

Mahuva Port



Figure 1: Mahuva Port (Site Area ~ 40 Ha- Phase 1 & ~50 Ha addition in Phase 2)

Boreholes (Offshore)	Mahuva (LAT, LONG)
BH1	21° 1'30.08"N, 71°46'16.02"E
BH2	21° 1'22.61"N, 71°46'1.40"E
BH3	21° 1'37.22"N, 71°46'25.67"E
Bathymetry (~5km waterfront has been covered between the given co-ordinates)	
B1	21° 1'4.24"N, 71°45'14.39"E
B2	21° 0'32.09"N, 71°45'36.85"E
B3	21° 1'33.09"N, 71°47'36.32"E
B4	21° 1'59.57"N, 71°47'11.76"E

The undergone study included collection and review of available secondary data, site reconnaissance visits, identification of data gaps, and preliminary generation of primary data through field surveys and stakeholder interactions. Preliminary traffic assessment and demand analysis were undertaken to understand potential cargo, vessel mix, and operational requirements, along with indicative estimates of vessel sizes and marine traffic.

Preliminary surveys comprising bathymetric and geotechnical investigations (with 3 Boreholes) were carried out for the identified sites, supported by available bathymetry charts and seabed data. Site topography maps were also prepared. Engineering surveys and investigations, including mathematical modelling, were undertaken to assess breakwater alignment, basin tranquillity, and overall marine suitability of the sites.

A preliminary environmental and social impact assessment was conducted to identify key environmental sensitivities and constraints, including CRZ considerations, coastal processes,

fishing activity interfaces, and other relevant environmental and social aspects. Site suitability analysis was carried out to evaluate alternative layouts and configurations and to identify the preferred development option for each location.

Based on the above assessments, preliminary layouts and conceptual designs were developed covering marine infrastructure, dredging and reclamation. Indicative capital and O&M cost estimates were prepared, along with financial analysis to assess overall project viability.

Dahej Port



Figure 2: Dahej Port

A detailed appreciation of the project location and its strategic relevance has been carried out, including assessment of regional context, proximity to industrial clusters, and integration with existing and proposed road and rail connectivity. The surrounding economic environment, including the role of Dahej and the PCPIR region, has been examined to establish the long-term relevance and necessity of the proposed port development.

Extensive site investigations and baseline assessments have already been completed. These include analysis of marine and oceanographic conditions such as bathymetry, tides, waves, currents, meteorological parameters, and seismic considerations. Environmental baseline conditions, including coastal regulation classification and sediment transport characteristics, have also been examined to inform sustainable planning and statutory compliance. In addition, geotechnical aspects and seabed characteristics have been studied to support preliminary engineering decisions.

A comprehensive assessment of cargo potential has been undertaken, covering regional and state-level cargo trends, hinterland characteristics, competing facilities, and commodity-wise demand analysis. Key cargo streams including dry bulk, liquid bulk, LNG, containers, and other relevant commodities have been analysed, along with traffic projections and future outlook, providing a robust basis for capacity planning and phasing.

Preliminary planning of marine and landside facilities has already been carried out. This included identification of design vessels, navigation requirements, channel dimensions, manoeuvring areas, berth configurations, and operational parameters. Concept-level layouts for various terminals and supporting infrastructure have been developed, along with an overall development plan, phasing strategy, and master planning framework.

Utility requirements and port-wide infrastructure systems such as power supply, water, drainage, firefighting, navigation aids, security, and communication systems have also been examined at a planning level. Further, preliminary engineering inputs have been developed, including design bases, loading criteria, applicable standards, and broad structural concepts for marine, civil, and steel structures.

Environmental impacts, risk considerations, statutory requirements, and an initial cost framework have been addressed to provide an integrated view of project viability and implementation readiness.

Along with this a tentative phase wise Block Cost has been estimated along with tariff assumptions and financial analysis proving the viability of the project.