 SPT 10.00 10.45 12	Light brownish inerganic clays of high plasticity.  CH   4 SPT   7.50   7.95   6   12    12 DS   7.95   8.30    13 DS   8.50   9.00    14 DS   9.00   10.00    5 SPT   10.00   10.45   12   16    -22.500	Light brownish inerganic clays of high plasticity, CH 4 SPT 7.50 7.95 6 12 16 12 DS 7.95 8.30 13 DS 8.50 9.00 10.00 5 SPT 10.00 10.45 12 16 21 14 DS 10.00 10.45 12 16 21 14 DS 10.00 10.45 12 16 21 15 15 15 15 15 15 15 15 15 15 15 15 15	Light brownish inerganic diays of high plasticity, flat clays.  CH 4 SPT 7.50 7.95 6 12 15 12 12 15 12 15 12 12 15 12 12 15 12 12 15 12 12 15 12 12 15 12 15 12 12 15 12 12 15 12 12 12 15 12 12 12 12 12 12 12 12 12 12 12 12 12	Light brownish inerganic clays of high plasticity.  CH 4 SPT 7.50 7.95 6 12 16 ± 28  CH 12 DS 7.95 8.30  13 DS 8.50 9.00  14 DS 9.00 10.00  5 SPT 10.00 10.45 12 16 21 - 37	Light brownish inerganic clays of high plasticity, CH 4 SPT 7.50 7.95 6 12 16 1 28 12 16 12 15 12 16 1	Light brownish inerganic clays of high plasticity.  CH   4   SPT   7.50   7.95   6   12   16   4   28    12   DS   7.95   8.30      13   DS   8.50   9.00   10.00    14   DS   9.00   10.00    5   SPT   10.00   10.45   12   16   21   - 37    -22.500	Light brownish inerganic clays of high plasticity.  CH   4   SPT   7.50   7.95   6   12   16   2   28    12   DS   7.95   8.30    13   DS   8.50   9.00    14   DS   9.00   10.00    5   SPT   10.00   10.45   12   16   21   - 37    -22.500

UDS : Undisturbed Sample SPT : Standard Penetration Test SPT

RQD : Rock Quality Designation
PR : Rate of Penetralion
VST : Vane Shear Test
Client Rept.

K : Permeability Test PT : Packer Permeability Test

: Wash Sample

Drawn By Site Engg. Maitesh Reens

Checked By Santip S. Deshpande

Bore Termination Depth: 10.45 m



SHOP NO. I, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Berelog

Job No : 16-145

As per IS 1892 : 2002

Page No : | of |

Freject > Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Citem : Kandla Port Trust, Gandhichan - Kutch, Pin - 370201.

Co - ordinates : - E - 0625021 m, N - 2549095 m

Bore Hole No. 8 (017-9)

Cutchion : As per Location Sketch

Depth of Casine : 10.45 m

Depth of Bore Hole: 10.45 m
Depth of Casing: 10.45 m
Date of Connecement & completion: 24/01/017 to 25/01/017

Depth/ Posle m)	Thic (m)	R.L. (m)	Log	Material Description	Group Symbol	Sample	Туре	Date of Dept	h (m)			N.I			TCR (%)	SCR (%)	RQD (%)	Rock ratings
	0.00	412,760			-		3.0	From	To	15.	30	45	1 60	N				
0.00				Silty sands, poorly graded sand-silt mixtures.		1	DS	0.00	0.50							7		1
1.00	2.50					2	DS	0.50	1.00	H								H
	200			Light yellowish and dull white sitty sands, poorly graded sand-silt mixtures.	SM	1	DS SPT	1.00 1.50	1,50 1.95	4	6	19		25				
2.00		-15.260		portra year day manatay		4	DS	1.95	2,50			Ñ,						
	13			foorganic clays of high plusticity, fat clays.		.5	DS	2.50	3.00		7							
3.00	1,00	-16.200			CH	J.	nia.	400										
		-10.2007		Light yellowish and dull white sitty and b, poorly		2	- SPT	3.00	3.50	31	50	3	-	R		-	-	
4.00	1.00		0.0	groded sand-silt mixtures.	SM	7	DS	3,75	4.50					7				
		-17,260		Light brownish inorganic clays of high plasticity, for clays.		8	DS	4.50	5.00								Ħ	
5.00				Dark brown and hight brown morpanic class of		9	DS SPT	5.00 5.30	5.50 5.95	2	7	.0		t8				
6.00				high plasticity, fat clays.		10	DS	5.95	6.50	1	ľ			10				
				Light brownish and dull white morganic clays of high plasticity, fat clays,		n	DS	6,50	7.00		h							
7.00	5.50			Light brownish inorganic clays of high plasticity.	СН	12	DS SPT	7.00 7.50	7.50 7.95									
8.00				fat clays.		13	DS	7.95	8.50	•	34	22	-	33				
						14	DS	8.50	9.00									
9.00						15	DS	%.0q	10.00									
		22.760				_												
10.00	0.45			Reddish brown inorganic silts and very line sands rock thour, silty or clayey line sands or clayey silts with none to low planticity.	MI.	5	SPT	10.06	10,45	4.	9	12		21				
)S	- Distor	-23.210 bed Samo				726		Recovery			ŢĪ.			¥ -		dillier T	-	

: Disturbed Sample

DS : Disturbed Sample
UDS : Undisturbed Sample
SPT : Standard Penetration Tent : Wash Sample

CR : Core Recovery
RQO: Rock Quality Designation
PR : Rate of Penetration
VST : Value Shear Fest
Ctient Rept.

K : Permeability Test PT : Packer Permeability Test

Site Engg. Drawn By Checked By Bore Termination Depth: 10.45 in Mahesh Reena Sandip S. Dashpande Mandape



#### RENUKA CONSULTANTS, SHOP NO. 1, MEERA MOHAN,

SHOP NO. 1, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604. Borelog

Job No : 16-145

As per 15 1892 : 2002

Page No : 1 of 4

Project: - Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port. Cliem: - Kandla Port Prest, Gandhidham - Kuteh, Pin - 370201.

Co - ordinates : - E - 0525053 m., N - 2548854 m

R. L.: -10.550 m

Location: As per Location Sketch

Bare Hele No. 9 (OJ7-8) Depth of Bare Hole : 31.26 m

Depth of Casing: 31.26 m

Depth/								Date of	Commen	cente	ot ac	comp	NOUN,	1 + 20	VU IVUI	10 24	OTTORY	
Scale (m)	Thic (m)	R.J., (m)	Log	Material Description	Group Symbol	Sample No.	Туре	Dept	b (in)		SPT	N' V	/alue		TCR (%)	SCR (%)	RQD (%)	Roc
2.60	0.00	-16.550	THE PARTY					From	To	15	30	45	60	N				
0,00			la la	Silry sands, poorly graded sand-silt mixtures.		1	DS	0.00	1,00									
1.00	2.00			Brownish silty sands, poorly graded sand-silt mixtures.	SM	İ	DS	1.00	1,50		ľ							
1.1		-12.550	THE R	1	11.0	. 1	DS	1.30	1000									
2.00		_		Dull white and light grayish inorganic clays of		1	SPT	2.00	2,45	13	42	49	-	91			-	
	1.00			high plasticity, fat clays.	CH	4	DS	2.45	9.00									
3.00		-13,550			ſ'n.		-											
61			MM	Light brown to brown silty sands, poorly graded sand-silt mixtures.	71	5	DS	3.00	3.50									
			MH.			5	DS	3,50	4.00									
4.00	2.00			Brownish silty sands, poorly graded sand-silt	SM	2	SPT	4.00	4,45	11	12	17	4	29				
				mixhaes.		7	DS	4.45	5.00	1								ľ
5,00		-15,550					-	- (10)										
				Brownish inorganic clays of high plasticity, fat clays.	1	8	DS	5.00.	5,50									
						9:	DS	5.50	5,00									
6.00		3		Dark brownish inorganic clays of high plasticity, fat clays.		3	SPT	6.00	6.45	6	10	20		30				
Н				an capys.		10	bs	6.45	7.00									
7.00				Brownish inorganic clays of high plasticity, fat clays.		11	DS	7.00	7.45									
П	16.26			ctays.		12	DS	7.45	8.00	m								
8,00				Dark brownish inorganic clays of high plasticity,	сн	a	SPT	8.00	8,45	12	14	18:		32				
51				fat clays.		13	DS	8.45	9.00									
9,00																		
		1		Brownish inorganic clays of high plasticity, far clays.		14	DS	9.00	9.50									
Ш						15	DS	950	10.00									
10,00						5 16	SPT	10.00	10,45	12	16	24	-	40				
		-20,550																



RENUKA CONSULTANTS, SHOP NO. I, MEERA MOHAN,

Borelog

Job No : 16-145

63		7		OPP. KRANTI TOWER, SECTOR NO. SHREE NAGAR, THANE - 400 604.					As per to						100	e No :	4 of 4	
R. L.:	Fandli finates : +10.550	- E - 062	st, Gan 5053 m	ions at Proposed Container Terminal Barge Inti- diidham - Kutch, Pin - 370201. 1, N - 2548854 m	nsar Tunta	Tekra	Naviga	Bore He Depth o	hannel ar sle No. 9 f Bore Ho f Casing Common	(OJ7- ole : 3 : 31.2)	8) 1.26 5 m	m				7 to 24/	01/01/7	
Depth/	This (m)	R.L. (m)	Log	Material Description	Group Symbol	Sample No.	Туре	100	fi (m)	-	_	NI			TCR (%)	SCR (%)	RQD (%)	Rock
31.00	26.26	-40.550 -41.810		Grayish inorganic clays of high plauticity, fin clays:	СН	15 46 16	SPT DS SPT	30.00 30.30 31.00	30.30 31.00 31.26	40	50	3.0	, on	R				
SPT WS Site I Mail	: Undis	bed Samp turbed San ard Penetr Sample Drawn Rec	le nple stion T	Checked By Sandip S, Deshpande		RQD PR VST	Rock (	Penetra Shour Te	Designation dicts	on:	Во	re To	maina	PT':	Perme Packer Depth:	Permer	ibility T	est



RENUKA CONSULTANTS, SHOP NO. 1, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

Job No : 16-145

As per IS 1892 : 2002

Page No : 1 of 1

Project :- Marine Geo Investigations at Proposed Container Terminal Barge Jetty hear Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Client :- Kandla Port Trust, Gandhidham - Kutch, Pin - 370201. Co - ordinates :- E - 0625443 m, N - 2549207 m

R. L.: -8.060 m Location: As per Location Sketch

Bare Hole No. 10 (OPP OF7-10) Depth of Bore Hole: 10.45 m

Depth of Casing | 10.45 or Date of Commencement & completion : 28/01/017 to 29/01/017

Scale	The (m)	2.L (m)	Log	Material Description	Group Symbol	Sample	Туре	Depti	r (m)	J	SPI	N' V	alue		TCR (%)	SCR (%)	RQD (%)	Rock
(m)	0.00	-8.000			-	-		Prom	To	15	30	45	60	N				
0.00				Inorganic with and very fine anads rock flour, silty or clayey fine sands or clayey silts with none to low plasticity.		1	DS	0.00	1,00									
60.1	2.00			Brownish inorganic silts and very fine sands rock flour, silty or clayey fine sands or clayey slits will	ML	2	DS	1.00	1.50									
		14.22		none to low plasticity.			50	Ven	2.00	ш								
2.00		-10.060	TORONO DE	Dull white silty sands, poorly graded sand-silt		3	DS	2.00	2.00	7	13	18	-	31				
		1.8		mixtures.		3	bs	2.45	3.00									
3.00						5	DS DS	3.00 3.50	3,50 4,00									
4.00	4.00			Light brownish and dull white silty sands, poorly	SM	1	SPT	4,00	4.45	12	12	15		27				
				graded sand-silt mixtures.		7	DS	4.45	5.09		ĺ							
5.00							DS	5.00	5.50				٩					
	l .		N/SA	Brownish and coll white silty sands, poorly graded sand-silt mixtures.		8	DS	3210	.3.511									
		-14,060	JUNEAU			9	DS	5,56	6.00				Ų.					
6,00		19,000		Light brownish incognotic clays of high plasticity,		3	SPT	6.00	6,45	4	14	30	1	94				
	1.00			fat clays,	cm	10	DS	6.45	7.00		î							
7:00		-15,060				1.16	D.C.	7.00	7.60								-	-
				Duil white silty sands, poorly graded sand-silt mixtures.		11	DS	7.00	7.50							17		
						12	DS	7.50	8.00									
8.00				Brownish silty saids, poorty graded said-silt		4	SPT	8.00	8.45	9	18	42	=	60				
				mixtures	-	13	DS	8.45	9,00		Ŋ					П		ľ
0.00	345	1			SM									ш				
9.00					SM	14	DS DS	9300 9.50	9,50									
						13	LUS	9.50	16/00									
10.00			78	Durk brownish sitty sands, poorly graded sand- silf mixtures.		5	SPT	10.00	10.41	10	12	18	3	30				
DS.		+18,510				CR		Recover								esbility		

DS UDS SPT WS Disturbed Sample : Undisturbed Sample

: Standard Penetration Test

CR : Core Recovery RQD : Rock Quality Designation PR Rate of Penetration VST Vane Shear Test

K.: Permeability Test PT: Packer Permeability Test

: Wash Sample

Checked By Drawn By Site Engg. Sandip S. Deshpande Mahesh Reems Mandage

Client Rept.

Here Termination Depth: 10.45 m



SHOP NO. I, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3. SHREE NAGAR, THANE - 400 604.

Borelog

Job No : 16-145

As per IS 1892 : 2002

Page No: 1 of 1

Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandia Port.

Client: Kandia Port Trust, Gandhichiam - Kuteh, Pin - 370201.

Co - ordinates r - E - 0625963 m, N - 2547756 m

Bore Hole No. 11 (OPP 034-11)

R. L: - 3.990 m

Location: As per Location Sketch

Depth of Casing: 10.45 m

Bore Hole No. 11 (OPP OM-11) Depth of Bore Hole: 10.45 m Depth of Casing: 10.45 m

Donited	-				_	_		Date of	Comme	nceme	mt &	comp	stetio	a:0i	/02/0F	10 03/	02/017	
Depth/ Scale (m)		R.L.(m)	Log	Material Description	Group Symbol	Sample	Турс	Dep	th (m)		SPI	N' Y	Value		TCR (%)	SCR (%)	RQD (%)	Rock
0.00	0.00	-8.990	mm	Ingrando chan article structure en et co		-		From	To	15	30	45	60	N			-	
5.00				luorganic clays of high plusticity, fat clays.		1	DS	0.00	1.00									
1.00	2.00				Сн				l kin									
				Brownish inergonic citys of high plasticity, fut clays,		2	DS:	1.50	2.00									
2.00		-10,990		Duli white sitty sands, pourly graded sand-sile mixtures.		-1	SPT	1.00	2,25	12	50	2	ş	R	-	-		-
						*	DS	2.25	3.00							Н		
1.00						5	DS DS	3,00 9,50	3.50 4.00									
4.00	4.00				SM	1	SPT DS	4,00 4,45	4.45 5.00	ă.	7	23	0	30				
5.00				Become the tilly sunds, portly graded sand-till numbers		H	D\$	5,00	5,50									
6.00		-14.990		Browniah inorganic clays of high plasticity, fat		0	DS	5.50	6.00			-	Ш	34				
1.1		0.000		clays.		10	SPT LIS	6,00	5,45 7,00	6	17	27		##		V		
7.00	2.00			Dullandin faccos la describil de frances de	СН				100									
				Dull white inorganic clays of high plasticity, fat clays.		14	DS	7.00	7.50 8.00							Ш		
8.00		-16,990		Brownish silty sands, poorly graded sand-silt mixtures		ā	SPT	8.00	8.45	12	22	50	+	72			-	-
						1.5	D8	8.45	9.00									
9,00	2.00	in the s			SM	(4	DS DS	9,00 9,50	9.50 10.00									
(0.46	0.45	-18,990		Light to dark brownish inorganic clays of high plasticity, fat clays.	СН	5	SPT	10.00	10.45	8	10	tă		23				
DS .	- Pil-t	-19.440 bed Samp				CR		tecovery							Permea			

UDS SPT WS : Undisturbed Sample

: Standard Penetration Test : Wash Sample Site Engg. Drawn By

Mahesh Mandage Checked By Sandip S. Deshpande

BQD : Rock Quality Designation, PR Rate of Penetration VST : Vane Shear Test Client Rept.

K Permeability Test PT Packer Permeability Test

Bore Termination Depth: 10.45 m.



SHOP NO. 1, MEERA MOHAN, OPP, KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

Job No : 16-145

As per IS 1892: 3002

Page No: 1 of 1

Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Circut: Kandla Port Trust, Gandhadham - Kutch, Pite - 170201.

Bore Hole No. 115 (SC-1)

R. L.: -9,940 in Depth of Bore Hole: 10.45 in Depth of Casing: 10.45 in

pletion: 21/01/018 to 21/01/018

epthy	_		-		200	9	1	Date of C							TCR		RQD	Rock
cale	THE (m)	R.L. (m)	Log	Material Description	Group Symbol	Sampl	Тура	Depth	(m)		SFT	Nº V	luc	1	(36)	(%)	(%)	rating
m)	0.00	-9,940						From	To	13	30	45	50	N	1			
.00	0.00			Grayish inerganic clays of high plusticity, fat clay		1	DS	0.00	1.00									
.00.						74.77	DS DS	1.00	1.50									
1,00						4	UDS DS	2.00 2.45	2.45 3.00									
3.00						10	DS DS	3.00 3.50	3.50 4.00			-						
4,00						7	UDS DS	4.00 4.45	4.45 5.00									
5,00	10.45				CH	8 9	DS DS	5.00 5.50	5.50 6.00									
6,00						10	UDS DS	6.00 6.45	6.45 7.00									
7.60	1				h	11 12	DS 125	7.00 7.50	7.50 8.00									
\$.00						13	SPT	8.00 8.45	8,45 9,00	3	2	3.	÷	5				
9.00	-					14		9.80 9.50	9,50									
10.0	0					72	SPT	10.00	10.45	1	3	3	-	6	ic			
		-20.39	0		1	1		1						1	1	1		1
DS UDS SPT	: Um	turbed Sar historped a history Pen	Sample etration			RQ PR	O Red Rete	Recovery Quality of Penetr e Shear T	Designa ration	tion						neabilit ar Pern	y Test seability	Test
WS 50	e Engg	sh Sample Dri	iwn By	Checked By		1	Chen		T		В	ore T	erini	natio	n Dept	h: 16.42	5 113	
3	lahesh.		cena	Sandip St Deshpande		1												



SHOP NO. 1. MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 664.

Borelog

Job No : 16-145

As per IS 1892 : 2002

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Project - Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Cisent - Kandla Port Trust, Gandhichiam - Kutch, Pin - 370201.

Co - ordinates -- H - 0624627 m, N - 2535656 m

Bere Hole No. 116 (SC-2)

R. L.: -8.170 m

Location : As per Exaction Sketch

Denth of Cosings - 10 45 m.

Bere Hole No. 116 (SC-2) Depth of Bore Hole: 10.45 m Depth of Casing: 10.45 m Date of Commencement & completion: 21/01/018 to 21/01/018

Depth/ Scale (m)	-	R.L. (m)	 Maurial Description	Group Symbol	Sample	Туре		th (m)	1			Value		TCR (%)	100	RQD (%)	Rock
	0.00	-8.170					From	To	13	1 30	145	60	IN	-	100	-	4.00
0.00			Grayish inorganic clays of high planticity, fat clay		1	DS	0.00	1.00									F
1,00					3	DS DS	1.06 1.50	1.50							Ш		
2.00					- +	UDS DS	2.00 2.45	2,45 3.00									
3.00					5 6	DS DS	3.00 3.50	3.50 4.00									
4.00					24.14	UDS DS	4.00	4.45 5.00									
5:00	10.45			си	8 9	DS DS	5.00 5.50	5,50 6:00									
6.00					3	UDS	6.00 6.45	6.45 7.00									
7.00					11 12	DS DS	7,00 7,50	7.50 8.00	j						j.P		
8.00		-			1 13	SPT DS	\$.00 8.45	8,45 9,00	ĵ.	2	4		5				
9.00					14 15	DS DS	9,00 0,50	9.50 10.00			Ó						
(0.00					ż	:SPT	10.00	10.45	í	177	4	-	7				
05 :	Distarb	-18.520 sed Sample			70	Core R				0					hilling T		

UDS : Und-sturbed Sample

Standard Penetration Lest : Wash Sample Engg. Drawn By SPT WS

Checked By Santin S. Deshpande Sile Engg. Mahrish Reena Mandape

CR Core Recovery
RQD: Rock Quality Designation
PR | T Rate of Penetration
VST : Vane Shear Test

Client Rept.

K = Penneability Test PT | Packer Penneability Test

Bace Termination Depth: 10.45 m



SHOP NO. I, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Bordog

Job No : 16-145

As per IS 1892 : 2002

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Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Cteck areas of Kandla Port.

Cient - Kandla Port Tunat, Geodinidham - Kutch, Pin - 370201.

Bore Hole No. 117 (SC-3)

R. L.; -7.100 m Depth of Bare Hole: 10.45 m

Location; As per Location Sketch

Depth of Casing: 10.45 m

Depth of Casing : 10.45 m Date of Commencement & completion : 21/01/018 to 21/01/018

	Tide (m)	R.L. (m)	Log	Material Description	Group Symbol	Sample No.	Туре	Depth	(m)	1	SPT	N° Va	lue		TCR (%)	SCR (%)	RQD (%)	Rock rating
m)	0.00	-7.100				-		From	To:	15.	30	45	60	N		-	100	
000	Wahr	-7.100		Grayish inorganic clays of high plasticity, fat clay		1	DS	0,00	1,00						П			
						Ш					4		- 1					
.00											1		1					
1,00						21.3	DS DS	1.00	2.00									
								2	6.0									
2.00	8					4	UDS DS	2.00	3.00	ii								
							117			П								
3.00						5	DS	3.00	3.50							100		
	X					6	DS	3,50	4.00									
4:00						2 7	UDS DS	4.00 4.45	4.45 5,00	17								
					K	l x	Lia	4.03	3/89	Ш								
5,00						13												
2,60	18:45				СН	8 0	DS DS	5.00	5.50									
						1	1115		201			V						
6.00	-					10	UDS	6.00	7.00			1						1
												0.				1		
7.00	-					11	DS	7.00	7.50			18				1		
						12	ns	7.50	8,00									
8.00					1	i	SPT	8.00	8.45	1	2	3	-	5.			1	1
					111	13	DS	8.45	9.00									
								1										
9.00	1					14		9.00	9.50							1	И	
						1	10						1	L			1	
10.0	0	1				2	SPT	10,00	10.45	1	3	3	-	10	1			1
ì	1				1				1							4		9.
nc.	1	-17.5			-	CR	- Con	Recover	Y	_	-	-	1	K	Pen	peabilit	y Test	_
DS UDS		imbed Sa historbed				RC	D Roc	k Quality	Designat	tion							neability	Test
SPT	Sta	ndard Pen	etration			PR		of Penet										
WS	: Wa	sh Samph				VS		e Shear T Rept.	est	_	В	ore To	ernois	nation	Den	h: 10.4	5 m	_
	te Engg. Anhesh		awn By Leena	Checked By Sandip S. Deslipande			V-10CKH	14500					- 11-01		-			



SHOP NO. 1, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

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Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandia Port.

Cient: - Kandia Port Trust, Gandhidhan - Kutoh, Pat - 370201.

Co - ordinates: - II - 0626859 m, N - 2537324 m

Bore Hole No. 118 (SC-4)

Depth of Bore Hole: 10.45 m

Location: As per Location Sketch

Depth of Casing ) 10,45 m Date of Commencement & completion / 22/01/018 to 22/01/018

Depth/ Scale (m)	This (m)	R.L. (m)	Log	Material Description	Group Symbol	Sample	Туре		th (m)	T		-	Yahs		DCR (%)	_	RQD (%)	Rock ratings
	0.00	-3,620	,,,,,,,				-	From	To	15	30	45	1 50	N		-		70.00
0.00				Grayish inorganic clays of high plasticity, fix clay		1	DS	0.00	1.00	1	1	1	1 00	1	1			
										1			1		hп		1	
	1. 9										1	F.	П		11.0			
1.00												1	1	1		. 0		
1		1				2	DS	1.00	1.50				U					
		1 3				3	DS	1.50	2.00	n								
2.00		3		II /							1			111				
-300		1				4	UDS DS	2.00	3,00	V.				Ш	V. U	. /		
				N. //		3		-42	200	1			ш					
		1									П		U					
3,00		1				Ų.		1	NU	Ш	ш	1	R.					
						5	DS DS	3.00	3.50 4.00		1	١.	Ш					
							~	3.00	1100							1 X		
4.00	U T	1		f		2	UDS	4.00	4.45		П							
		1		1		7	DS	4,45	3.00						n 1	7 1		
															6.11			
500						ш												
5.00	10.45	-				8	DS	5,00	3.57			10			100			
	1	1			CH	.9	D8	5.50	600								1	
	9.1	1							100						И			
6.00		į.				3	UDS	6.00	6.45									
		-				10	DS	6,45	7,00								1.1	
- 1		į.																
7.00		8										11				- 1	6.1	- 1
		ě				u	DS	7.00	7.50			11.3						
		-			11.7	12	DS	7.50	8.00			DΠ						
	10				1		(1)					00						- 1
8.00						1	SPT	8.00	8.45	1	3	3		5				
- 4		-			- 1	13	DS	8,45	9.00					0.11		- 1		
		į.		1	X 1									M				
9.00		ŧ								110						- 1		
		1				14	DS	9.00	9.50									
		8				15	DS	0.50	10.00				m		1.0			
500														U				
0.00		-				2	SPT	10.00	10.45	0	2	3	3	5				
		8										34						
	- 1	14.070															10	
e .	Dienul	1.00	anna			-				1.11		-				- 1		

Disturbed Sample

UDS : Undisturted Sample SPT : Standard Penetration : Standard Penetration Test

Reena

: Wash Sample Engg. Drawn By Site Engg.

Mabesh

Mandape

Checked By Sandip S. Destipande

CR : Core Recovery RQD: Rock Quality Designation PR : Rate of Penetration VST : Vane Shoar Test

Client Rept.

Permeability Test PT : Packer Permeability Test

Hore Termination Depth: 10,45 m



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Borelog

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Project :- Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Client :- Kendla Port Trust, Gendhidnam - Kurch, Pin - 370201.

Co - ordinates :- E - 0627774 m, N - 2538185 m

Bore Hole No. 119 (SC-5)

R. La: -5,020 m

Location : As per Location Sketch

Depth of Casing : 10.45 m Date of Consucencement & completion : 21/01/018 to 22/01/018

	Thk. (m)	R.L. (m)	Log	Material Description	Group Symbol	No.	Туре	Depth	(m)		SPT	N' Va	lue		TCR (%)	SCR (%)	RQD (%)	Rock
(m)	0,00	-5.020	-			12		From	To	15.	30	45	60 I	N		11.7		
0.00	U,III	-9.020		Grayish inorganic clays of high plasticity, fat clay		1	DS	0.00	1.00									
.00						2 3	DS DS	1.00 1.50	1.50 2.00									
.00						4	UDS	2.00 2.45	2.45 3.00									
5,00						5	DS DS	3,00 3,50	3.50 4.00									
4.00						7	UDS DS	4.00 4.45	4.45 5.00									
5.00	10,45				CIÍ	8 9	DS DS	5 00 5 50	5,50 6,00									
6.00						3 10	UDS DS	1	6.45 7.00									
7,00						11 12	DS DS	7.00 7.50	7.50 8.90									
8.00						1 13	SPT	8.00 8,45	8.45 9.00	1	2	3	-	5				
9.00						14		9.00 9.50	9,50 10.90									
10.00						2	SPT	10.00	10.45	2	3	3		ó				
		15,47	0			CS		s Recover			-			1		neabilit		

: Standard Penetration Test

Reena

- Wash Sample Drawn By Site Engg.

Mahesh

Mandage

Checked By Sandip S. Deshpande PR Rate of Penetration VST Vane Shear Test Client Ropt

Bore Termination Depth; 19,45 m



SHOP NO. I, MEERA MOHAN, OPP, KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

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Project :- Manine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekna, Navigational Charmel and Creek areas of Kandla Port.

Clicit :- Kandla Port Trust, Gandhicham - Kutch, Pin - 370201.

Co - ordinates :- E - 0627046 m, N - 253892 m.

Bore Hole No. 120 (8C-6)

R. L.: 8.640 m Location: As per Location Sketch

Bore Hole No. 120 (SC-6) Depth of Bore Hole : 10.45 in Depth of Casing : 10.45 in Date of Communicement & con

Scale	This (m)	R.L. (in)	Log	Material Description	Group Symbol	No.	Туре	-	Comunication (m)				Value	-	TCR	SCR	RQD	Rock
(m)	0.00	8.640			Symbol	V2	100		3. 1	-	1.20	1.70	1 00		(%)	(95)	(%)	ruting
0.00				Grayish inorganic clays of high plasticity, for clay		1	DS	From 0.00	1.00	15	30	45	60	N				
1.00						24.3	DS DS	1,00	1.50									
1,00						-4	UDS DS	2.00 2.45	2,45 3.00									
5.00						5 0	DS DS	3.00 3.50	3.50 4.00									
4.00						2.7	UDS DS	4,00 4 45	4.45 5.00									
\$.00	10.45				रम	8 8	DS DS	5:00 5:50	5,50 6,00									
0.00						2 10	U/DS DS	6,00 6,45	5,45 7,00									
7.05						11 12	D8 D8	7.00 7.50	7.50 8.00									
8.00						13	SPT DS	8.00 8.45	8.45 9.00	Y	1	3	-	5				
9,00		9				14 15	DS DS	9.00 9.50	9.50 10.00							1		
0.410						2	SPT	10,00	10.45	1	1	3		à				

SPT : Standard Penetration Test WS : Wash Sample

Rooma

: Wash Sample Engg. Drawn By

Site Engg.

Mandape

Checked By Sandip S. Deshpande BQD: Rock Quality Designation PR. Rate of Penetration VST (Vane Shear Test

PT: Packer Penneability Test

Client Rept.

Bitre Termination Depth: 10.45 m



### RENUKA CONSULTANTS, SHOP NO. 1, MEERA MOHAN,

OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

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Project: - Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.
Client: - Kandla Port Trust, Gandhidham - Kutch, Fin - 370204.

Co - ordinates: - B - 0620795 m, N - 2539751 m

Bore Hole No. 121 (SC-7)

Location : As per Location Sketch

Depth of Bore Hole: 10.45 m.

Depth of Casing: 10.45 m Date of Commencement & completion: 23/01/018 to 23/01/018

eptit/ icale	Thk. (m)	R.L. (m)	Log	Material Description	Group Symbol	No.	Type	Depth	(m)	3	SPT	N'V	alue		TCR (%)	SCR (%)	RQD (%)	Rock
(m)	0,00	-9.860	-			N)		From	To	15	30 [	45	60	N				
0.00	0.30	3,300		Grayish inorganie clays of high plasticity, fat clay		1	DS	0.00	1.00									
1.00						2	DS DS	1.00 1.50	1.50									
2.00						4	SPT	2.00 2.45	2.45 3.00	4	5	ġ	4	14				
3.00						5	DS DS	1.00 3.50	7.50 4.00									
4.00						7	UDS DS	4,00 4,45	4,45 5,00							1		
5.00	10.45				сн	8 9	DS DS	5,90 5,50	\$.50 6.00									
6.00						2 10	UDS DS	6.00 6.45	6.45 7.00									
7,00	6					11	DS DS	7.00 7.50	7.50 8.00		k						000	
8.00						3 13	UDS	8,00 8,45	8,45 9,00									
9.00						14		9,00 9,50	9.50									
10.00	0					2	SPI	10.00	10.45	2	2	3	-	5				
DS	, Dist	=20,3 turbed Sa	-77777		_			e Recover k Quality		1	1	H	1			neobilit	y Test nenhility	

UDS SPT WS : Standard Penetration Test

Wash Sample

PR : Rate of Penetration VST : Vane Shear Test

Client Rept. Bore Termination Depth; 10.45 m. Checked By Drawn By Site Engg. Sandip S. Deshpande Mahesh Reena Mandape



SHOP NO. 1. MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

Job No : 16-145

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Project :- Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.

Client :- Kandla Port Trust, Gandristhum - Kutch, Pin - 370201.

Co - ordinates :- E - 0527592 m, N - 2539142 m

R. La: -5,450 m

Depth of Bore Hole : 10,45 m

Depth of Casing : 10,45 m

Locatio	-5,150 a: Asş	m er Locati		, N - 2539142 m				Depth o	lole No. 1 of Bore H of Casing f Comme	iole :	10.45 45 m	m	pletic	on : 29	M31/013	8 to 23/	01/018	
Depth/ Scale (m)		R.L. (m)	Log	Material Description	Group Symbal	Sample	Туре		ain (m)				Value		TCR (%)	SCR (36)	RQD (%)	Rock
0.00	0.00	-5.150		Grayish inorganic clays of high plasticity, fat clay		ī	DS	From 0.00	1.00	15	30	45	60	N		1		
1.00						tal far	DS DS	1.00	1.50 2.00									
2,00						+9	UDS DS	2.00	2,45 3,00									
3.00						5	DS DS	3.00 3.50	1,50 4,00									
00.						7	UDS	4.00	4.45 5,00						H			
5.00	10.45				СН	# 9	DS DS	5,00 3,50	5,50 6 00									
5.00						3. 10	tips DS	8.00 6.45	6.45 7.00									
7.00						11 12	DS DS	7.00 7.50	7.50 8.00									
LUSO						1.	SFT DS	8.00 8.45	-8.45 9.00	±	2	2		4				
2.00						14	bs bs	9.00 9.50	9.50 18.00									
0.00						2	SPT	10,00	10,45	i	2	1	-	1				

SPT WS : Standard Penetration Test

ROD: Rock Quality Designation
PR: Rate of Penetration
VST: Vane Shear Test
Client Rept.

PT: Packer Permeability Test

2 Wash Sample Site Engg. Drawn By Mahesh Mandape Reens

Orecked By Sandip S. Deshparate

Bore Termination Depth: 10,45 m



SHOP NO. 1, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 504.

Borelog

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Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channel and Creek areas of Kandla Port.
Client: Kandla Port Trust, Guodhidham - Kutch, Pin - 370201.
Co - ordinates: - E - 0623948 m, N - 2547850 m

Bore Hole No. 123 (SC-9)

Location: As per Location Sketch

Depth of Bore Hole: 10.45 m

Depth of Casing : 10.45 m

Date of Commencement & completion: 23/01/018 to 23/01/018

	Thic (m)	R.L. (m)	Log	Material Description -	Group Symbol	ample No	Type	Depth	(m)	1	SPI 7	r.Va	lue.		FCR (%)	SCR (%)	RQD (96)	Rock
(m)	2008	-11290			- Career-Or	N.	-	From	To	15	30 1	45	60	N		100		
00,0	0.00	-11290		Grayish inorganic clays of high plasticity, fat clays.		1	DS	0.00	1.00									
1.00					1	79.00	DS DS	1.00	1.50									
2,00						,1 4	UDS DS	2.00 2.45	2.45 3.00									
3,00	5:00				Сн	5	DS DS	3,00 3,50	3.50 4.00									
4,00						7	UDS DS	4.00 4.45	4.45 5.80									
5,00						9	DS DS	5.00) 5.50	5,50 6,00									
6.00		-17.2%		Crayish silty sands, poorly graded sand-silt mixtures,	t	3 10	L/DS DS	6,00	6,45 7,00									
7.00						11	DS DS	7.00 7.50	7.50 8.00									
8.00	4.45				SM	13	SPT	8:00 8:45	8.45 9.00	7	14	19	-	33		ŀ		
9.00						14	DS DS	9,00 9,50	9.30 10.00									
10.00	1					2	SPT	10.00	10.45	11	15	29	+	44			V.	
DS UDS		-21.74 mrbed Sm listarised	nple	III.	_			r Recover	y Designat	ion	1_					esbility er Perm	Test	Test

: Standard Penetration Test : Wash Sample WS

Checked By Site Engg. Drawn By Sandip S. Deshpande Mahesh Mandape Reama

VST = Vane Shear Test
Client Rept.

Bore Termination Depth: 10.45 m



SHOP NO. I, MEERA MOHAN, OPP. KRANTI TOWER, SECTOR NO. 3, SHREE NAGAR, THANE - 400 604.

Borelog

Job No : 16-145

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Project: Marine Geo Investigations at Proposed Container Terminal Barge Jetty near Tuna Tekra, Navigational Channet and Creek areas of Kandla Port.

Client: Kandla Port Tuna, Gandhidhima - Klatch, Pin - 370291.

Co - ordinates: - E - 0626256 m, N - 2543981 m

R. L.: -9.350 m

Location: As per Location Sketch

Depth of Born Hole : 10.45 m

Depth of Casing : 10.45 m

Depth of Casing 10.45 m.
Date of Commencement & completion 24/01/018 to 24/01/018

Depth/ Scale (m)	1	R.L. (m)	Log	Material Description	Group Symbol	Sample No.	Туре	1	th (m)			יאיי	_		TCR (%)	SCR (%)	RQD (%)	Reck
0.00	0.00	-9.350					200	From	To-	15	30	45	60	I.N.				
00.0			G m	ruyish silty sands, poorly graded sand-silt ixtures.		T	DS	0.00	1.00		Í							
1.00	3.00				SM	2	DS DS	1.00 1.50	1.50 2,00									
2.00							SPT DS	2,00 3,45	2.45 1.00	4	5	3	+	13				
3.00		-12,350	G	ayish inorganic silts and very fine sands rock		5	DS	3,00.	3.50									115
			He wi	our, allly or chayey fine sands or chayey ailts th none to low plasticity.		6	DS	5.50	4.00						П		Ш	VIII
4.00	2.80				ML	7	SPT	4.00	4.29 5.80	20	50	æ	9	R				
5.00		-14,350	Maria	nyian filty sands, poorly graded sarah-silt			Pari.	e 00										
		1	jui.	chires		9	DS DS	5.50	5.50									
00.6						3 10	SPT	6.00 6,45	6.45 7.00	13	23	28	Y	51				
7,00						11	DS DS	7.00 7.50	7.50 8.00								١	
8.00	5.45				SM	4	SPT DS	8.00 8.45	8,45 9,00	7	12	14		36.				
9.00						14	DS DS	9.00	9,50									
(0,00				, y		5	SPT	9.50 10.00	10.45	8	18	17		32				
S :	Disturt	-19,800 bed Sample urbed Samp						ecovery	etionatio						Permea	hitity T	est	

UDS Undisturbed Sample SPT Standard Penetration Test

Wash Sample Site Engg. Mahesh Drawn By Reena

Mundape

Checked By Sandip S. Deshpande CR : Core Recovery RQD: Rock Quality Designation

PR : Rate of Penotration VST : Vane Shear Test Client Rept.

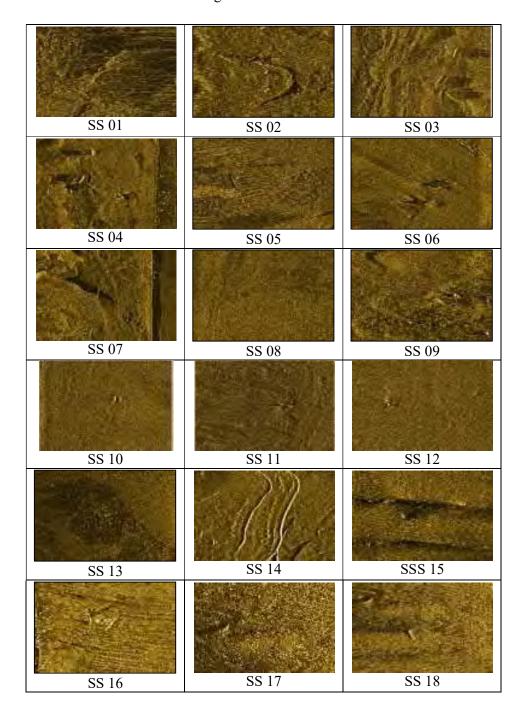
PT : Packer Permeability Test

Bore Tennination Depth: 10,45 m



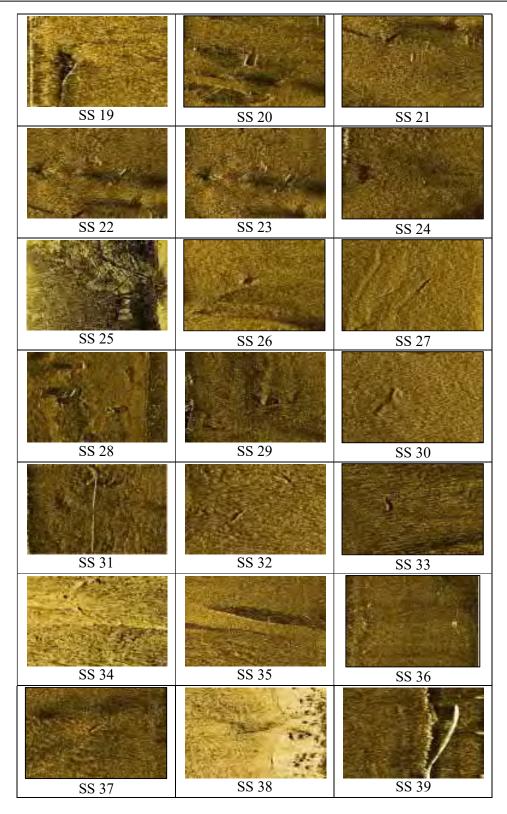
AII. GPI Results: Appendix A(3) "Details of Under Water Objects in Kandla Creek & Navigation Channel" 5.1. Side Scan Sonar (SSS) Survey Results

The targets/objects namely SS01 to SS92 were identified through SSS survey and are presented in Figs. 11 to 16 and tiles SS01 to SS50. The SSS survey identified target/objects location details are in Table AII.2 along with its remarks.

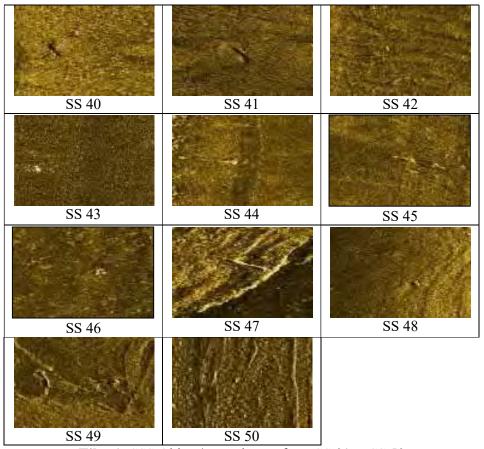












Tiles 1: SSS Object/target image from SS 01 to SS 50

Table AII.2 Details of the SSS targets/object locations and its remarks

S.N	Targ et ID	Location	UTM (2	Zone 42)	Geographic	Location	Remark
0	SSS		X (m)	Y (m)	Latitude	Longitude	
1	SS 1	Location 2	625199.30	2550705.40	23°03'36.6681"N	70°13'19.7566" E	Unknown target; small in size
2	SS 2	Location 4	625012.30	2549963.00	23°03' 12.5814"N	70°13'12.9686" E	Linear feature; Could be chain
3	SS 3	Location	625140.30	2549037.00	23°02'42.4398"N	70°13'17.1942" E	Unknown target; partially buried and scattered
4	SS 4	13	625147.90	2549025.10	23°02'42.0509"N	70°13'17.4577" E	Unknown target; partially buried and scattered
5	SS 5	Location 15	625597.20	2548737.80	23°02'32.5878"N	70°13'33.1579" E	Unknown target; small in size
6	SS 6	Location 16	625388.70	2548574.30	23°02'27.3287"N	70°13'25.785"E	Unknown target; small in size
7	SS 7	Location 18	625360.40	2548152.20	23°02'13.6127"N	70°13'24.6669" E	Small linear target
8	SS 8	Location 19	625652.80	2547914.90	23°02'5.8179"N	70°13'34.869"E	Unknown target; small in size
9	SS 9	Location 20	625366.00	2547871.00	23°02'4.4686"N	70°13'24.781"E	Anchor with rope/chain



# Comprehensive study for the Maintenance Dredging requirements of Deendayal Port and to suggest measures to reduce dredging cost





10	SS 10	Location 22	625510.80	2547516.10	23°01'52.8904"N	70°13'29.7635" E	Unknown target; small in size
11	SS 11	Location 23	625451.30	2547501.30	23°01'52.4254"N	70°13'27.669"E	Anchor with rope/chain
12	SS 12	Location 25	625724.90	2546602.50	23°01'23.1285"N	70°13'37.0156" E	Unknown target; small in size
13	SS 13	Location 27	626098.40	2545755.90	23°00' 55.5013"N	70°13'49.8854" E	Unknown target
14	SS 14	Location 29	625691.50	2545303.30	23°00' 40.8969"N	70°13'35.4603" E	Unknown target; small in size
15	SS 15	Location 30	625648.60	2544948.10	23°00' 29.36"N	70°13'33.8491" E	Unknown target; partially exposed
16	SS 16	Location 31	625722.797 7	2544891.70	23°00' 27.506"N	70°13'36.4386" E	Anchor with rope/chain
17	SS 17	Location	625682.80	2544699.80	23°00' 21.2777"N	70°13'34.9774" E	Unknown target; small in size
18	SS 18	32	625690.40	2544671.20	23°00' 20.3458"N	70°13'35.2359" E	Unknown target; small in size
19	SS 19	Location 34	625807.30	2543847.90	22°59' 53.5461"N	70°13'39.0995" E	Unknown target
20	SS 20	Location 35	625616.80	2543754.00	22°59' 50.5449"N	70°13'32.3816" E	Unknown target; small in size
21	SS 21	Location 37	625605.20	2543574.80	22°59' 44.7218"N	70°13'31.9216" E	Unknown target; partially buried and scattered
22	SS 22	Location	625596.80	2543511.40	22°59' 42.6627"N	70°13'31.608"E	Unknown target; partially buried and scattered
23	SS 23	38	625602.50	2543501.70	22°59' 42.3458"N	70°13'31.8053" E	Unknown target; partially buried and scattered
24	SS 24	Location 39	625700.60	2543433.70	22°59' 40.1083"N	70°13'35.2305" E	Unknown target; small in size
25	SS 25	Location 40	626090.54	2543431.15	22°59'39.9191"N	70°13'48.924"E	Unknown target
26	SS 26	Location 41	625948.20	2543257.00	22°59' 34.2958"N	70°13'43.8739" E	Unknown target; small in size
27	SS 27	Location 42	625663.50	2543288.40	22°59' 35.3942"N	70°13'33.885"E	Unknown; small linear target
28	SS 28	Location 43	625804.40	2543092.40	22°59' 28.9833"N	70°13'38.7756" E	Unknown target; small in size
29	SS 29	Location	625681.80	2543020.10	22°59' 26.666"N	70°13'34.4489" E	Unknown target; small in size
30	SS 30	44	625721.30	2542994.80	22°59' 25.8327"N	70°13'35.8286" E	Unknown target; small in size
31	SS 31	Location 46	625752.30	2542709.60	22°59' 16.5516"N	70°13'36.8335" E	Unknown linear target
32	SS 32	Lagation	625797.20	2542695.30	22°59' 16.0744"N	70°13'38.406"E	Unknown target
33	SS 33	Location 47	625812.30	2542683.60	22°59' 15.6899"N	70°13'38.9328" E	Unknown target
34	SS 34	Location 48	625955.28	2542722.82	22°59'16.9261"N	70°13'43.9654" E	Unknown target
35	SS 35	Location 49	626112.50	2542799.80	22°59' 19.3861"N	70°13'49.5092" E	Unknown; very small target
36	SS 36	Location 50	626278.10	2542700.00	22°59' 16.0962"N	70°13'55.2952" E	Anchor with rope/chain
37	SS 37	Location 51	626002.60	2542272.90	22°59' 2.285"N	70°13'45.4947" E	Unknown; very small target

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Unknown; very small target  Suspected target  Unknown target  Unknown target  Unknown; very small target  Unknown target; small in size  Unknown linear target  Unknown target  Unknown target  Unknown target
Suspected target Unknown target Unknown; very small target Unknown target; small in size Unknown linear target Unknown target
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Unknown; very small target
Unknown; very small target
Unknown target
Small target; could be Tyre
Small target; could be Tyre
Small target; could be Tyre
Unknown; very small target
Unknown target; small in size
Unknown target; small in size
Unknown target; partially buried and scattered
Unknown target; partially exposed
Unknown; very small target
Small target; could be Tyre

# Comprehensive study for the Maintenance Dredging requirements of Deendayal Port and to suggest measures to reduce dredging cost





				T .	T	1	
67	SS 66	Location 99	620948.90	2532786.00	22° 53` 55.1798" N	70° 10` 45.3539" E	Unknown linear target
68	SS 67	Location 100	621111.30	2532644.60	22° 53` 50.5400" N	70° 10` 51.0135" E	Unknown target; small in size
69	SS 68	Location 102	620296.50	2532322.70	22° 53` 40.2855" N	70° 10` 22.3286" E	Unknown; very small target
70	SS 69	Location 103	619917.00	2532343.90	22° 53` 41.0729" N	70° 10` 9.0165" E	Unknown target
71	SS 70	Location 105	619997.50	2532018.20	22° 53` 30.4623" N	70° 10` 11.7507" E	Unknown target; small in size
73	SS 71	Location 106	619543.30	2531810.40	22° 53` 23.8229" N	70° 9` 55.7538" E	Unknown target; small in size
74	SS 72	Location 107	619458.80	2531654.40	22° 53` 18.7725" N	70° 9` 52.7452" E	Small target; could be Tyre
76	SS 73	Location 108	619236.60	2531602.20	22° 53` 17.1323" N	70° 9` 44.9332" E	Unknown target; small in size
77	SS 74	Location 110	618618.50	2531205.60	22° 53` 4.3954" N	70° 9` 23.1334" E	Unknown target
78	SS 75	Location 111	618627.50	2531021.90	22° 52` 58.4202" N	70° 9` 23.3987" E	Linear feature; Could be chain
79	SS 76	Location 113	618337.20	2530724.10	22° 52` 48.8115" N	70° 9` 13.1299" E	Unknown target; partially buried and scattered
80	SS 77	Location 115	617279.60	2530077.60	22° 52` 28.0589" N	70° 8` 35.8424" E	Anchor with rope/chain
81	SS 78	Location 116	617160.80	2529984.90	22° 52` 25.0748" N	70° 8` 31.6487" E	Unknown target; partially buried and scattered
82	SS 79	Location 117	617002.80	2529979.80	22° 52` 24.9488" N	70° 8` 26.1033" E	Linear feature; Could be chain
83	SS 80	Location 119	616807.00	2529898.80	22° 52` 22.3643" N	70° 8` 19.2109" E	
84	SS 81	Location 120	616626.90	2529556.20	22° 52` 11.2701" N	70° 8` 12.7988" E	Linear feature; Could be chain
85	SS 82	Location 121	616503.30	2529559.40	22° 52` 11.4051" N	70° 8` 8.4628" E	Linear feature; Could be chain
86	SS 83	Location 121	616458.40	2529539.90	22° 52` 10.7823" N	70° 8` 6.8821" E	Unknown target
87	SS 84	Location 122	616198.40	2529520.80	22° 52` 10.2263" N	70° 7` 57.7541" E	Unknown target; small in size
88	SS 85	Location 123	615775.60	2529304.80	22° 52` 3.3086" N	70° 7` 42.8610" E	Unknown target; partially exposed
89	SS 86	Location 125	615805.50	2528990.30	22° 51` 53.0753" N	70° 7` 43.8256" E	Unknown target; small in size
90	SS 87	Location 124	615580.70	2529084.30	22° 51` 56.1876" N	70° 7` 35.9633" E	Anchor with rope/chain
91	SS 88	Location 126	615553.30	2528863.50	22° 51` 49.0151" N	70° 7` 34.9427" E	Linear feature; Could be chain
92	SS 89	Location 127	615667.70	2528775.90	22° 51` 46.1384" N	70° 7` 38.9331" E	Unknown linear target
93	SS 90	Location 128	615341.90	2528892.40	22° 51` 50.0073" N	70° 7` 27.5332" E	Unknown target; partially exposed
94	SS 91	Location 129	615248.10	2528774.20	22° 51` 46.1873" N	70° 7` 24.2105" E	Linear feature; Could be chain
96	SS 92	Location 130	614060.60	2528161.10	22° 51` 26.5451" N	70° 6` 42.3835" E	Unknown target; small in size



There are four anchors/mooring systems with chains/ropes, one linear chain like feature, two unknown linear objects, six unknown objects partially buried and scattered, sixteen small unknown objects, five very small unknown objects, two unknown small linear object, thirteen unknown objects and one suspected object traced within surveyed limit.

In general, the SSS mosaic shows that the seabed/riverbed is carpeted by sedimentary particles composed by clay, silt, silty clay, stiff-clay and silty sand. The records do not show the presence of any exposed hard rock. The SSS mosaic map is presented in Fig. 11 to 16.

#### AII.5.2. Sub-Bottom Profile (SBP) Survey Results

The sub-bottom records acquired in the field were processed using several geophysical signal processing techniques such as zap filter, low pass filter, high pass filter, TVG and DBG. The filtered data were taken to interpretation window for target identification.

The targets namely SB1 to SB25, identified through sub-bottom profiling survey are presented in Figs. 11 to 16. The details of the targets/objects geographical locations and remarks are given in tableAII.3.

Table AII.3 Details of geographical locations of each targets/objects identified by SBP

C N -	Target ID	I 4	UTM (2	Zone 42)	Geographi	c Location
S.No	SBP	Location	X (m)	Y (m)	Latitude	Longitude
1	SB 1	Location 2	625261.2318	2550629.502	23°03'34.1836"N	70°13'21.9104"E
2	SB 2	Location 10	625270.35	2549189.06	23°02'47.3484"N	70°13'21.8077"E
3	SB 3	Location 12	625099.5956	2549020.14	23°02'41.9027"N	70°13'15.7592"E
4	SB 4	Location 14	625302.7588	2549039.299	23°02'42.4705"N	70°13'22.9024"E
5	SB 5	Location 14	625323.8218	2548960.152	23°02'39.8915"N	70°13'23.6191"E
6	SB 6	Location 15	625598.8718	2548780.292	23°02'33.9689"N	70°13'33.2292"E
7	SB 7	Location 13	625571.1454	2548759.296	23°02'33.2938"N	70°13'32.2489"E
8	SB 8	Location 17	625500.1977	2548450.271	23°02'23.2658"N	70°13'29.6656"E
9	SB 9	I	625930.3111	2547689.741	23°01'58.4217"N	70°13'44.5514"E
10	SB 10	Location 21	625952.0664	2547657.557	23°01'57.3694"N	70°13'45.3061"E
11	SB 11	Location 38	625642.57	2543502.18	22°59'42.3505"N	70°13'33.2127"E
12	SB 12	Location 40	626083.69	2543411.09	22°59'39.2688"N	70°13'48.6775"E
13	SB 13	Location 44	625701.43	2543049.81	22°59'27.6266"N	70°13'35.1469"E
14	SB 14	Location 49	626181.68	2542783.2	22°59'18.8275"N	70°13'51.9337"E
15	SB 15	Location 52	626090.3508	2541920.148	22°58'50.7921"N	70°13'48.4724"E
16	SB 16	Location 63	627200.72	2538660.95	22°57'4.5222"N	70°14'26.4959"E
17	SB 17	Location 66	626750.7463	2536859.478	22°56'6.0742"N	70°14'10.1665"E
18	SB 18	Location 68	625387.9944	2535634.59	22°55'26.6197"N	70°13'21.9717"E



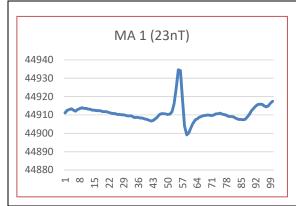


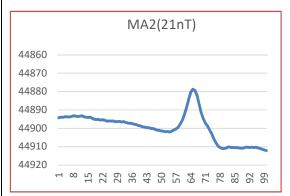
19	SB 19	Location 71	626570.27	2540270.83	22°57`57.0369" N	70°14` 4.8374" E
20	SB 20	Location 78	627110.95	2538535.91	22°57`0.478" N	70°14`23.30" E
21	SB 21	Location 87	625222.61	2535403.59	22°55`19.15" N	70°13`16.098" E
22	SB 22	Location 89	622480.61	2533986.63	22°54`33.81" N	70°11`39.45" E
23	SB 23	Location 97	621520.8	2532879.97	22°53`58.08" N	70°11`5.45" E
24	SB 24	Location 109	618457.9	2531381.65	22°53`10.16" N	70°10`17.54" E
25	SB 25	Location 117	616986.91	2529972.89	22°52`24.72" N	70°08`25.54" E

Generally, sub-bottom is composed by different sedimentary formation at various depth. The second acoustic boundary which is called second layer, has also been observed few meters blow from the seabed at assorted locations. The maximum acoustic boundary has been delineated at a distance of 8m below seabed. The sub-bottom profiles do not show any buried hard rock within the penetrated limit.

#### AII.5.3. Magnetometer survey Results

The magnetic survey data shows that there are 88 marine magnetic anomalies present at surveyed location. The deviation from Earth's magnetic field caused by presence of manmade debris/objects are classified and plotted in the plate 1. The targets namely MA1 to MA88, identified through magnetometer survey are presented in Figs. 11 to 16. The details of the targets/objects and its geographical locations are given in the table AII.4.





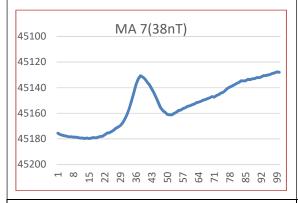












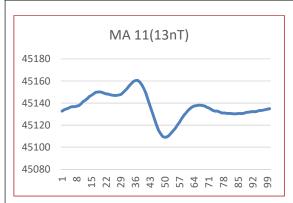


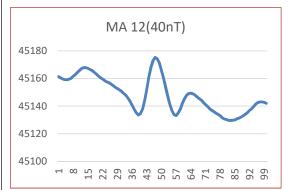


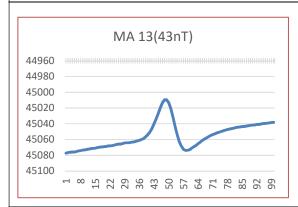




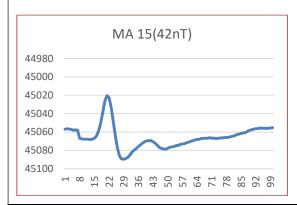




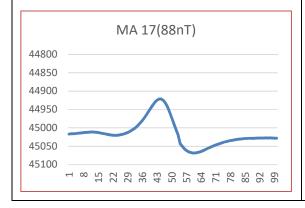








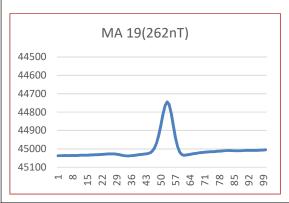


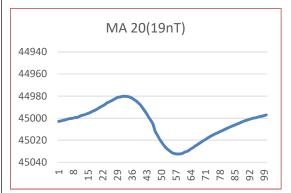


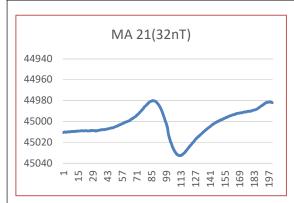




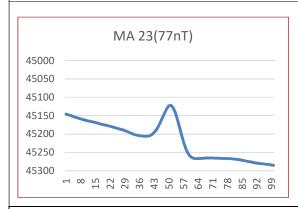


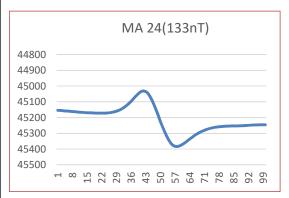


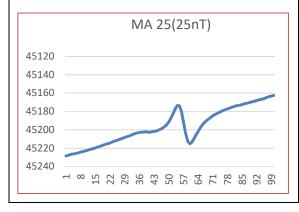


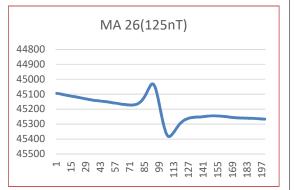














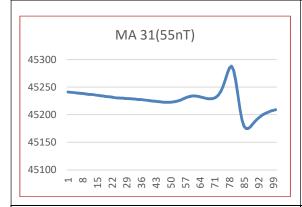


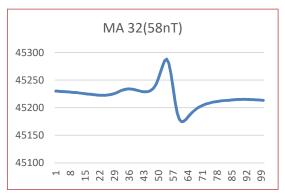














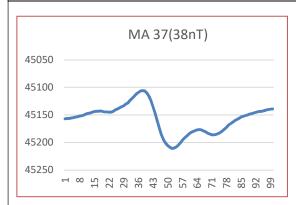




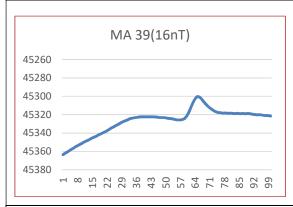


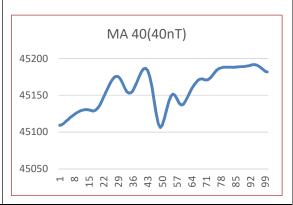


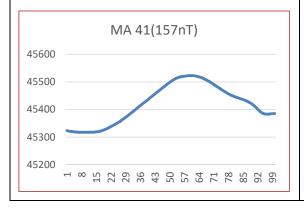








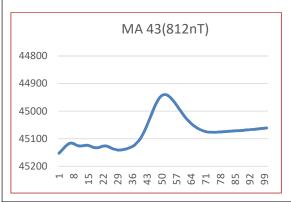


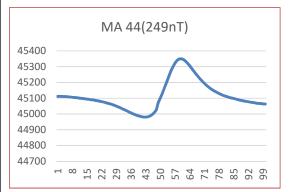


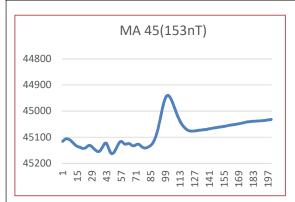




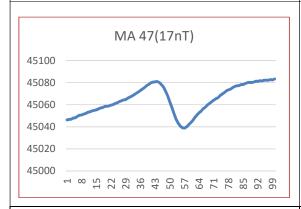












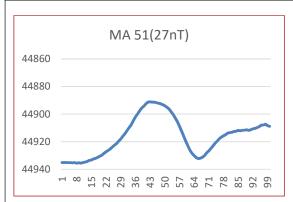




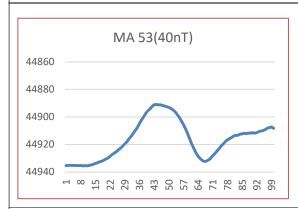




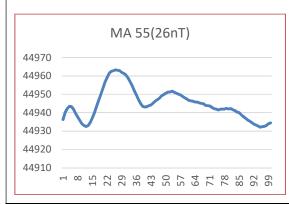


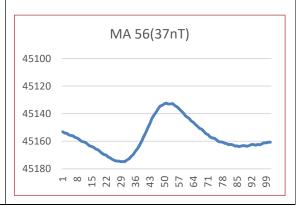


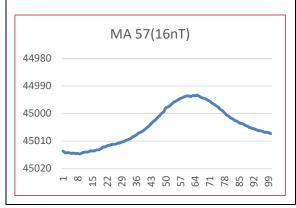


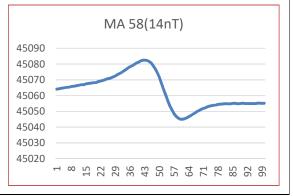






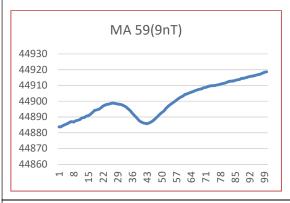


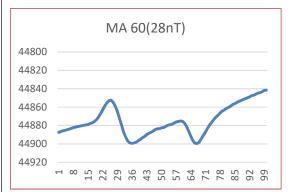




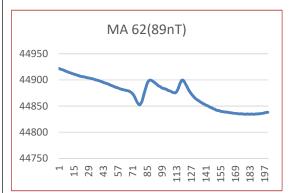


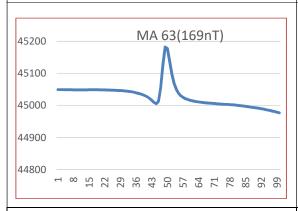












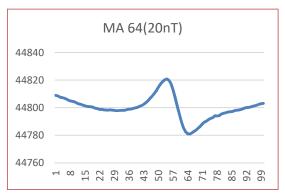












Plate 1: Magnetic anomaly MA01 to MA69

Table AII.4 Details of the targets/objects locations

G.N.	<b>Anomaly Code</b>	omaly Code UTM (Zone 42)		Zone 42)	Geographic Location	
S.No	MAGI	Location	X (m)	Y (m)	Latitude	Longitude
1	MA 1	Landing 1	625296.467	2550917.838	23°03'43.5486"N	70°13'23.2331"E
2	MA 2	Location 1	625349.345	2550842.873	23°03'41.0969"N	70°13'25.069"E
3	MA 3		625201.639	2550728.503	23°03'37.4186"N	70°13'19.8456"E
4	MA 4	Location 2	625256.468	2550667.07	23°03'35.4064"N	70°13'21.754"E
5	MA 5		625155.846	2550672.31	23°03'35.6041"N	70°13'18.2201"E
6	MA 6	Location 3	625280.963	2550157.183	23°03'18.8219"N	70°13'22.4649"E
7	MA 7	Location 4	624989.146	2549989.445	23°03'13.4475"N	70°13'12.1629"E
8	MA 8	Location 5	625187.424	2549972.588	23°03'12.8456"N	70°13'19.1243"E
9	MA 9	Location 5	625215.897	2549965.48	23°03'12.6068"N	70°13'20.1225"E
10	MA 10	Location 6	625248.402	2549839.622	23°03'8.506"N	70°13'21.2276"E
11	MA 11	Location 7	625193.949	2549783.475	23°03'6.6952"N	70°13'19.298"E
12	MA 12	Location 8	625154.524	2549691.016	23°03'3.6999"N	70°13'17.8857"E
13	MA 13	Location 9	625000.377	2549214.079	23°02'48.2351"N	70°13'12.3303"E
14	MA 14	Location 10	625254.237	2549239.215	23°02'48.9835"N	70°13'21.2564"E
15	MA 15	Location 11	625413.389	2549214.014	23°02'48.1209"N	70°13'26.8404"E
16	MA 16	Location 12	625051.136	2549014.766	23°02'41.7411"N	70°13'14.0552"E
17	MA 17	Location 13	625150.026	2549036.722	23°02'42.4282"N	70°13'17.5358"E



## Comprehensive study for the Maintenance Dredging requirements of Deendayal Port and to suggest measures to reduce dredging cost



18	MA 18		625149.179	2549022.448	23°02'41.9643"N	70°13'17.5019"E
19	MA 19	Location 14	625354.644	2549014.803	23°02'41.6599"N	70°13'24.718"E
20	MA 20	Location 14	625339.326	2549001.666	23°02'41.237"N	70°13'24.176"E
21	MA 21	Location 15	625666.963	2548712.884	23°02'31.7587"N	70°13'35.6014"E
22	MA 22	Location 16	625384.302	2548513.453	23°02'25.3516"N	70°13'25.6127"E
23	MA 23	Location 17	625495.113	2548474.33	23°02'24.0495"N	70°13'29.494"E
24	MA 24	Location 1/	625476.069	2548468.542	23°02'23.8665"N	70°13'28.8233"E
25	MA 25	Location 19	625624.349	2547962.431	23°02'7.371"N	70°13'33.8835"E

27	26	344.26		(25202.005	2547000 550	2200215 02401131	70012125 2026UE
28	26	MA 26	Location 20	625383.005	2547888.558	23°02'5.0349"N	70°13'25.3836"E
29			T				
30							
31	-						
32   MA 32			Location 26				
32 MA 32			Location 27				
34							
35	33			626223.145	2545527.614		
36	_		Location 29				
37		MA 35					
38			Location 30	625642.884	2544967.617		70°13'33.6541"E
A		MA 37		625642.801	2544953.948		
MA 40	38	MA 38		625743.53		23°00'27.6911"N	
MA 41	39		Location 31		2544882.503		
A2	40	MA 40		625767.96	2544863.62	23°00'26.5808"N	70°13'38.0165"E
A3	41	MA 41		625743.098	2544764.761	23°00'23.3734"N	70°13'37.1142"E
44	42	MA 42	Location 22	625791.823	2544729.25	23°00'22.2055"N	70°13'38.8151"E
45	43	MA 43	Location 32	625697.703	2544708.21	23°00'21.5471"N	70°13'35.5032"E
46         MA 46         Location 33         625856.113         2544074.507         23°00′0.9004″N         70°13′40.8804″E           47         MA 47         625832.828         2544075.32         23°00′0.9332″N         70°13′40.0629″E           48         MA 48         Location 34         625826.772         2543887.35         22°59′54.8234″N         70°13′39.7949″E           49         MA 49         Location 36         625816.545         2543697.86         22°59′48.6653″N         70°13′39.38″E           50         MA 50         Location 39         625706.754         2543410.821         22°59′39.3627″N         70°13′35.4399″E           51         MA 51         625897.463         2543029.754         22°59′26.9212″N         70°13′42.0253″E           52         MA 52         Location 45         625951.249         2543024.26         22°59′26.9212″N         70°13′43.9125″E           53         MA 53         62591.249         2543001.027         22°59′25.9808″N         70°13′42.847″E           54         MA 54         Location 48         625947.408         2542717.598         22°59′16.578″N         70°13′42.847″E           55         MA 56         Location 50         626291.486         2542714.982         22°59′16.5796″N         70°13′55.7697″E	44	MA 44		625665.994	2544703.962	23°00'21.4176"N	70°13'34.3883"E
47         MA 47         625832.828         2544075.32         23°00'0.9332"N         70°13'40.0629"E           48         MA 48         Location 34         625826.772         2543887.35         22°59'54.8234"N         70°13'39.7949"E           49         MA 49         Location 36         625816.545         2543697.86         22°59'48.6653"N         70°13'39.38"E           50         MA 50         Location 39         625706.754         2543410.821         22°59'39.3627"N         70°13'35.4399"E           51         MA 51         625897.463         2543029.754         22°59'26.9212"N         70°13'42.0253"E           52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         62591.101         2543001.027         22°59'25.9808"N         70°13'43.9125"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'44.8892"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.257"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E	45	MA 45		625885.941	2544091.122	23°00'1.4325"N	70°13'41.9329"E
48         MA 48         Location 34         625826.772         2543887.35         22°59'54.8234"N         70°13'39.7949"E           49         MA 49         Location 36         625816.545         2543697.86         22°59'48.6653"N         70°13'39.38"E           50         MA 50         Location 39         625706.754         2543410.821         22°59'39.3627"N         70°13'35.4399"E           51         MA 51         625897.463         2543029.754         22°59'26.9212"N         70°13'42.0253"E           52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.5785"N         70°13'43.6874"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.6404"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'15.5983"N <td< td=""><td>46</td><td>MA 46</td><td>Location 33</td><td>625856.113</td><td>2544074.507</td><td></td><td>70°13'40.8804"E</td></td<>	46	MA 46	Location 33	625856.113	2544074.507		70°13'40.8804"E
49         MA 49         Location 36         625816.545         2543697.86         22°59'48.6653"N         70°13'39.38"E           50         MA 50         Location 39         625706.754         2543410.821         22°59'39.3627"N         70°13'35.4399"E           51         MA 51         625897.463         2543029.754         22°59'26.9212"N         70°13'42.0253"E           52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'43.6874"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'44.8892"E           56         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         25409499.743         22°58'20.7777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°57'55.3598"N <td< td=""><td>47</td><td>MA 47</td><td></td><td>625832.828</td><td>2544075.32</td><td>23°00'0.9332"N</td><td>70°13'40.0629"E</td></td<>	47	MA 47		625832.828	2544075.32	23°00'0.9332"N	70°13'40.0629"E
50         MA 50         Location 39         625706.754         2543410.821         22°59'39.3627"N         70°13'35.4399"E           51         MA 51         625897.463         2543029.754         22°59'26.9212"N         70°13'42.0253"E           52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'43.6874"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.257"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 56         626744.097         2540843.187         22°58'15.5983"N	48	MA 48	Location 34	625826.772	2543887.35	22°59'54.8234"N	70°13'39.7949"E
51         MA 51         625897.463         2543029.754         22°59'26.9212"N         70°13'42.0253"E           52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'44.8892"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'44.8892"E           56         MA 56         Location 50         626299.663         2541303.045         22°58'30.6712"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'20.777"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N	49	MA 49	Location 36	625816.545	2543697.86		
52         MA 52         Location 45         625951.249         2543024.26         22°59'26.7279"N         70°13'43.9125"E           53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'43.6874"E           55         MA 55         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'44.8892"E           56         MA 56         Location 50         626299.663         2541303.045         22°58'30.6712"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'20.777"N         70°13'55.789E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'55.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626997.226         2540222.062         22°57'55.359"N         70°14'12.0335"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'3	50	MA 50	Location 39				
53         MA 53         625921.101         2543001.027         22°59'25.9808"N         70°13'42.847"E           54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'43.6874"E           55         MA 55         Location 50         62691.486         2542702.461         22°59'16.5796"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'22.0335"E           62         MA 62         Location 69         626891.57         2539739.341         22°57	51	MA 51		625897.463	2543029.754	22°59'26.9212"N	70°13'42.0253"E
54         MA 54         Location 48         625947.408         2542717.598         22°59'16.7585"N         70°13'43.6874"E           55         MA 55         Location 50         625981.757         2542702.461         22°59'16.5796"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'20.777"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         254081.43         22°57'50.7443"N         70°14'12.9035"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         25388	52	MA 52	Location 45	625951.249	2543024.26	22°59'26.7279"N	70°13'43.9125"E
55         MA 55         Location 48         625981.757         2542702.461         22°59'16.257"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'12.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538838.245         22°57'10.3004"N         70°14'28.1536"E           64         MA 64         Location 64         627621.753         2538	53	MA 53		625921.101	2543001.027	22°59'25.9808"N	70°13'42.847"E
55         MA 55         625981.757         2542702.461         22°59'16.257"N         70°13'44.8892"E           56         MA 56         Location 50         626291.486         2542714.982         22°59'16.5796"N         70°13'55.7697"E           57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'12.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°5	54	MA 54	Lagation 19	625947.408	2542717.598	22°59'16.7585"N	70°13'43.6874"E
57         MA 57         Location 53         626299.663         2541303.045         22°58'30.6712"N         70°13'55.6404"E           58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'12.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         253	55	MA 55	Location 46	625981.757	2542702.461	22°59'16.257"N	70°13'44.8892"E
58         MA 58         Location 55         626420.101         2540999.743         22°58'20.777"N         70°13'59.78"E           59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'22.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 68         625372.714         25356	56	MA 56	Location 50	626291.486	2542714.982	22°59'16.5796"N	70°13'55.7697"E
59         MA 59         Location 56         626744.097         2540843.187         22°58'15.5983"N         70°14'11.1101"E           60         MA 60         Location 57         626907.226         2540222.062         22°57'55.359"N         70°14'16.6541"E           61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'12.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535		MA 57	Location 53	626299.663	2541303.045		70°13'55.6404"E
60         MA 60         Location 57         626907.226         2540222.062         22°57′55.359″N         70°14′16.6541″E           61         MA 61         Location 58         627061.624         2540081.43         22°57′50.7443″N         70°14′22.0335″E           62         MA 62         Location 59         626891.57         2539739.341         22°57′39.6686″N         70°14′15.9615″E           63         MA 63         Location 61         627246.224         2538863.713         22°57′11.1021″N         70°14′28.1536″E           64         MA 64         Location 62         627150.187         2538838.245         22°57′10.3004″N         70°14′24.7744″E           65         MA 65         Location 64         627621.753         2538237.317         22°56′50.6328″N         70°14′41.1513″E           66         MA 66         Location 65         627529.949         2537986.091         22°56′42.49″N         70°14′37.8537″E           67         MA 67         Location 66         626696.937         2536881.222         22°56′6.7959″N         70°14′8.284″E           68         MA 68         Location 68         625372.714         2535616.486         22°55′26.0352″N         70°13′21.4301″E	58	MA 58	Location 55	626420.101	2540999.743	22°58'20.777"N	70°13'59.78"E
61         MA 61         Location 58         627061.624         2540081.43         22°57'50.7443"N         70°14'22.0335"E           62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E			Location 56	626744.097			70°14'11.1101"E
62         MA 62         Location 59         626891.57         2539739.341         22°57'39.6686"N         70°14'15.9615"E           63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	60	MA 60	Location 57	626907.226	2540222.062	22°57'55.359"N	70°14'16.6541"E
63         MA 63         Location 61         627246.224         2538863.713         22°57'11.1021"N         70°14'28.1536"E           64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	61	MA 61	Location 58	627061.624	2540081.43	22°57'50.7443"N	70°14'22.0335"E
64         MA 64         Location 62         627150.187         2538838.245         22°57'10.3004"N         70°14'24.7744"E           65         MA 65         Location 64         627621.753         2538237.317         22°56'50.6328"N         70°14'41.1513"E           66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	62	MA 62	Location 59	626891.57	2539739.341	22°57'39.6686"N	70°14'15.9615"E
65         MA 65         Location 64         627621.753         2538237.317         22°56′50.6328″N         70°14′41.1513″E           66         MA 66         Location 65         627529.949         2537986.091         22°56′42.49″N         70°14′37.8537″E           67         MA 67         Location 66         626696.937         2536881.222         22°56′6.7959″N         70°14′8.284″E           68         MA 68         Location 68         625372.714         2535616.486         22°55′26.0352″N         70°13′21.4301″E	63	MA 63	Location 61	627246.224	2538863.713	22°57'11.1021"N	70°14'28.1536"E
66         MA 66         Location 65         627529.949         2537986.091         22°56'42.49"N         70°14'37.8537"E           67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	64	MA 64	Location 62	627150.187	2538838.245	22°57'10.3004"N	70°14'24.7744"E
67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	65	MA 65	Location 64	627621.753	2538237.317	22°56'50.6328"N	70°14'41.1513"E
67         MA 67         Location 66         626696.937         2536881.222         22°56'6.7959"N         70°14'8.284"E           68         MA 68         Location 68         625372.714         2535616.486         22°55'26.0352"N         70°13'21.4301"E	66	MA 66	Location 65	627529.949	2537986.091	22°56'42.49"N	70°14'37.8537"E
	67	MA 67	Location 66	626696.937	2536881.222	22°56'6.7959"N	70°14'8.284"E
69 MA 69 Location 69 624986.878 2535531.782 22°55'23.3853"N 70°13'7.8624"E	68	MA 68	Location 68	625372.714	2535616.486	22°55'26.0352"N	70°13'21.4301"E
	69	MA 69	Location 69	624986.878	2535531.782	22°55'23.3853"N	70°13'7.8624"E







70	MA 70	Location 70	626507.09	2541876.75	22°58`49.26"N	70°14`3.09"E
71	MA 71	Location 73	627313.32	2539611.47	22°57`35.39"N	70°14`30.73"E
72	MA 72	Location 74	627336.48	2539472.565	22°57`30.87"N	70°14`31.50"E
73	MA 73	Location 77	627598.59	2538716.01	22°57`6.20"N	70°14`40.48"E
74	MA 74	Location 84	626661.68	2536872.6	22°56`6.52"N	70°14`7.04"E
75	MA 75	Location 85	626339.58	2536157.4	22°55`43.35"N	70°13`55.52"E
76	MA 76	Location 86	624673.24	2535609.61	22°55`26"N	70°12`56.87"E
77	MA 77	Location 89	622505.44	2533992.66	22°54`34"N	70°11`40.32"E
78	MA 78	Location 93	621462.63	2533355.17	22°54`13.55"N	70°11`3.54"E
79	MA 79	Location 92	622063.86	2533239.89	22°54`9.64"N	70°11`24.61"E
80	MA 80	Location 96	621349.38	2533031.81	22°54`3.06"N	70°10`59.47"E
81	MA 81	Location 97	621544.74	2532892.97	22°53`58.50"N	70°11`6.29"E
82	MA 82	Location 98	621057.22	2532785.26	22°53`55.12"N	70°10`49.15"E
83	MA 83	Location 101	620270.34	2532452.97	22°53`44.52"N	70°10`21.44"E
84	MA 84	Location 104	619912.49	2532195.52	22°53`36.25"N	70°10`8.81"E
85	MA 85	Location 109	618433.6	2531381.24	22°53`10.15"N	70°09`16.69"E
86	MA 86	Location 112	618267.44	2531081.81	22°53`0.46"N	70°09`10.78"E
87	MA 87	Location 114	618067.94	2530659.12	22°52`46.76"N	70°09`3.66"E
88	MA 88	Location 118	616930.77	2529875.3	22°52`21.56"N	70°08`23.54"E

## AII.6. GPI Conclusion

The marine GPI carried out at inner and outer channel of Deendayal Port Trust (DPT) through SSS, SBP and MM surveys which reveals various significant results. The geophysical surveys show about 92 considerable targets on seabed by SSS, SBP study has shown about 25 buried/partially buried targets and MM survey reveals about 88 anomalies in the surveyed region. With the integration of these targets and anomalies, 88 locations are classified and marked. The seabed object maps are presented between Fig. 11 to 16.



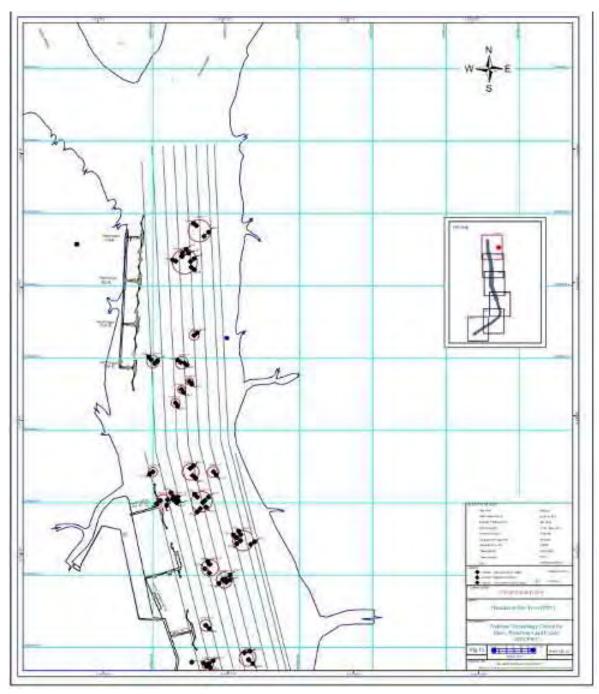


Fig. AII .11. Kandla Creek DPT Proposed Oil Jetty Seabed objects map of GPI



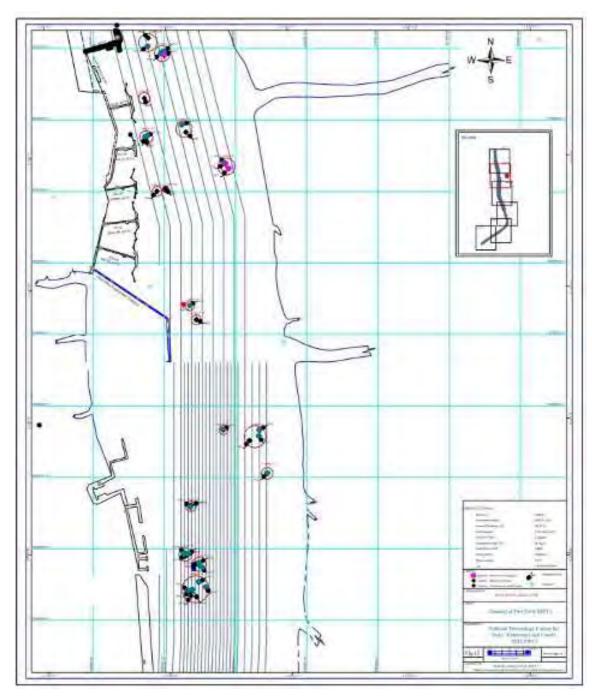


Fig. AII .12. Kandla Creek DPT Oil Jetty Seabed objects map of GPI





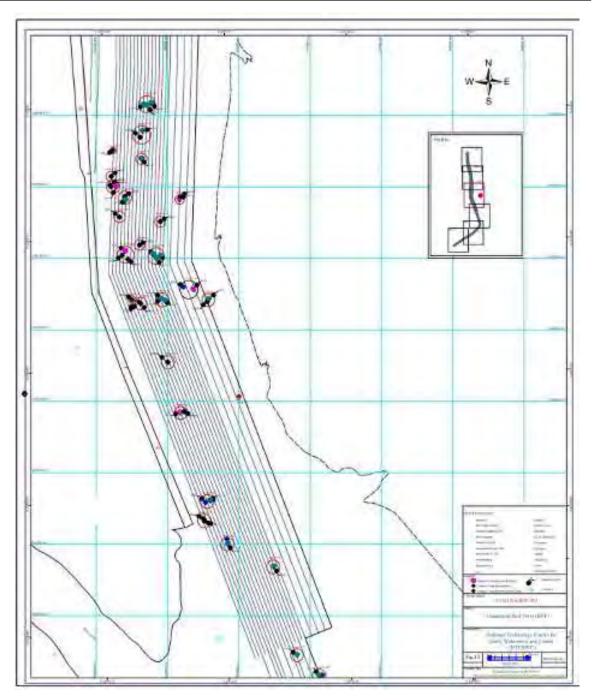


Fig. AII.13. Kandla Creek DPT Cargo Jetty Seabed objects map of GPI





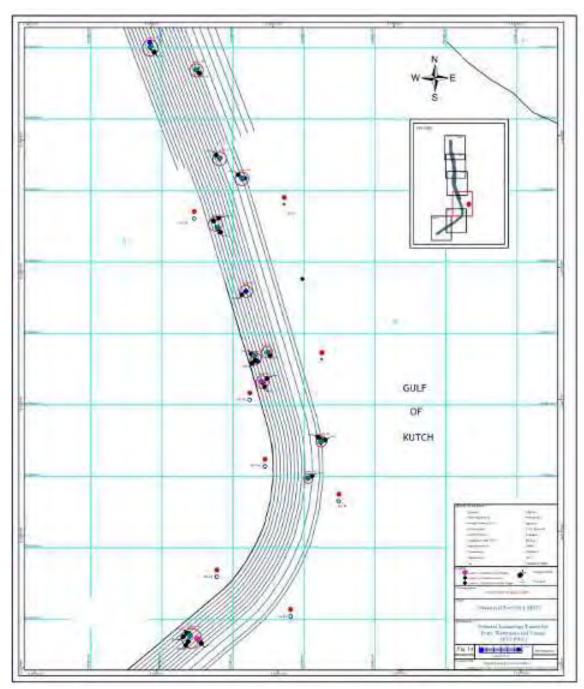


Fig. AII.14. DPT Zone 1 Seabed objects map of GPI



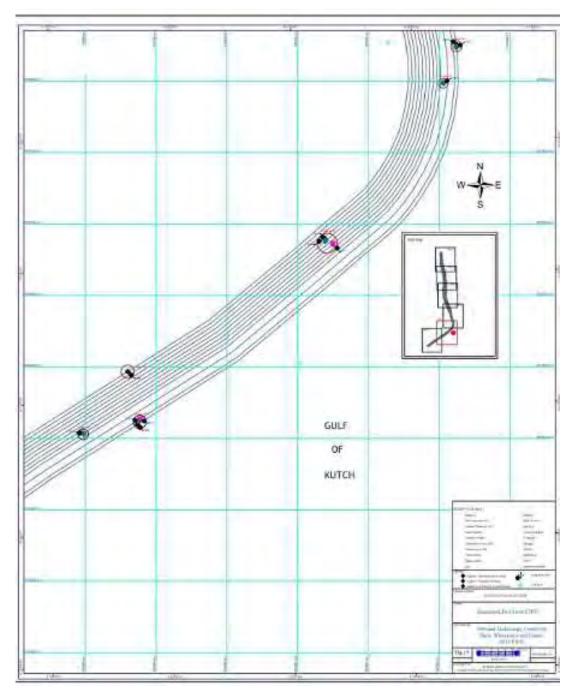


Fig. AII.15. DPT Zone 2 Seabed objects map of GPI





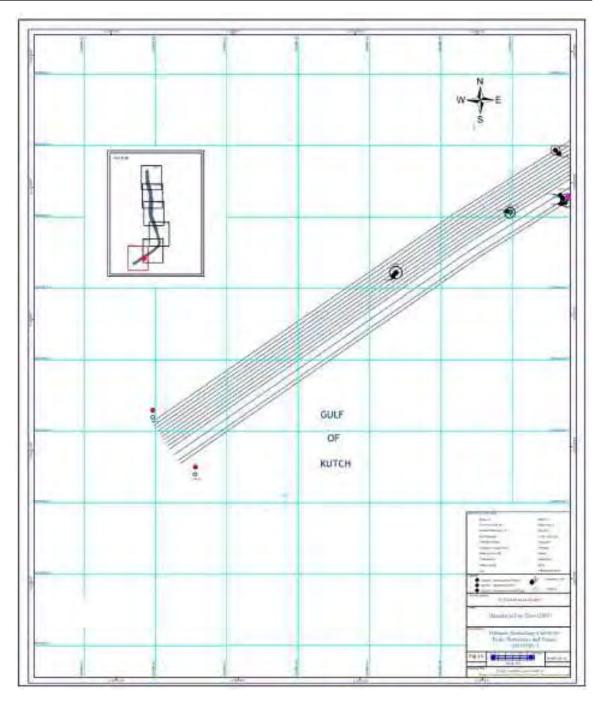


Fig. AII.16. DPT Navigational Chanel Seabed objects map of GPI





The table AII.5 shows the object based on the presence anomalies identified through SSS, SBP and MM surveys. The objects identified and mapped are based on GPI. Ground-truth verification by appropriate methods mandatory in order to confirm the findings in terms of shape/material/geometry and other properties of objects/targets.

Table AII.5 Details of the targets/object based on SSS, SBP & MM

Sl.No	Locations	Side Scan Target	Sub Bottom Target	Magnetia Anomaly	
51.110		Side Scall Target	Sub Dottom Target	Magnetic Anomaly	
1	Location 1			$\sqrt{}$	
2	Location 2	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
3	Location 3			V	
4	Location 4	$\sqrt{}$		$\sqrt{}$	
5	Location 5			$\sqrt{}$	
6	Location 6			$\sqrt{}$	
7	Location 7			$\sqrt{}$	
8	Location 8			$\sqrt{}$	
9	Location 9			$\sqrt{}$	
10	Location 10		$\sqrt{}$	$\sqrt{}$	
11	Location 11			V	
12	Location 12		V	V	
13	Location 13	$\sqrt{}$		$\sqrt{}$	
14	Location 14		V	V	
15	Location 15	$\sqrt{}$	V	V	
16	Location 16	$\sqrt{}$		V	
17	Location 17		V	V	
18	Location 18	$\sqrt{}$			
19	Location 19	$\sqrt{}$		V	
20	Location 20	$\sqrt{}$		$\sqrt{}$	
21	Location 21		√	$\sqrt{}$	
22	Location 22	$\sqrt{}$			
23	Location 23	$\sqrt{}$			
24	Location 24			$\sqrt{}$	
25	Location 25	$\sqrt{}$			
26	Location 26			V	
27	Location 27	V		V	
28	Location 28				
29	Location 29	$\sqrt{}$		V	
30	Location 30	V		V	
31	Location 31	V		V	
32	Location 32	$\sqrt{}$		V	
33	Location 33			V	
34	Location 34	$\sqrt{}$		V	
35	Location 35				







Sl.No	Locations	Side Scan Target	Sub Bottom Target	Magnetic Anomaly
36	Location 36			V
37	Location 37	$\sqrt{}$		
38	Location 38	$\sqrt{}$	V	
39	Location 39	$\sqrt{}$		V
40	Location 40	$\sqrt{}$	V	
41	Location 41	V		
42	Location 42	$\sqrt{}$		
43	Location 43	$\sqrt{}$		
44	Location 44	$\sqrt{}$	V	
45	Location 45			V
46	Location 46			
47	Location 47			
48	Location 48			
49	Location 49		V	<u> </u>
50	Location 50			V
51	Location 51	V		<u> </u>
52	Location 52	√ √	V	
53	Location 53	√ √		V
54	Location 54	√ √		<u> </u>
55	Location 55	·		V
56	Location 56			√
57	Location 57			
58	Location 58			$\frac{1}{\sqrt{1}}$
59	Location 59			
60	Location 60	V		,
61	Location 61	,		
62	Location 62			
63	Location 63	$\sqrt{}$	V	<u> </u>
64	Location 64		,	<b>√</b>
65	Location 65	,		<u> </u>
66	Location 66		<b>√</b>	<u> </u>
67	Location 67		,	<u> </u>
68	Location 68	<u>√</u>	V	
69	Location 69	Y	<b>,</b> ,	
70	Location 70			√
71	Location 70		\ \ \ \ \	ν
72	Location 72	√	V	
73	Location 72 Location 73	V		1
74	Location 74			<u> </u>
75	Location 75			V
76	Location 76	N 1		
77	Location 76  Location 77	V		2





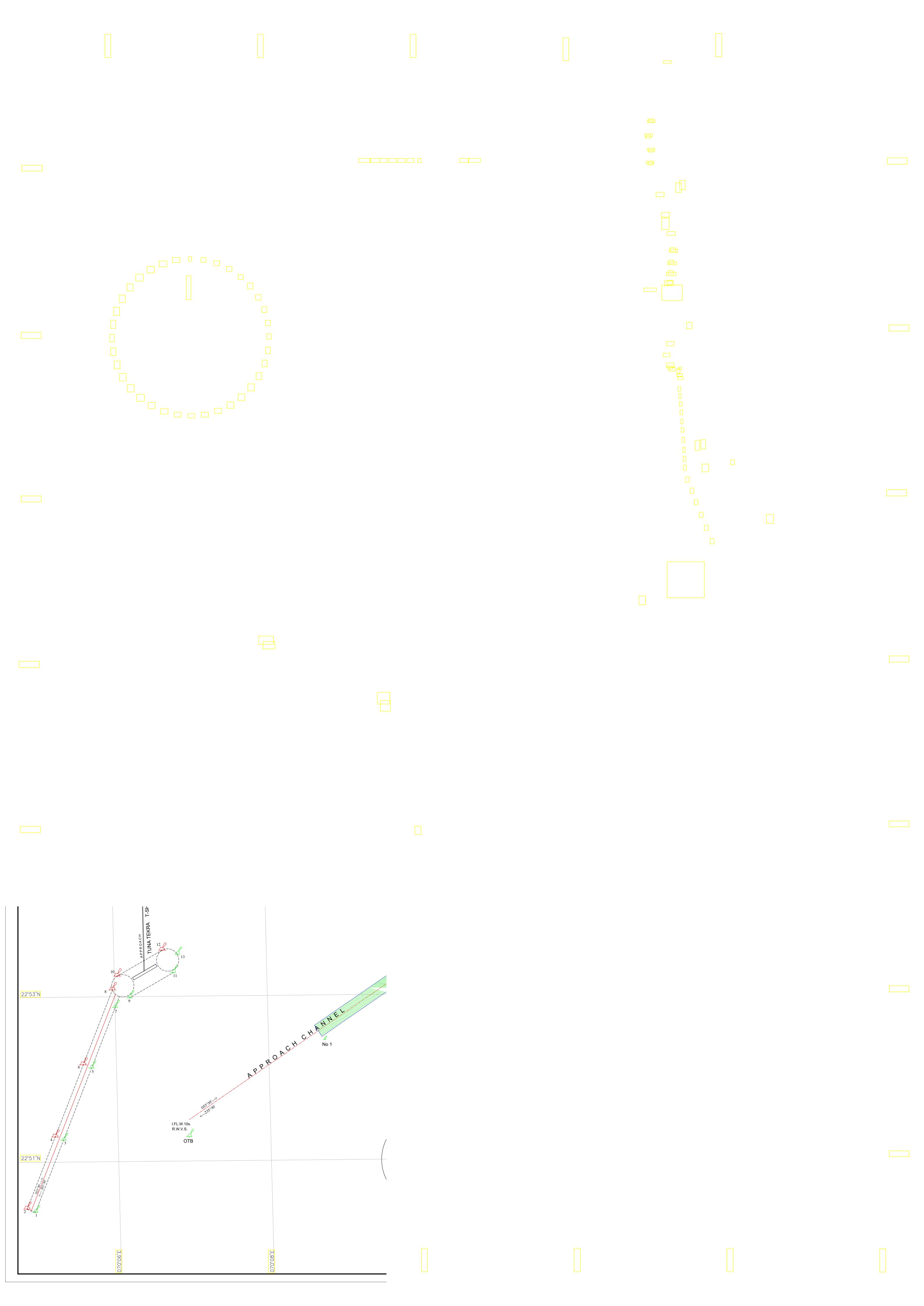
Sl.No	Locations	Side Scan Target	Sub Bottom Target	Magnetic Anomaly
78	Location 78		V	
79	Location 79	$\sqrt{}$		
80	Location 80	$\sqrt{}$		
81	Location 81	$\sqrt{}$		
82	Location 82	$\sqrt{}$		
83	Location 83	$\sqrt{}$		
84	Location 84			V
85	Location 85	$\sqrt{}$		V
86	Location 86			V
87	Location 87	$\sqrt{}$	√	
88	Location 88	$\sqrt{}$		
89	Location 89		V	$\sqrt{}$
90	Location 90	V		
91	Location 91	V		
92	Location 92			V
93	Location 93			V
94	Location 95			
95	Location 96			V
96	Location 97		V	<b>√</b>
97	Location 98			
98	Location 99			<u> </u>
99	Location 100	V		
100	Location 101	·		V
101	Location 102	√		<u> </u>
102	Location 103	V		
103	Location 104	·		V
104	Location 105	V		· · · · · · · · · · · · · · · · · · ·
105	Location 106	√ ·		
106	Location 107	√ √		
107	Location 108	√ √		
108	Location 109	,	V	V
109	Location 110		,	,
110	Location 111			
111	Location 112	,		V
112	Location 113			,
113	Location 113	Y		V
113	Location 115			Y
115	Location 116			
116	Location 117		V	
117	Location 117	V	V V	
118	Location 119	2		V
		N N		
119	Location 120	V		

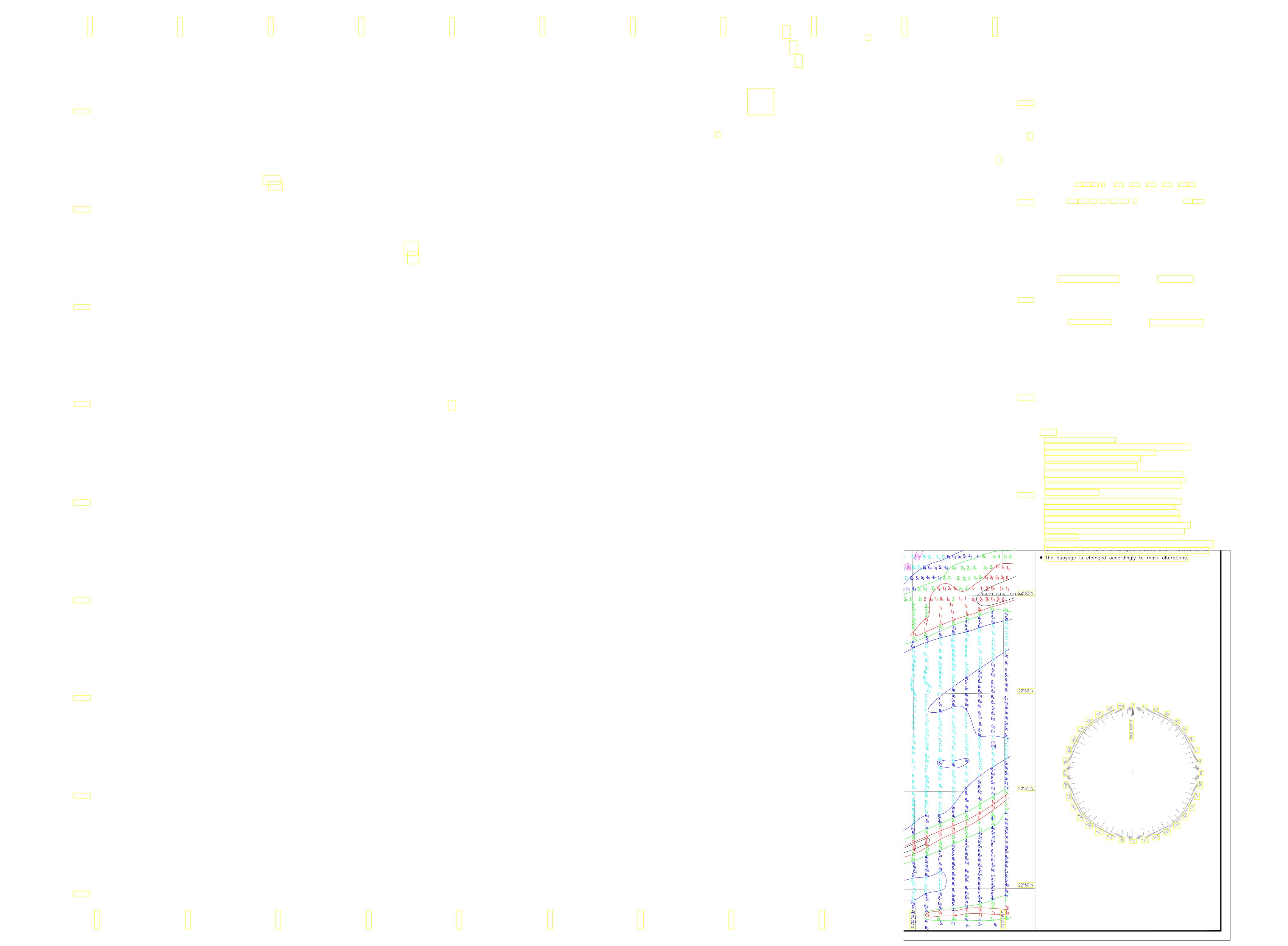


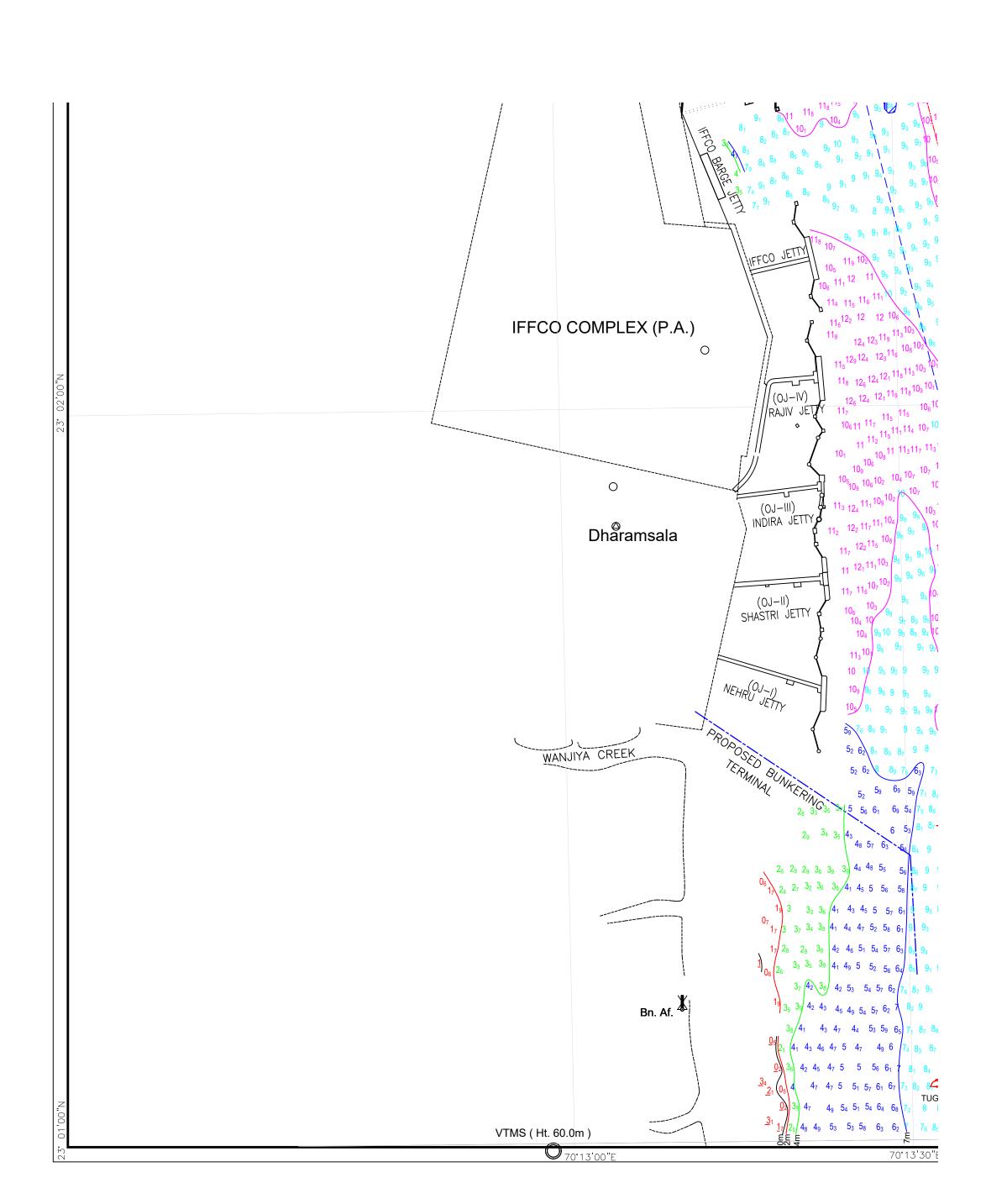


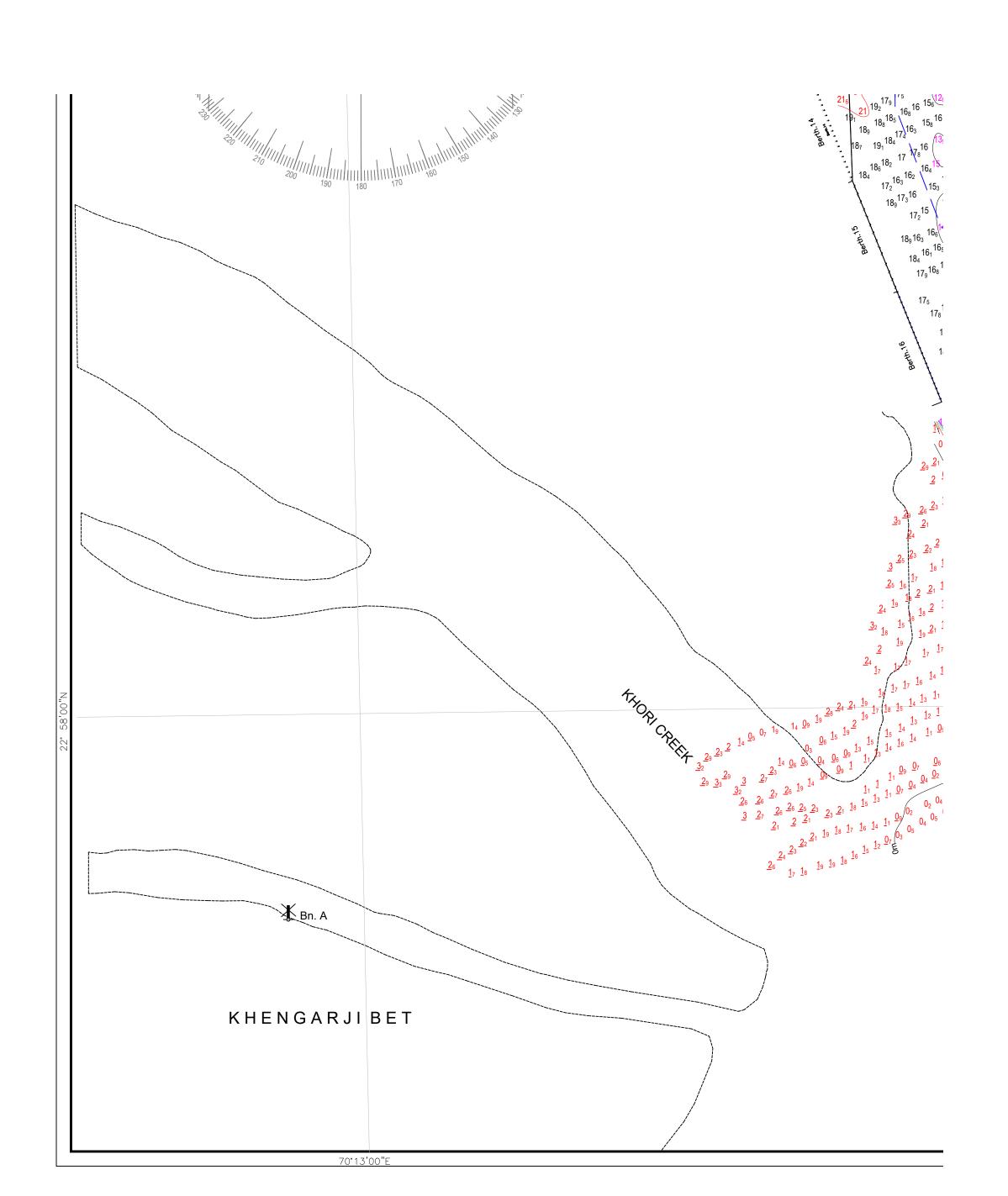
Sl.No	Locations	Side Scan Target	Sub Bottom Target	Magnetic Anomaly
120	Location 121	V		
121	Location 122	$\sqrt{}$		
122	Location 123	$\sqrt{}$		
123	Location 124	$\sqrt{}$		
124	Location 125	$\sqrt{}$		
125	Location 126	V		
126	Location 127	$\sqrt{}$		
127	Location 128	V		
128	Location 129	V		
129	Location 130	V		

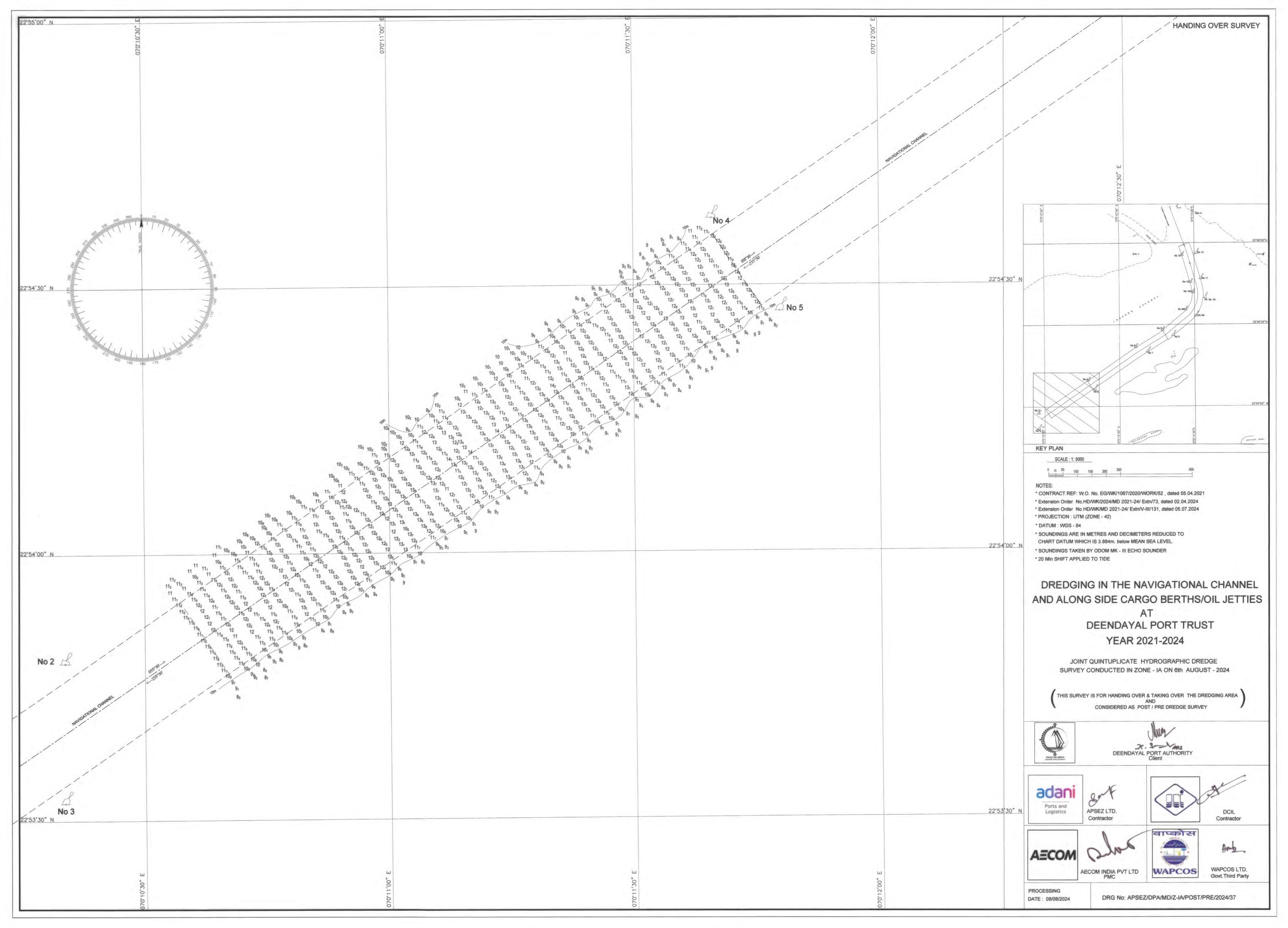
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STEEN STATE OF THIS SIDE